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DAIRY FARM BUSINESS SUMMARY

May 1986

A.E. Ext. 86-18

WESTERN PLAIN REGION 1985

FARM NO. 38001

JANUARY 30, 1986

INCOME STATEMENT (continued)

| Receipts | Cash | Change in Accounts Receivable | Change in Inventory | Accrual Receipts |
|------------------------|-----------|-------------------------------|---------------------|------------------|
| Milk sales | \$ 151850 | | | \$ 151850 |
| Other livestock | 9840 | | | 9840 |
| Gov't receipts | 400 | | | 400 |
| Other | 230 | | | 230 |
| Crops | 250 | | | 250 |
| Gov't receipts | 140 | | | 140 |
| Other | 200 | | | 200 |
| TOTAL ACCRUAL RECEIPTS | \$ 16426 | | | \$ 16426 |

EXPENSES

| Expense | Cash | Change in Accounts Payable | Change in Inventory | Accrual Expenses |
|--------------------------|---------|----------------------------|---------------------|------------------|
| Hired Labor | \$ 5200 | | | \$ 5200 |
| Feed | | | | |
| Dairy grain & conc. | | | | |
| Dairy roughage | | | | |
| Other livestock | | | | |
| Machinery | | | | |
| Mach. hire, rent/lease | | | | |
| Machinery repairs/parts | | | | |
| Auto expense (f.e.) | | | | |
| Fuel, oil & grease | | | | |
| Livestock | | | | |
| Replacement livestock | | | | |
| Breeding | | | | |
| Veterinary & medicine | | | | |
| Milk marketing | | | | |
| Cattle lease/rent | | | | |
| Other livestock exp. | | | | |
| Crops | | | | |
| Fertilizer & lime | | | | |
| Seeds & plants | | | | |
| Spray, other crop | | | | |
| Real Estate | | | | |
| Land/bldg/fence w/ | | | | |
| Taxes | | | | |
| Insurance | | | | |
| Rent & lease | | | | |
| Other | | | | |
| Telephone (farm &) | | | | |
| Electricity (farm &) | | | | |
| Interest paid | | | | |
| Miscellaneous | | | | |
| TOTAL OPERATING EXPENSES | \$ 5200 | | | \$ 5200 |

RETURN TO OPERATOR(S) & F
UNPAID, MGMT., & EQUITY C
Total Accrual Receipts

- Total Accrual Expenses
= NET FARM INCOME

RETURN TO OPERATOR(S) & F
MANAGEMENT & EQUITY C
Net Farm Income

- Family Labor Unpaid
= RETURN TO OPERATOR(S)
MANAGEMENT & EQUITY C

RETURN TO OPERATOR(S)
Return to Operator
Management & Equity C

- Real Interest on \$
Capital & \$
= LABOR & MANAGEMENT
3.00 OPERATOR

RETURN TO EQUITY C
Return to Operator
Management & Equity C

- Value of Operation
& Management
= RETURN ON EQUITY C
Rate of Return

FARM NO. 38001

JANUARY 30, 1986

INCOME STATEMENT

Sam. Farnese

EXPENSES

| Expense | Cash | Change in Accounts Payable | Change in Inventory | Accrual Expenses |
|--------------------------|---------|----------------------------|---------------------|------------------|
| Hired Labor | \$ 5200 | | | \$ 5200 |
| Feed | | | | |
| Dairy grain & conc. | | | | |
| Dairy roughage | | | | |
| Other livestock | | | | |
| Machinery | | | | |
| Mach. hire, rent/lease | | | | |
| Machinery repairs/parts | | | | |
| Auto expense (f.e.) | | | | |
| Fuel, oil & grease | | | | |
| Livestock | | | | |
| Replacement livestock | | | | |
| Breeding | | | | |
| Veterinary & medicine | | | | |
| Milk marketing | | | | |
| Cattle lease/rent | | | | |
| Other livestock exp. | | | | |
| Crops | | | | |
| Fertilizer & lime | | | | |
| Seeds & plants | | | | |
| Spray, other crop | | | | |
| Real Estate | | | | |
| Land/bldg/fence w/ | | | | |
| Taxes | | | | |
| Insurance | | | | |
| Rent & lease | | | | |
| Other | | | | |
| Telephone (farm &) | | | | |
| Electricity (farm &) | | | | |
| Interest paid | | | | |
| Miscellaneous | | | | |
| TOTAL OPERATING EXPENSES | \$ 5200 | | | \$ 5200 |

NEW YORK COOPERATIVE EXTENSION
Prepared by
DEPARTMENT OF AGRICULTURAL ECONOMICS
CORNELL UNIVERSITY

Name Sam. Farnese
Address RR1 Box 19
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1985 DAIRY FARM BUSINESS SUMMARY

PROCESSES OF THE FARM BUSINESS

| | 1982 | 1984 | 1985 |
|--|-----------|-----------|-----------|
| Size of Business | | | |
| Avg # of cows | 45 | 67 | 77 |
| Avg # of heifers | 50 | 80 | 80 |
| Milk sold, lbs. | 910000 | 964800 | 1116500 |
| Milk sold, lbs. | 2.78 | 2.75 | 2.75 |
| Total tillable acres | 260 | 260 | 260 |
| Rates of Production | | | |
| Milk sold per cow, lbs. | 14000 | 14400 | 14500 |
| Milk sold per acre, lbs. | 2.8 | 2.4 | 2.7 |
| Corn silage per acre, tons | 14 | 14 | 14 |
| Labor Efficiency | | | |
| Cows per worker | 24 | 34 | 28 |
| Milk sold per worker, lbs. | 330909 | 350834 | 404000 |
| Cost Control | | | |
| Grain & conc. purch. as % milk sales | 28% | 29% | 28% |
| Dairy feed & crop exp. per cwt. milk | 4.38 | 4.17 | 5.48 |
| Labor and mach. costs per cow | 7.88 | 8.88 | 8.21 |
| Capital Efficiency (average for year) | | | |
| Farm capital per cow | \$ 5794 | \$ 9719 | \$ 3507 |
| Real estate per cow | \$ 2348 | \$ 2351 | \$ 2500 |
| Machinery and equipment per cow | \$ 1362 | \$ 1336 | \$ 1175 |
| Capital turnover, years | 3.4 | 2.8 | 2.3 |
| Profitability | | | |
| Net farm income w/o approp. | \$ 1200 | \$ -8426 | \$ 18557 |
| Net farm income w/ approp. | \$ 19215 | \$ -5891 | \$ 13402 |
| Labor & management income | \$ -11929 | \$ -19844 | \$ 2974 |
| Rate return on equity capital w/approp | -5.4% | -15.7% | -6.5% |
| Financial Summary | | | |
| Farm net worth | \$ 234878 | \$ 238365 | \$ 276867 |
| Farm debt per cow | \$ 0.44 | \$ 0.42 | \$ 0.38 |
| Cash flow coverage ratio | \$ 8603 | \$ 2983 | \$ 2212 |
| PARTNERSHIP, ACCT. BOOK, DOP. | 1.05 | 1.14 | 1.32 |

Stuart F. Smith

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1985 DAIRY FARM BUSINESS SUMMARY
Western Plain Region*

Introduction

Dairy farmers throughout the State have been participating in New York Cooperative Extension's farm business summary and analysis program since the early 1950's. Each participating farmer receives a complete summary and analysis of his or her farm business in addition to this publication. The information in this report is compiled by averaging data submitted from the region described at the bottom of this page.

Program Objective

The primary objective of the dairy farm business summary, DFBS, is to help farmers improve their management skills through appropriate use of record data and application of modern farm business management decision-making techniques. In short, DFBS identifies the records farmers need and demonstrates how to use them in making business and financial management decisions.

Program Improvements

The 1985 DFBS report features improved accrual accounting procedures, a new measure of farm profitability, a more indepth balance sheet, an annual cash flow statement, and several major improvements in the business analysis format and the analysis measures used. These and other changes are identified in the body of this report.

The revised format provides one full page for the analysis of the farm cropping program and another for complete analysis of the dairy program. Corn and hay crop related expenses are evaluated separately for cooperating farmers. The cost of producing milk per cow and per hundredweight of milk sold has been compiled. An annual cash flow worksheet has been added to the farmer's individual report. The popular Progress of The Farm Business report has been moved to page one of the farmer's report and added to this publication.

Micro DFBS, which allows Cooperative Extension agents and specialists to calculate and print individual farm business reports in their offices, is now being used by more than 50 percent of our dairy farm management field staff. This innovative program provides faster processing of farm record data and increased use of DFBS in farm management programs.

*This summary was prepared by Stuart F. Smith with invaluable assistance from Linda Putnam, Cindy Farrell, Beverly Carcelli, and Mary Chaffee, Department of Agricultural Economics, New York State College of Agriculture and Life Sciences, Cornell University. The individual business records were collected by Cooperative Extension agents Merville Button and David Thorp and regional specialist George Allhusen. The Western Plain Region (with the number of participating farms in parentheses) is comprised of Erie (6), Genesee (5), Livingston (10), Monroe (2), Niagara (4), Orleans (4), and Wyoming Counties (14).

SUMMARY OF THE FARM BUSINESS

Business Characteristics

Finding the right management strategies is an important part of farming. Various combinations of farm resources, enterprises, business arrangements, and management techniques are used by the dairy farmers in this region. The following table shows important farm business characteristics and the number of farmers reporting these characteristics.

BUSINESS CHARACTERISTICS
45 Western Plain Dairy Farms, 1985

| <u>Type of Farm</u> | <u>Number</u> | <u>Type of Business</u> | <u>Number</u> |
|--|------------------|-------------------------------|---------------|
| Dairy | 40 | Single proprietorship | 22 |
| Part-time dairy | 0 | Partnership | 20 |
| Dairy cash-crop | 5 | Corporation | 3 |
| Part-time cash-crop dairy | 0 | Other | 0 |
| <u>Type of Ownership</u> | <u>Number</u> | <u>Type of Barn</u> | <u>Number</u> |
| Owner | 42 | Stanchion | 12 |
| Renter | 3 | Freestall | 32 |
| | | Other | 1 |
| <u>Milking System</u> | <u>Number</u> | <u>Business Record System</u> | <u>Number</u> |
| Bucket & carry | 0 | CAMIS | 2 |
| Dumping station | 2 | Account Book | 19 |
| Pipeline | 12 | Agrifax (mail-in only) | 16 |
| Herringbone parlor | 27 | On-Farm Computer | 6 |
| Other parlor | 4 | Other | 2 |
| <u>Dairy Records Service</u> | <u>Number</u> | | <u>Number</u> |
| DHIC | 32 | Other | 2 |
| O.S. | 11 | None | 0 |
| <u>Milk Diversion Program Participants</u> | <u>Number: 3</u> | | |

The averages used in this report were compiled using data from all the participating dairy farms in this region unless noted otherwise. There may be regular dairy farms, part-time farms, dairy cash-crop farms, farm renters, partnerships, and corporations included in the average. These specific classifications are used to separate farms in the State Business Summary.

A part-time farm has less than 12 months of labor from all operators.

A dairy cash-crop farm has income from crop sales that exceed 10 percent of milk sales.

A farm renter owns no farm real estate at the end of the year or owns no tillable land.

Milk Diversion Program Participants are the farmers that were in the 1984-85 federal milk diversion program. These farms have also been included in the regional summary averages.

Income Statement

The revised accrual income statement begins with an accounting of all farm business expenses.

CASH AND ACCRUAL FARM EXPENSES
45 Western Plain Dairy Farms, 1985

| Expense Item | Cash Paid + | Change in Inventory + | Change in Accounts Payable + | Accrual Expenses - |
|-------------------------------|----------------|--------------------------|---------------------------------|-----------------------|
| <u>Hired Labor</u> | \$ 46,207 | | \$-198 | \$ 46,009 |
| <u>Feed</u> | | | | |
| Dairy grain & conc. | 69,513 | \$ -214 | 100 | 69,399 |
| Dairy roughage | 1,577 | 0 | -4 | 1,573 |
| Other livestock | 709 | -7 | 0 | 702 |
| <u>Machinery</u> | | | | |
| Mach. hire, rent/lease | 3,616 | | -120 | 3,496 |
| Machinery repairs/parts | 18,603 | -31 | -125 | 18,447 |
| Auto expense (f.s.) | 308 | | 0 | 308 |
| Fuel, oil & grease | 11,937 | -77 | 105 | 11,965 |
| <u>Livestock</u> | | | | |
| Replacement livestock | 1,957 | | 0 | 1,957 |
| Breeding | 5,170 | -153 | 108 | 5,125 |
| Vet & medicine | 7,958 | -58 | -180 | 7,720 |
| Milk marketing | 16,661 | | -7 | 16,654 |
| Cattle lease/rent | 0 | | 0 | 0 |
| Other livestock expense | 14,219 | 3 | 95 | 14,317 |
| <u>Crops</u> | | | | |
| Fertilizer & lime | 17,005 | -383 | -77 | 16,545 |
| Seeds & plants | 7,396 | -236 | 39 | 7,199 |
| Spray, other crop exp. | 7,771 | -284 | 51 | 7,538 |
| <u>Real Estate</u> | | | | |
| Land/bldg./fence repair | 3,973 | | -199 | 3,774 |
| Taxes | 6,666 | | -171 | 6,495 |
| Insurance | 5,543 | | -76 | 5,467 |
| Rent & lease | 8,460 | | 31 | 8,491 |
| <u>Other</u> | | | | |
| Telephone (f.s.) | 640 | | 0 | 640 |
| Electricity (f.s.) | 7,430 | | 69 | 7,499 |
| Interest paid | 35,499 | | -98 | 35,401 |
| Miscellaneous | 2,981 | -365 | -70 | 2,546 |
| Total Operating | \$301,799 | \$-1,805 | \$-727 | \$299,267 |
| Expansion livestock | \$722 | | \$-95 | \$ 628 |
| Machinery depreciation | | | | 27,020 |
| Building depreciation | | | | 14,660 |
| TOTAL ACCRUAL EXPENSES | | | | \$341,575 |

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 values 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).

Worksheets are provided to enable any dairy farmer to compute his or her accrual farm income and compare it with the averages on the opposite page.

CASH AND ACCRUAL FARM EXPENSES WORKSHEET

| Expense Item | Cash Paid | + | Change in Inventory | + | Change in Accounts Payable | - | Accrual Expenses |
|-------------------------|--------------|---|------------------------|---|-------------------------------|---|---------------------|
| <u>Hired Labor</u> | \$ _____ | | \$ _____ | | \$ _____ | | \$ _____ |
| <u>Feed</u> | | | | | | | |
| Dairy grain & conc. | _____ | | _____ | | _____ | | _____ |
| Dairy roughage | _____ | | _____ | | _____ | | _____ |
| Other livestock | _____ | | _____ | | _____ | | _____ |
| <u>Machinery</u> | | | | | | | |
| Mach. hire, rent/lease | _____ | | _____ | | _____ | | _____ |
| Machinery repairs/parts | _____ | | _____ | | _____ | | _____ |
| Auto expense (f.s.) | _____ | | _____ | | _____ | | _____ |
| Fuel, oil & grease | _____ | | _____ | | _____ | | _____ |
| <u>Livestock</u> | | | | | | | |
| Replacement livestock | _____ | | _____ | | _____ | | _____ |
| Breeding | _____ | | _____ | | _____ | | _____ |
| Vet & medicine | _____ | | _____ | | _____ | | _____ |
| Milk marketing | _____ | | _____ | | _____ | | _____ |
| Cattle lease/rent | _____ | | _____ | | _____ | | _____ |
| Other livestock expense | _____ | | _____ | | _____ | | _____ |
| <u>Crops</u> | | | | | | | |
| Fertilizer & lime | _____ | | _____ | | _____ | | _____ |
| Seeds & plants | _____ | | _____ | | _____ | | _____ |
| Spray, other crop exp. | _____ | | _____ | | _____ | | _____ |
| <u>Real Estate</u> | | | | | | | |
| Land/bldg./fence repair | _____ | | _____ | | _____ | | _____ |
| Taxes | _____ | | _____ | | _____ | | _____ |
| Insurance | _____ | | _____ | | _____ | | _____ |
| Rent & lease | _____ | | _____ | | _____ | | _____ |
| <u>Other</u> | | | | | | | |
| Telephone (f.s.) | _____ | | _____ | | _____ | | _____ |
| Electricity (f.s.) | _____ | | _____ | | _____ | | _____ |
| Interest paid | _____ | | _____ | | _____ | | _____ |
| Miscellaneous | _____ | | _____ | | _____ | | _____ |
| Total Operating | \$ _____ | | \$ _____ | | \$ _____ | | \$ _____ |
| Expansion livestock | _____ | | _____ | | _____ | | _____ |
| Machinery depreciation | _____ | | _____ | | _____ | | _____ |
| Building depreciation | _____ | | _____ | | _____ | | _____ |
| TOTAL ACCRUAL EXPENSES | \$ _____ | | \$ _____ | | \$ _____ | | \$ _____ |

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. Purchased feed and supplies used out of inventory must be included. Beginning of year less end of year purchased feed and supply inventory equals the change in inventory to include in accrual expenses. Feed, supplies, and services used but not paid for must be included by adding the net increase in operating accounts payable. Increases in operating accounts payable are determined by subtracting the balance at the beginning of the year from the end of year balance.

CASH AND ACCRUAL FARM RECEIPTS
45 Western Plain Dairy Farms, 1985

| Receipt Item | Cash Receipts | Change in + Inventory | Change in Accounts + Receivable | Accrual + Receipts |
|------------------------|------------------|--------------------------|---------------------------------------|-----------------------|
| Milk sales | \$339,436 | | \$ -310 | \$339,126 |
| Dairy cattle | 21,855 | \$8,391 | -13 | 30,233 |
| Dairy calves | 3,848 | | 0 | 3,848 |
| Other livestock | 613 | 82 | 0 | 695 |
| Crops | 7,599 | 1,299 | -11 | 8,887 |
| Government receipts | 4,361 | | 20 | 4,381 |
| Custom machine work | 348 | | -66 | 282 |
| Gas tax refund | 262 | | 0 | 262 |
| Other | 5,999 | | 2,390 | 8,389 |
| Total Accrual Receipts | \$384,321 | \$9,772 | \$2,010 | \$396,103 |

Cash receipts include 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 live-stock 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 January milk check for this December's marketings compared with the previous January's check, and other delayed payments.

CASH AND ACCRUAL FARM RECEIPT WORKSHEET

| Receipt Item | Cash Receipts | Change in + Inventory | Change in Accounts + Receivable | Accrual + Receipts |
|------------------------|------------------|--------------------------|---------------------------------------|-----------------------|
| Milk sales | \$ _____ | \$ _____ | \$ _____ | \$ _____ |
| Dairy cattle | _____ | _____ | _____ | _____ |
| Dairy calves | _____ | _____ | _____ | _____ |
| Other livestock | _____ | _____ | _____ | _____ |
| Crops | _____ | _____ | _____ | _____ |
| Government receipts | _____ | _____ | _____ | _____ |
| Custom machine work | _____ | _____ | _____ | _____ |
| Gas tax refund | _____ | _____ | _____ | _____ |
| Other | _____ | _____ | _____ | _____ |
| Total Accrual Receipts | \$ _____ | \$ _____ | \$ _____ | \$ _____ |

To calculate the change in inventory to be included in the above worksheet, subtract the beginning of year values from the end of year values excluding appreciation. The changes in inventories caused by declining prices must be excluded from the calculation of accrual receipts. Changes in accounts receivable are also determined by subtracting beginning of year balances from end of year balances.

Profitability Analysis

Farm owners/operators contribute labor, management, and capital to their businesses and 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 livestock, machinery, and real estate 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.

NET FARM INCOME 45 Western Plain Dairy Farms, 1985

| Item | Average | My Farm |
|--|-----------------|----------|
| Total accrual receipts | \$396,103 | \$ _____ |
| Appreciation: Livestock | -17,180 | _____ |
| Machinery | 2,619 | _____ |
| Real Estate | <u>8,551</u> | _____ |
| Total Including Appreciation | \$390,093 | \$ _____ |
| Total accrual expenses | <u>-341,575</u> | - _____ |
| Net Farm Income (with appreciation) | \$ 48,518 | \$ _____ |
| Net Farm Income (without appreciation) | \$ 54,528 | \$ _____ |

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.

RETURN TO OPERATOR(S') LABOR, MANAGEMENT, AND EQUITY 45 Western Plain Dairy Farms, 1985

| Item | Average | | My Farm | |
|---|-----------------|--------------------|-----------------|--------------------|
| | With Apprec. | Without Apprec. | With Apprec. | Without Apprec. |
| Net farm income | \$48,518 | \$54,528 | \$ _____ | \$ _____ |
| Family labor unpaid @ \$550 per month | <u>-1,100</u> | <u>-1,100</u> | - _____ | - _____ |
| Return to operator(s') labor, management, & equity | \$47,418 | \$53,428 | \$ _____ | \$ _____ |

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 each operator's labor and management.

LABOR AND MANAGEMENT INCOME
45 Western Plain Dairy Farms, 1985

| Item | Average | My Farm |
|--|----------------|----------|
| Return to operator(s') labor, management, & equity without appreciation | \$53,428 | \$ _____ |
| Real interest @ 5% on \$516,419 equity capital | <u>-25,821</u> | - _____ |
| Labor & Management Income | \$27,607 | \$ _____ |
| Labor & Management Income per 1.58 Operators | \$17,436 | \$ _____ |

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.

RETURN ON EQUITY CAPITAL
45 Western Plain Dairy Farms, 1985

| Item | Average | My Farm |
|---|----------------|----------|
| Return to operator(s') labor, management, & equity capital with appreciation | \$47,418 | \$ _____ |
| Value of operator(s') labor & management | <u>-30,903</u> | - _____ |
| Return on equity capital with appreciation | \$16,515 | \$ _____ |
| Rate of return on equity capital with appreciation | 3.2% | _____ |
| Return on equity capital without appreciation | \$22,525 | \$ _____ |
| Rate of return without appreciation | 4.4% | _____ |

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 recognize all the assets and liabilities that make up the balance sheet. The second step is to analyze your filled out balance sheet by evaluating changes made during the year.

1985 FARM BUSINESS & NONFARM BALANCE SHEET
45 Western Plain Dairy Farms, 1985

| Farm Assets | | | Farm Liabilities & Net Worth | | |
|--------------------------------|-----------|-----------|----------------------------------|-----------|-----------|
| | Jan. 1 | Dec. 31 | | Jan. 1 | Dec. 31 |
| <u>Current</u> | | | <u>Current</u> | | |
| Farm cash, checking & savings | \$ 6,621 | \$ 5,746 | Accounts payable | \$ 8,068 | \$ 7,630 |
| Accounts rec. | 31,960 | 30,955 | Operating debt | 3,385 | 3,697 |
| Feed & supplies | 80,679 | 83,779 | Short-term | 7,364 | 11,402 |
| Total | \$119,260 | \$120,480 | Total | \$ 18,817 | \$ 22,729 |
| <u>Intermediate</u> | | | <u>Intermediate</u> | | |
| Dairy cows: | | | | \$165,139 | \$158,854 |
| owned | \$131,820 | \$128,473 | | | |
| leased | 0 | 0 | | | |
| Heifers | 61,727 | 56,308 | | | |
| Bulls/other lvstk. | 1,674 | 1,732 | | | |
| Mach./eq. owned | 170,011 | 168,127 | | | |
| Mach./eq. leased | 613 | 495 | Financial lease | | |
| Coop stock & cert. | 27,667 | 30,671 | (cattle/mach.) | \$ 613 | \$ 495 |
| Total | \$393,512 | \$385,806 | Total | \$165,753 | \$159,349 |
| <u>Long-Term</u> | | | <u>Long-Term</u> | | |
| Land/buildings: | | | | \$164,000 | \$159,361 |
| owned | \$348,026 | \$351,572 | | | |
| leased | 296 | 153 | | | |
| Total | \$348,322 | \$351,725 | Financial lease | | |
| | | | (structures) | 296 | 153 |
| | | | Total | \$164,296 | \$159,514 |
| Total Farm Assets | \$861,094 | \$858,011 | Total Farm Liab. | \$348,865 | \$341,592 |
| | | | FARM NET WORTH | \$512,229 | \$516,419 |
| | | | Nonfarm Liabilities & Net Worth* | | |
| <u>Nonfarm Assets*</u> | Jan. 1 | Dec. 31 | | Jan. 1 | Dec. 31 |
| Personal cash, chkg. & savings | \$ 7,136 | \$ 6,796 | | | |
| Cash value life ins. | 5,643 | 6,510 | Nonfarm | | |
| Nonfarm real estate | 11,087 | 12,022 | Liabilities | \$ 3,100 | \$ 4,466 |
| Auto (personal sh.) | 3,928 | 4,548 | | | |
| Stocks & bonds | 1,172 | 1,974 | | | |
| Household furn. | 8,713 | 9,204 | | | |
| All other | 2,249 | 2,694 | NONFARM NET | | |
| Total Nonfarm | \$39,930 | \$43,748 | WORTH | \$36,830 | \$39,282 |

*Average of 23 farms reporting.

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.

1985 FARM BUSINESS & NONFARM BALANCE SHEET

| Farm Assets | | | Farm Liabilities & Net Worth | | |
|---------------------------------------|--------|---------|--|--------|---------|
| | Jan. 1 | Dec. 31 | | Jan. 1 | Dec. 31 |
| <u>Current</u> | | | <u>Current</u> | | |
| Farm cash, checking & savings | | | Accounts payable | | |
| Accounts rec. | | | Operating debt | | |
| Feed & supplies | | | Short-term: | | |
| | | | | | |
| Total | | | Total | | |
| <u>Intermediate</u> | | | <u>Intermediate</u> | | |
| Dairy cows: | | | | | |
| owned | | | | | |
| leased | | | | | |
| Heifers | | | | | |
| Bulls/other lvstk. | | | | | |
| Mach./eq. owned | | | | | |
| Mach./eq. leased | | | Financial lease | | |
| Coop stock & cert. | | | (cattle/mach.) | | |
| Total | | | Total | | |
| <u>Long-Term</u> | | | <u>Long-Term</u> | | |
| Land/buildings: | | | | | |
| owned | | | | | |
| leased | | | | | |
| Total | | | Financial lease | | |
| | | | (structures) | | |
| | | | Total | | |
| Total Farm Assets | | | Total Farm Liab. | | |
| | | | FARM NET WORTH | | |
| | | | | | |
| <u>Nonfarm Assets</u> | | | <u>Nonfarm Liabilities & Net Worth</u> | | |
| | Jan. 1 | Dec. 31 | | Jan. 1 | Dec. 31 |
| | | | <u>Nonfarm Liab.:</u> | | |
| Personal cash, chkg. & savings | | | | | |
| Cash value | | | | | |
| life ins. | | | | | |
| Nonfarm real est. | | | | | |
| Auto (pers. share) | | | Total Nonfarm | | |
| Stocks & bonds | | | Liabilities | | |
| Household furn. | | | | | |
| All other | | | Nonfarm | | |
| Total Nonfarm | | | Net Worth | | |
| <u>TOTAL FARM & NONFARM</u> | | | <u>TOTAL FARM & NONFARM</u> | | |
| | Jan. 1 | Dec. 31 | | Jan. 1 | Dec. 31 |
| Total Farm & Nonfarm Assets | | | | | |
| Less Total Farm & Nonfarm Liabilities | | | | | |
| Farm & Nonfarm Net Worth | | | | | |

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.

BALANCE SHEET ANALYSIS
45 Western Plain Dairy Farms, 1985

| Item | Average | My Farm |
|---|----------------|--------------------------------|
| <u>Financial Ratios - Farm:</u> | | |
| Percent equity | 60% | _____ % |
| Debt/asset ratio: total | 0.40 | _____ |
| long-term | 0.45 | _____ |
| intermediate/current | 0.36 | _____ |
| <u>Financial Ratios - Farm & Nonfarm:</u> | | |
| Percent equity | 61% | _____ % |
| Total debt/asset ratio | 0.39 | _____ |
| <u>Farm Debt Analysis:</u> | | |
| Accounts payable as % of total debt | 2% | _____ % |
| Long-term liabilities as a % of total debt | 47% | _____ % |
| Current & inter. liab. as a % of total debt | 53% | _____ % |
| | | |
| <u>Farm Debt Levels:</u> | <u>Per Cow</u> | <u>Per Tillable Acre Owned</u> |
| Total farm debt | \$2,190 | \$1,275 |
| Long-term debt | 1,023 | 595 |
| Intermediate & current debt | 1,167 | 679 |

Balance sheet analysis concludes with a summary of the inventory balancing procedure for farm real estate and machinery and equipment. It is important to account for the value of these assets used on the balance sheet and the changes that occur from the beginning to end of year. Changes in the livestock inventory are included in the dairy analysis.

FARM INVENTORY BALANCE
45 Western Plain Dairy Farms, 1985

| Item | Avg. of Regional Farms | | My Farm | |
|--------------------|------------------------|-----------|----------|-----------|
| | R.E. | Mach./Eq. | R.E. | Mach./Eq. |
| Value beg. of year | \$348,026 | \$170,011 | \$ _____ | \$ _____ |
| Purchases | \$13,552* | \$23,631 | \$ _____ | \$ _____ |
| Lost capital | -1,760 | 0 | - _____ | - _____ |
| Sales | -2,137 | -1,114 | - _____ | - _____ |
| Depreciation | -14,660 | -27,020 | - _____ | - _____ |
| Net investment | \$-5,005 | \$-4,503 | =+ _____ | =+ _____ |
| Appreciation | +8,551 | +2,619 | + _____ | + _____ |
| Value end of year | \$351,572 | \$168,127 | \$ _____ | \$ _____ |

* \$5,001 land and \$8,551 buildings and/or depreciable improvements.

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 in the following table 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, 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. If the imbalance (error) amount is positive, recorded cash inflows exceed outflows by this amount. If it is negative, cash outflows are too high in relation to inflows.

ANNUAL CASH FLOW STATEMENT
45 Western Plain Dairy Farms, 1985

| <u>Item</u> | <u>Average</u> | <u>My Farm</u> |
|---|----------------|----------------|
| <u>Cash Inflows</u> | | |
| Beginning farm cash, checking & savings | \$ 6,621 | \$ _____ |
| Cash farm receipts | 384,321 | _____ |
| Sale of assets: Machinery | 1,114 | _____ |
| Real estate | 2,578 | _____ |
| Money borrowed (intermediate & long-term) | 28,720 | _____ |
| Money borrowed (short-term) | 10,768 | _____ |
| Increase in operating debt | 312 | _____ |
| Nonfarm income | 2,880 | _____ |
| Money borrowed - nonfarm | 940 | _____ |
| Total | \$438,255 | \$ _____ |
| <u>Cash Outflows</u> | | |
| Cash farm expenses | \$301,799 | \$ _____ |
| Capital purchases: Expansion livestock | 722 | _____ |
| Machinery | 23,631 | _____ |
| Real estate | 13,552 | _____ |
| Principal payments (intermediate & long-term) | 39,644 | _____ |
| Principal payments (short-term) | 6,730 | _____ |
| Decrease in operating debt | 0 | _____ |
| Nonfarm debt payments | 521 | _____ |
| Personal withdrawals & family exp. | 29,940 | _____ |
| Ending farm cash, checking & savings | 5,746 | _____ |
| Total | \$422,284 | \$ _____ |
| Imbalance (error) | \$ 15,970 | \$ _____ |

Repayment Analysis

The second step of 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 by using debt payments per unit of production and receipt/debt payment ratios.

FARM DEBT PAYMENTS PLANNED
Same 38 Western Plain Dairy Farms, 1984 and 1985

| Debt Payments | Average | | | My Farm | | |
|----------------------------------|---------------|----------|-----------------|---------------|---------|-----------------|
| | 1985 Payments | | Planned 1986 | 1985 Payments | | Planned 1986 |
| | Planned | Made | | Planned | Made | |
| Long-term | \$25,413 | \$24,267 | \$20,751 | \$_____ | \$_____ | \$_____ |
| Intermediate-term | 47,669 | 49,343 | 49,244 | _____ | _____ | _____ |
| Short-term | 8,587 | 5,832 | 6,281 | _____ | _____ | _____ |
| Operating (net reduction) | 0 | 0 | 1,048 | _____ | _____ | _____ |
| Accounts payable (net reduction) | 2,492 | 2,656 | 2,321 | _____ | _____ | _____ |
| Total | \$84,162 | \$82,097 | \$79,644 | \$_____ | \$_____ | \$_____ |
| (98% planned were made) | | | | | | |
| Per cow | \$547 | \$534 | | \$_____ | \$_____ | |
| Per cwt. 1985 milk | \$3.18 | \$3.11 | | \$_____ | \$_____ | |
| Percent of total 1985 receipts | 21% | 21% | | _____ | _____ | |
| Percent of 1985 milk receipts | 25% | 24% | | _____ | _____ | |

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 planned payments that could have been made with last year's available cash flow. Farmers that did not participate in DFBS last year will find in their report a cash flow coverage ratio based on this year's planned debt payments.

CASH FLOW COVERAGE RATIO
Same 38 Western Plain Dairy Farms, 1984 and 1985

| Item | Average | My Farm |
|---|-----------|---------|
| Cash farm receipts | \$383,731 | \$_____ |
| - Cash farm expenses | 301,989 | _____ |
| + Interest paid | 34,669 | _____ |
| - Net personal withdrawals from farm* | 25,662 | _____ |
| (A) = Amount Available for Debt Service | \$90,749 | \$_____ |
| (B) = Debt Payments Planned for 1985 | \$84,162 | \$_____ |
| (A ÷ B) = Cash Flow Coverage Ratio for 1985 | 1.08 | _____ |

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

ANALYSIS OF THE FARM BUSINESS

The farm business has been divided into three parts to allow a more indepth analysis of the cropping program, the dairy program, and the factors affecting capital and labor efficiency.

Cropping Program Analysis

The cropping program is an important part of the dairy farm business and sometimes it 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 purchasing choices.

LAND RESOURCES AND CROP PRODUCTION
45 Western Plain Dairy Farms, 1985

| Item | Average | | | My Farm | | |
|----------------------|--------------|---------------|------------------|--------------|------------------|--------------|
| <u>Land</u> | <u>Owned</u> | <u>Rented</u> | <u>Total</u> | <u>Owned</u> | <u>Rented</u> | <u>Total</u> |
| Tillable | 268 | 211 | 478 | _____ | _____ | _____ |
| Nontillable | 22 | 19 | 40 | _____ | _____ | _____ |
| Other nontillable | 83 | 15 | 98 | _____ | _____ | _____ |
| Total | 373 | 245 | 616 | _____ | _____ | _____ |
| <u>Crop Yields</u> | <u>Farms</u> | <u>Acres</u> | <u>Prod/Acre</u> | <u>Acres</u> | <u>Prod/Acre</u> | |
| Hay crop | 45 | 180 | 3.35 tn DM | _____ | _____ | tn DM |
| Corn silage | 44 | 141 | 15.16 tn | _____ | _____ | tn |
| | | | 5.11 tn DM | _____ | _____ | tn DM |
| Other forage | 7 | 13 | 1.18 tn DM | _____ | _____ | tn DM |
| Total forage | 45 | 320 | 4.10 tn DM | _____ | _____ | tn DM |
| Corn grain | 37 | 115 | 98.24 bu | _____ | _____ | bu |
| Oats | 19 | 32 | 94.70 bu | _____ | _____ | bu |
| Wheat | 18 | 42 | 63.46 bu | _____ | _____ | bu |
| Other crops | 12 | 29 | | _____ | _____ | |
| Tillable pasture | 17 | 22 | | _____ | _____ | |
| Idle | 19 | 42 | | _____ | _____ | |
| Total Tillable Acres | 45 | 478 | | _____ | _____ | |

Average crop acres and yields compiled for the region are for 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 based on dry matter information provided.

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

CROP MANAGEMENT FACTORS
45 Western Plain Dairy Farms, 1985

| Item | Average | My Farm |
|---|---------|---------|
| Total tillable acres per cow | 3.15 | _____ |
| Total forage acres per cow | 2.11 | _____ |
| Harvested forage dry matter, tons per cow | 8.62 | _____ |

ERRATA SHEET
A.E. Ext. 86-18, page 14
Crop and Related Accrual Expenses

| Expense | Hay crop per ton DM | Per ton corn silage equiv. |
|----------------------------|------------------------|-------------------------------|
| Fertilizer & lime | \$ 6.53 | \$3.31 |
| Seeds & plants | 2.20 | 1.45 |
| Spray & other crop expense | <u>1.53</u> | <u>1.65</u> |
| Total | \$10.25 | \$6.41 |

Cropping Program Analysis (continued)

A substantial number of cooperators have allocated crop expenses to hay crop, corn, and other crop production. This additional data has been compiled to show the traditional crop expenses per acre and per production unit for these crops. Corn production has been converted to corn silage equivalent using 5.88 bushels of dry shell equivalent to equal one ton of corn silage as fed.

CROP RELATED ACCRUAL EXPENSES
Western Plain Dairy Farms Reporting*, 1985

| Expense | Total Per Till. Acre | Hay Crop | | Corn Per Acre | Per Ton Corn Silage Equiv.** | Other Crops Per Acre |
|-------------------------------|-------------------------------|-------------|---------------|---------------------|---------------------------------------|----------------------------|
| | | Per Acre | Per Ton DM | | | |
| Fertilizer & lime | \$34.57 | \$12.84 | \$3.83 | \$27.49 | \$1.74 | \$13.93 |
| Seeds & plants | 15.04 | 4.01 | 1.20 | 11.85 | 0.75 | 8.20 |
| Spray & other crop expense | <u>15.75</u> | <u>2.80</u> | <u>0.83</u> | <u>14.35</u> | <u>0.91</u> | <u>8.13</u> |
| Total | \$65.36 | \$19.65 | \$5.86 | \$53.69 | \$3.40 | \$30.26 |
| <u>My Farm:</u> | | | | | | |
| Fertilizer & lime | \$_____ | \$_____ | \$_____ | \$_____ | \$_____ | \$_____ |
| Seeds & plants | _____ | _____ | _____ | _____ | _____ | _____ |
| Spray & other crop expense | _____ | _____ | _____ | _____ | _____ | _____ |
| Total | \$_____ | \$_____ | \$_____ | \$_____ | \$_____ | \$_____ |

*Hay crop expense breakdown reported by 29 farms, 279 acres per farm. Corn - 29 farms reporting average 361 acres. Other crops - 21 farms average 85 acres.

**Corn grain converted to silage; 5.88 bushels dry shelled equals one ton silage.

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. Although machinery costs have not been allocated to individual crops, they are shown per total tillable acre.

ACCRUAL MACHINERY EXPENSES
45 Western Plain Dairy Farms, 1985

| Machinery Expense Item | Average | | My Farm | |
|----------------------------|-------------------|------------------|-------------------|------------------|
| | Total Expenses | Per Til. Acre | Total Expenses | Per Til. Acre |
| Fuel, oil & grease | \$11,964 | \$ 25.00 | \$_____ | \$_____ |
| Machinery repairs & parts | 18,448 | 38.55 | _____ | _____ |
| Machine hire, rent & lease | 3,496 | 7.30 | _____ | _____ |
| Auto expense (farm share) | 308 | 0.64 | _____ | _____ |
| Interest (5%) | 8,453 | 17.66 | _____ | _____ |
| Depreciation | <u>27,020</u> | <u>56.46</u> | _____ | _____ |
| Total | \$69,689 | \$145.62 | \$_____ | \$_____ |

Dairy Program Analysis

Analysis of the dairy enterprise can tell a great deal about the strengths and weaknesses of the dairy farm business. Changes in dairy herd size and market values that occur 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 on page 5.

DAIRY HERD INVENTORY
45 Western Plain Dairy Farms, 1985

| Item | Dairy Cows | | Heifers | |
|-------------------------------|------------|----------------|---------|---------------|
| | Number | Value | Number | Value |
| Beginning of year (owned) | 147 | \$131,820 | 129 | \$61,727 |
| + Change without appreciation | | 7,287 | | 1,104 |
| + Appreciation | | <u>-10,634</u> | | <u>-6,523</u> |
| End of year (owned) | 156 | \$128,473 | 131 | \$56,308 |
| End including leased | 156 | | | |
| Average number | 152 | | 129 | |

My Farm:

| | | | | |
|-------------------------------|-------|----------|-------|----------|
| Beginning of year (owned) | _____ | \$ _____ | _____ | \$ _____ |
| + Change without appreciation | _____ | _____ | _____ | _____ |
| + Appreciation | _____ | _____ | _____ | _____ |
| End of year (owned) | _____ | _____ | _____ | _____ |
| End including leased | _____ | _____ | _____ | _____ |
| Average number | _____ | \$ _____ | _____ | \$ _____ |

Total milk sold and milk production 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.

MILK PRODUCTION
45 Western Plain Dairy Farms, 1985

| Item | Average | My Farm |
|--|-----------|---------|
| Total milk sold, lbs. | 2,643,119 | _____ |
| Milk sold per cow, lbs. | 17,404 | _____ |
| Average milk plant test, percent butterfat | 3.51 | _____ |

The cost of producing milk has been compiled using the whole farm method, and is featured in the following table. Accrual receipts from milk sales can be compared with the accrual costs of producing milk per cow and per hundredweight of milk. Using the whole farm method, operating costs of producing milk are estimated by deducting nonmilk 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 the interest charge for using equity capital. Note that the cost of labor, management, and equity capital has been excluded in the intermediate compilation.

ACCRUAL RECEIPTS FROM DAIRY AND COST OF PRODUCING MILK
45 Western Plain Dairy Farms, 1985

| Item | Average | | | My Farm | | |
|---|-----------|---------|----------|---------|---------|----------|
| | Total | Per Cow | Per Cwt. | Total | Per Cow | Per Cwt. |
| <u>Accrual Receipts</u> | | | | | | |
| Milk | \$339,126 | \$2,233 | \$12.83 | \$_____ | \$_____ | \$_____ |
| Dairy cattle | 30,233 | 199 | 1.14 | _____ | _____ | _____ |
| Dairy calves | 3,848 | 25 | 0.15 | _____ | _____ | _____ |
| Total | \$373,207 | \$2,457 | \$14.12 | \$_____ | \$_____ | \$_____ |
| <u>Accrual Costs of Producing Milk</u> | | | | | | |
| Operating costs | \$242,292 | \$1,595 | \$ 9.17 | \$_____ | \$_____ | \$_____ |
| Total costs without op(s') labor, mgmt. & capital | 285,696 | 1,881 | 10.81 | _____ | _____ | _____ |
| Total Costs | \$342,420 | \$2,255 | \$12.96 | \$_____ | \$_____ | \$_____ |

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.

DAIRY RELATED ACCRUAL EXPENSES
45 Western Plain Dairy Farms, 1985

| Item | Average | | My Farm | |
|--|---------|----------|---------|----------|
| | Per Cow | Per Cwt. | Per Cow | Per Cwt. |
| Purchased dairy grain & concentrates | \$457 | \$2.63 | \$_____ | \$_____ |
| Purchased dairy roughage | 10 | .06 | _____ | _____ |
| Total Purchased Dairy Feed | \$467 | \$2.69 | \$_____ | \$_____ |
| Purchased grain & conc. as % of milk receipts | | 20% | | % |
| Purchased feed & crop exp. | \$673 | \$3.87 | \$_____ | \$_____ |
| Purchased feed & crop exp. as % of milk receipts | | 30% | | % |
| Breeding | \$ 34 | \$0.19 | \$_____ | \$_____ |
| Veterinary & medicine | 51 | 0.29 | _____ | _____ |
| Milk marketing | 110 | 0.63 | _____ | _____ |
| Cattle lease | 0 | 0.00 | _____ | _____ |
| Other livestock expense | \$ 94 | \$0.54 | _____ | _____ |

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 management's success.

CAPITAL EFFICIENCY
45 Western Plain Dairy Farms, 1985

| Item | Per Worker | Per Cow | Per Tillable Acre | Per Tillable Acre Owned |
|------------------------------|------------|----------|-------------------|-------------------------|
| Farm capital | \$187,539 | \$5,660 | \$1,796 | \$3,207 |
| Real estate | | 2,305 | | 1,306 |
| Machinery & equipment | 37,009 | 1,117 | 354 | |
| Capital turnover, years 2.17 | | | | |
| <u>My Farm:</u> | | | | |
| Farm capital | \$ _____ | \$ _____ | \$ _____ | \$ _____ |
| Real estate | _____ | _____ | _____ | _____ |
| Machinery & equipment | _____ | _____ | _____ | _____ |
| Capital turnover, years | _____ | _____ | _____ | _____ |

LABOR FORCE INVENTORY AND ANALYSIS
45 Western Plain Dairy Farms, 1985

| Labor Force | Months | Age | Years of of Educ. | Value of Labor & Mgmt. |
|-----------------------|-----------|---|----------------------|---------------------------|
| Operator number 1 | 12 | 45 | 13 | \$20,424 |
| Operators 2 & 3 | 7 | 38 | 14 | 10,479 |
| Family paid | 5 | | | |
| Family unpaid | 2 | | | |
| Hired | <u>29</u> | | | |
| Total | 55 | + 12 = 4.58 Worker Equivalent 1.58 Operator/Manager Equiv. | | |
| <u>My Farm:</u> Total | _____ | + 12 = _____ Worker Equivalent | | |
| Operator's | _____ | + 12 = _____ Operator/Manager Equiv. | | |

| Labor Efficiency | Average | | My Farm | |
|----------------------|-----------|------------|---------|------------|
| | Total | Per Worker | Total | Per Worker |
| Cows, average number | 152 | 33 | _____ | _____ |
| Milk sold, pounds | 2,643,119 | 576,681 | _____ | _____ |
| Tillable acres | 479 | 104 | _____ | _____ |
| Work units | 1,695 | 370 | _____ | _____ |

| Labor Costs | Total | Average | | Total | My Farm | |
|--------------------------|-----------|---------|---------------|----------|----------|---------------|
| | | Per Cow | Per Til. Acre | | Per Cow | Per Til. Acre |
| Value of operator(s) | | | | | | |
| labor (\$800/month) | \$15,200 | \$100 | \$31.76 | \$ _____ | \$ _____ | \$ _____ |
| Family unpd. (\$550/mo.) | 1,100 | 7 | 2.30 | _____ | _____ | _____ |
| Hired | 46,009 | 303 | 96.14 | _____ | _____ | _____ |
| Total Labor | \$62,309 | \$410 | \$130.20 | \$ _____ | \$ _____ | \$ _____ |
| Machinery Cost | \$69,689 | \$459 | \$145.62 | \$ _____ | \$ _____ | \$ _____ |
| Total Labor & Mach. | \$131,998 | \$869 | \$275.81 | \$ _____ | \$ _____ | \$ _____ |

ANNUAL CASH FLOW WORKSHEET

| Item | Regional Average (per cow) | My Farm | | Expected Change | 1986 Projection |
|---|----------------------------------|---------|---------|--------------------|--------------------|
| | | Total | Per Cow | | |
| Average number of cows | 152 | | | | |
| <u>Accrual Oper. Receipts</u> | | | | | |
| Milk | \$2,233 | \$ | \$ | | \$ |
| Dairy cattle | 199 | | | | |
| Dairy calves | 25 | | | | |
| Other livestock | 5 | | | | |
| Crops | 59 | | | | |
| Misc. receipts | 88 | | | | |
| Total | \$2,608 | \$ | \$ | | \$ |
| <u>Accrual Oper. Expenses</u> | | | | | |
| Hired labor | \$ 393 | \$ | \$ | | \$ |
| Dairy grain & conc. | 457 | | | | |
| Dairy roughage | 10 | | | | |
| Other lvstk. feed | 5 | | | | |
| Mach. hire/rent/lease | 23 | | | | |
| Mach. rpr./parts & auto | 123 | | | | |
| Fuel, oil & grease | 79 | | | | |
| Replacement lvstk. | 13 | | | | |
| Breeding | 34 | | | | |
| Vet & medicine | 51 | | | | |
| Milk marketing | 110 | | | | |
| Cattle lease | 0 | | | | |
| Other lvstk. exp. | 94 | | | | |
| Fertilizer & lime | 109 | | | | |
| Seeds & plants | 47 | | | | |
| Spray/other crop exp. | 50 | | | | |
| Land, bldg., fence repair | 25 | | | | |
| Taxes | 43 | | | | |
| Insurance | 36 | | | | |
| Real est. rent/lease | 56 | | | | |
| Utilities | 54 | | | | |
| Miscellaneous | 17 | | | | |
| Total Less Int. Paid | \$1,736 | | | | \$ |
| <u>Net Accrual Operating Income</u> | (total) | (total) | | | |
| (without interest paid) | \$132,238 | \$ | | | \$ |
| - Change in lvstk./crop inv. | 9,773 | | | | |
| - Change in accts. rec. | 2,010 | | | | |
| + Change in feed/supply inv. | -1,805 | | | | |
| + Change in accts. payable | -727 | | | | |
| NET CASH FLOW | \$117,929 | \$ | | | \$ |
| - Personal withdrawals & family expenditures | 29,940 | | | | |
| Available for Debt Payments, Investments & Savings | \$ 87,989 | \$ | | | \$ |
| - Farm Debt Payments | 84,175 | | | | |
| Available for Investment & Savings | \$ 3,814 | \$ | | | \$ |
| - Capital Purchases: cattle, machinery & improvements | 37,811 | | | | |
| Additional Capital Needed | | \$ | | | \$ |

PROGRESS OF THE FARM BUSINESS

Comparing your business with average data from regional DFBS co-operators that participated in both of the last two years is one part of a business checkup. It is equally important for you to determine the progress your business has made over the past two or three years and to set targets or goals for the future.

PROGRESS OF THE FARM BUSINESS 45 Western Plain Dairy Farms, 1985

| Selected Factors | Average | | My Farm | | Goal |
|---|-----------|-----------|---------|------|------|
| | 1984 | 1985 | 1984 | 1985 | |
| <u>Size of Business</u> | | | | | |
| Average number of cows | 144 | 154 | | | |
| Average number of heifers | 128 | 129 | | | |
| Milk sold, lbs. | 2,483,942 | 2,643,451 | | | |
| Worker equivalent | 4.32 | 4.67 | | | |
| Total tillable acres | 471 | 482 | | | |
| <u>Rates of Production</u> | | | | | |
| Milk sold per cow, lbs. | 17,300 | 17,186 | | | |
| Hay DM per acre, tons | 3.3 | 3.4 | | | |
| Corn silage per acre, tons | 15 | 15 | | | |
| <u>Labor Efficiency</u> | | | | | |
| Cows per worker | 33 | 33 | | | |
| Milk sold per worker, lbs. | 575,255 | 566,454 | | | |
| <u>Cost Control</u> | | | | | |
| Grain & conc. purchased as % of milk sales | 21% | 20% | \$ | \$ | \$ |
| Dairy feed & crop exp. per cwt. milk | \$4.06 | \$3.82 | \$ | \$ | \$ |
| Labor & mach. costs/cow | \$906 | \$862 | \$ | \$ | \$ |
| <u>Capital Efficiency*</u> | | | | | |
| Farm capital per cow | \$5,905 | \$5,610 | \$ | \$ | \$ |
| Real estate per cow | \$2,431 | \$2,296 | \$ | \$ | \$ |
| Mach. & equip. per cow | \$1,146 | \$1,108 | \$ | \$ | \$ |
| Capital turnover, years | 2.2 | 2.2 | | | |
| <u>Profitability</u> | | | | | |
| Net farm inc. w/o apprec. | \$50,612 | \$55,777 | \$ | \$ | \$ |
| Net farm inc. w/apprec. | \$68,373 | \$50,360 | \$ | \$ | \$ |
| Labor & mgmt. income | \$23,224 | \$27,938 | \$ | \$ | \$ |
| Rate of return on eq. capital w/apprec. | 7.0% | 3.4% | | | |
| <u>Financial Summary</u> | | | | | |
| Farm net worth | \$527,749 | \$534,771 | \$ | \$ | \$ |
| Debt to asset ratio | 0.39 | 0.38 | \$ | \$ | \$ |
| Farm debt per cow | \$2,275 | \$2,065 | \$ | \$ | \$ |

*Average for the year.

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 458 farms for that factor. The other figures in each column are the average for the second 10 percent, third 10 percent, etc. Each column of the chart is independent of the others. The farms which are in the top 10 percent for one factor would not necessarily be the same farms which make up the top 10 percent for any other factor.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS 458 New York Dairy Farms, 1984

| <u>Size of Business</u> | | | <u>Rates of Production</u> | | | <u>Labor Efficiency</u> | |
|---------------------------|-------------------|------------------------|--------------------------------|--------------------------------|------------------------------------|-------------------------|-----------------------------------|
| 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 |
| 6.8 | 255 | 4,211,900 | 18,800 | 4.7 | 20 | 45 | 697,300 |
| 4.3 | 138 | 2,118,100 | 17,300 | 3.7 | 18 | 36 | 560,900 |
| 3.6 | 100 | 1,551,500 | 16,500 | 3.3 | 16 | 33 | 503,900 |
| 3.1 | 83 | 1,287,200 | 15,900 | 2.9 | 15 | 30 | 456,100 |
| 2.8 | 72 | 1,090,400 | 15,300 | 2.7 | 14 | 28 | 423,300 |
| ----- | | | | | | | |
| 2.5 | 63 | 950,300 | 14,800 | 2.5 | 13 | 26 | 392,200 |
| 2.2 | 56 | 818,600 | 14,200 | 2.3 | 12 | 25 | 361,400 |
| 2.0 | 49 | 691,500 | 13,400 | 2.0 | 12 | 23 | 328,000 |
| 1.7 | 43 | 577,800 | 12,200 | 1.7 | 10 | 20 | 275,500 |
| 1.4 | 33 | 395,200 | 10,000 | 1.3 | 8 | 16 | 191,300 |

| <u>Feed Bought Per Cow</u> | <u>% Feed is of Milk Receipts</u> | <u>Machinery Costs Per Cow</u> | <u>Labor & Machinery Costs Per Cow</u> | <u>Feed & Crop Expenses Per Cwt. Milk</u> |
|------------------------------------|---|--|--|---|
| \$214 | 11% | \$205 | \$ 511 | \$2.75 |
| 306 | 16 | 286 | 610 | 3.47 |
| 369 | 19 | 337 | 662 | 3.87 |
| 432 | 22 | 379 | 713 | 4.21 |
| 474 | 25 | 408 | 771 | 4.45 |
| ----- | | | | |
| 523 | 27 | 445 | 818 | 4.68 |
| 574 | 28 | 481 | 873 | 4.97 |
| 624 | 31 | 519 | 928 | 5.31 |
| 685 | 33 | 580 | 1,004 | 5.72 |
| 809 | 40 | 765 | 1,201 | 6.73 |

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.

Financial Analysis Chart

The farm financial analysis chart is designed just like the Farm Business Chart and may be used to measure the financial health of the farm business. Most of the financial measures used in the chart are presented on pages 7, 10, 12, and 17 of this publication.

FINANCIAL ANALYSIS CHART 458 New York Dairy Farms, 1984

| 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 |
| \$ 36 | \$909 | 7.67 | 2 | \$ 104 |
| 176 | 640 | 2.16 | 9 | 638 |
| 277 | 537 | 1.41 | 14 | 1,142 |
| 362 | 469 | 1.10 | 19 | 1,625 |
| 438 | 411 | .91 | 22 | 1,930 |
| 500 | 357 | .75 | 26 | 2,377 |
| 571 | 279 | .58 | 30 | 2,688 |
| 656 | 216 | .46 | 35 | 3,161 |
| 752 | 126 | .28 | 40 | 3,770 |
| 971 | -95 | -.56 | 52 | 5,072 |

| Solvency | | | | Efficiency & Profitability | | |
|--------------------------------|-------------------|------------------|---------------------------|--------------------------------|-------------------|-------------------------|
| Leverage Ratio ¹ | Percent Equity | Debt/Asset Ratio | | Capital Turnover (years) | Rate of Return on | |
| | | Long Term | Intermediate & Current | | Equity | Investment ² |
| .02 | 99 | .00 | .00 | 1.60 | 18% | 13% |
| .12 | 90 | .02 | .04 | 1.90 | 8 | 9 |
| .24 | 81 | .14 | .11 | 2.06 | 5 | 7 |
| .37 | 73 | .30 | .16 | 2.20 | 3 | 6 |
| .51 | 67 | .41 | .23 | 2.34 | 1 | 4 |
| .70 | 60 | .51 | .29 | 2.51 | -1 | 3 |
| .94 | 53 | .62 | .37 | 2.66 | -3 | 1 |
| 1.22 | 46 | .73 | .45 | 2.95 | -6 | 0 |
| 1.72 | 38 | .85 | .55 | 3.25 | -11 | -3 |
| 5.04 | 20 | 1.27 | .80 | 4.54 | -37 | -8 |

¹Dollars of debt per dollar of equity, computed by dividing total liabilities by total equity.

²Return on all farm capital (no deduction for interest paid) divided by total farm assets.

FARM BUSINESS SUMMARY BY HERD SIZE
458 New York Dairy Farms, 1984

| Item | Farms with: | Less than 40 Cows | 40 to 54 Cows | 55 to 69 Cows | 70 to 84 Cows |
|---|-------------|----------------------|------------------|------------------|------------------|
| <u>Capital Investment</u> (end of year) | | | | | |
| Livestock | | \$ 39,803 | \$ 58,991 | \$ 81,180 | \$100,136 |
| Feed & supplies | | 11,239 | 17,653 | 26,056 | 34,432 |
| Machinery & equipment | | 40,402 | 53,984 | 76,669 | 97,951 |
| Land & buildings | | <u>120,967</u> | <u>142,160</u> | <u>193,710</u> | <u>225,287</u> |
| TOTAL INVESTMENT | | \$212,411 | \$272,788 | \$377,615 | \$457,806 |
| <u>Receipts</u> | | | | | |
| Milk sales | | \$ 58,562 | \$ 89,405 | \$123,086 | \$155,027 |
| Dairy cattle sold | | 4,531 | 5,287 | 8,630 | 10,295 |
| Other livestock sales | | 1,004 | 1,626 | 2,110 | 1,890 |
| Crop sales | | 425 | 738 | 1,411 | 2,271 |
| Miscellaneous receipts | | <u>3,791</u> | <u>3,991</u> | <u>5,448</u> | <u>5,640</u> |
| Total Cash Receipts | | \$ 68,313 | \$101,047 | \$140,685 | \$175,123 |
| Increase in livestock | | -589 | 687 | 889 | 3,018 |
| Increase in feed & supplies | | 501 | 10 | 2,085 | 435 |
| Appreciation | | <u>1,609</u> | <u>3,371</u> | <u>6,243</u> | <u>5,188</u> |
| TOTAL FARM RECEIPTS | | \$ 69,834 | \$105,115 | \$149,902 | \$183,764 |
| TOTAL FARM REC. EXCL. APPREC. | | \$ 68,225 | \$101,744 | \$143,659 | \$178,576 |
| <u>Expenses</u> | | | | | |
| Hired labor | | \$ 2,503 | \$ 5,326 | \$ 8,539 | \$ 13,584 |
| Dairy grain & concentrate | | 16,993 | 23,274 | 30,095 | 36,692 |
| Other feed | | 1,632 | 1,422 | 2,227 | 1,486 |
| Machine hire | | 764 | 949 | 1,494 | 1,501 |
| Machinery repair | | 3,072 | 4,013 | 5,929 | 7,527 |
| Auto expense (farm share) | | 446 | 415 | 502 | 485 |
| Gas & oil | | 2,072 | 3,157 | 4,494 | 6,131 |
| Replacement animals | | 549 | 766 | 1,692 | 1,116 |
| Breeding fees | | 875 | 1,238 | 2,062 | 2,548 |
| Veterinary & medicine | | 1,072 | 1,617 | 2,641 | 3,098 |
| Milk marketing | | 4,893 | 7,345 | 9,676 | 12,223 |
| Cattle lease | | 0 | 55 | 87 | 125 |
| Other livestock expense | | 2,362 | 3,650 | 5,511 | 6,278 |
| Fertilizer & lime | | 2,355 | 3,446 | 6,291 | 8,000 |
| Seeds & plants | | 697 | 1,081 | 1,933 | 2,602 |
| Spray & other crop expense | | 693 | 813 | 1,438 | 1,988 |
| Land, bldg., fence repair | | 936 | 1,190 | 1,971 | 2,339 |
| Taxes & insurance | | 3,292 | 4,120 | 5,922 | 7,203 |
| Elec. & phone (farm share) | | 2,018 | 2,879 | 3,875 | 4,700 |
| Interest paid | | 5,789 | 9,300 | 12,660 | 14,845 |
| Misc. expenses (incl. rent) | | <u>1,441</u> | <u>3,088</u> | <u>4,125</u> | <u>5,609</u> |
| Total Cash Expenses | | \$ 54,454 | \$ 79,144 | \$113,164 | \$140,080 |
| Expansion livestock | | 60 | 238 | 702 | 1,062 |
| Machinery depreciation | | 6,475 | 7,623 | 11,531 | 15,287 |
| Building depreciation | | 2,001 | 3,166 | 5,605 | 5,742 |
| Unpaid family labor | | 1,844 | 1,750 | 1,821 | 1,805 |
| Interest on equity @ 5% | | <u>7,433</u> | <u>9,162</u> | <u>12,678</u> | <u>15,771</u> |
| TOTAL FARM EXPENSES | | \$ 72,267 | \$101,083 | \$145,501 | \$179,747 |
| <u>Financial Summary</u> | | | | | |
| NET CASH FARM INCOME | | \$13,859 | \$21,903 | \$27,521 | \$35,043 |
| Labor & Management Income | | \$-4,042 | \$661 | \$-1,842 | \$-1,171 |
| Number of Operators | | 1.07 | 1.18 | 1.32 | 1.34 |
| LABOR & MGT. INCOME/OPER. | | \$-3,778 | \$560 | \$-1,395 | \$-874 |
| LABOR, MGT. & OWNSHP. INC./OPER. | | \$4,673 | \$11,181 | \$12,939 | \$14,767 |

FARM BUSINESS SUMMARY BY HERD SIZE
458 New York Dairy Farms, 1984

| Item | Farms with: | 85 to 99 Cows | 100 to 149 Cows | 150 to 199 Cows | 200 to 249 Cows | 250 or More Cows |
|---|-------------|------------------|--------------------|--------------------|--------------------|---------------------|
| <u>Capital Investment</u> (end of year) | | | | | | |
| Livestock | | \$124,747 | \$166,776 | \$223,343 | \$ 317,993 | \$ 470,722 |
| Feed & supplies | | 41,199 | 60,934 | 81,393 | 113,736 | 189,321 |
| Machinery & equipment | | 111,838 | 134,403 | 183,205 | 190,946 | 259,528 |
| Land & buildings | | 242,050 | 348,070 | 415,970 | 581,058 | 879,980 |
| TOTAL INVESTMENT | | \$519,834 | \$710,183 | \$903,911 | \$1,203,733 | \$1,799,551 |
| <u>Receipts</u> | | | | | | |
| Milk sales | | \$189,618 | \$256,245 | \$343,599 | \$505,975 | \$ 838,467 |
| Dairy cattle sold | | 12,783 | 16,560 | 24,102 | 37,420 | 48,329 |
| Other livestock sales | | 2,448 | 3,855 | 5,448 | 8,275 | 9,101 |
| Crop sales | | 1,066 | 2,528 | 5,851 | 4,013 | 14,125 |
| Miscellaneous receipts | | 4,509 | 9,564 | 18,177 | 19,824 | 11,764 |
| Total Cash Receipts | | \$210,424 | \$288,752 | \$397,177 | \$575,507 | \$ 921,786 |
| Increase in livestock | | 5,264 | 2,971 | 7,534 | 4,471 | 51,943 |
| Increase in feed & supplies | | 281 | 7,022 | 6,856 | 4,218 | 14,687 |
| Appreciation | | 2,746 | 10,566 | 11,658 | 24,903 | 12,861 |
| TOTAL FARM RECEIPTS | | \$218,715 | \$309,311 | \$423,225 | \$609,099 | \$1,001,277 |
| TOTAL FARM REC. EXCL. APPR. | | \$215,969 | \$298,745 | \$411,567 | \$584,196 | \$988,416 |
| <u>Expenses</u> | | | | | | |
| Hired labor | | \$ 16,688 | \$ 27,852 | \$ 46,503 | \$ 77,411 | \$117,236 |
| Dairy grain & concentrate | | 49,523 | 61,297 | 78,388 | 115,416 | 201,481 |
| Other feed | | 1,616 | 3,305 | 3,705 | 4,065 | 10,626 |
| Machine hire | | 1,049 | 1,539 | 2,704 | 3,679 | 4,676 |
| Machinery repair | | 10,347 | 14,395 | 20,231 | 27,963 | 38,467 |
| Auto expense (farm share) | | 608 | 307 | 534 | 696 | 329 |
| Gas & oil | | 7,220 | 10,651 | 13,739 | 19,720 | 24,792 |
| Replacement animals | | 1,045 | 1,673 | 4,834 | 1,189 | 1,354 |
| Breeding fees | | 2,715 | 3,811 | 5,028 | 8,061 | 12,013 |
| Veterinary & medicine | | 3,776 | 5,339 | 6,729 | 12,980 | 20,847 |
| Milk marketing | | 15,285 | 19,404 | 26,629 | 39,971 | 52,277 |
| Cattle lease | | 150 | 104 | 0 | 0 | 732 |
| Other livestock expense | | 8,091 | 9,643 | 15,299 | 17,745 | 32,245 |
| Fertilizer & lime | | 9,363 | 13,360 | 21,445 | 26,273 | 32,100 |
| Seeds & plants | | 3,122 | 4,101 | 7,169 | 9,889 | 12,436 |
| Spray & other crop expense | | 2,126 | 4,726 | 7,328 | 6,131 | 15,530 |
| Land, bldg., fence repair | | 2,697 | 3,860 | 3,746 | 6,384 | 9,185 |
| Taxes & insurance | | 7,346 | 10,300 | 13,188 | 16,264 | 18,689 |
| Elec. & phone (farm share) | | 5,464 | 6,851 | 8,877 | 11,927 | 15,604 |
| Interest paid | | 19,120 | 27,319 | 39,003 | 50,300 | 87,833 |
| Misc. expenses (incl. rent) | | 5,312 | 8,375 | 10,210 | 20,000 | 23,600 |
| Total Cash Expenses | | \$172,663 | \$238,212 | \$335,289 | \$476,064 | \$732,052 |
| Expansion livestock | | 1,040 | 729 | 3,596 | 7,173 | 20,888 |
| Machinery depreciation | | 16,720 | 21,513 | 29,514 | 32,577 | 48,605 |
| Building depreciation | | 7,497 | 10,826 | 11,453 | 22,077 | 31,860 |
| Unpaid family labor | | 1,698 | 1,348 | 760 | 938 | 1,433 |
| Interest on equity @ 5% | | 16,884 | 22,692 | 29,569 | 38,653 | 59,533 |
| TOTAL FARM EXPENSES | | \$216,502 | \$295,320 | \$410,181 | \$577,482 | \$894,371 |
| <u>Financial Summary</u> | | | | | | |
| NET CASH FARM INCOME | | \$37,761 | \$50,540 | \$61,888 | \$99,443 | \$189,734 |
| Labor & Management Income | | \$-533 | \$3,425 | \$1,386 | \$6,714 | \$94,045 |
| Number of Operators | | 1.37 | 1.41 | 1.52 | 1.44 | 1.80 |
| LABOR & MGT. INCOME/OPER. | | \$-389 | \$2,429 | \$912 | \$4,663 | \$52,247 |
| LABOR, MGT. & OWNSHP. INC./OP. | | \$13,939 | \$26,016 | \$28,035 | \$48,799 | \$92,466 |

SELECTED BUSINESS FACTORS BY HERD SIZE
458 New York Dairy Farms, 1984

| Item | Farms with: | Less Than 40 Cows | 40 to 54 Cows | 55 to 69 Cows | 70 to 84 Cows |
|------------------------------------|-------------|----------------------|------------------|------------------|------------------|
| Number of farms | | 45 | 100 | 94 | 64 |
| <u>Size of Business</u> | | | | | |
| Number of cows | | 33 | 47 | 61 | 77 |
| Number of heifers | | 27 | 38 | 52 | 67 |
| Pounds of milk sold | | 443,000 | 664,700 | 919,900 | 1,159,400 |
| Worker equivalent | | 1.75 | 2.08 | 2.50 | 2.92 |
| Total work units | | 366 | 526 | 694 | 870 |
| Total tillable acres | | 112 | 164 | 213 | 271 |
| (Tillable acres rented)* | | (26) | (50) | (71) | (80) |
| <u>Rates of Production</u> | | | | | |
| Milk sold per cow | | 13,424 | 14,143 | 15,080 | 15,057 |
| Tons hay crop dry matter per acre | | 2.2 | 2.3 | 2.4 | 2.7 |
| Tons corn silage per acre | | 12.9 | 13.0 | 12.8 | 12.9 |
| Bushels of oats per acre | | 39.8 | 51.7 | 56.8 | 49.5 |
| <u>Labor Efficiency</u> | | | | | |
| Cows per worker | | 19 | 23 | 24 | 26 |
| Pounds milk sold per worker | | 253,143 | 319,567 | 367,960 | 397,055 |
| Work units per worker | | 209 | 253 | 278 | 298 |
| <u>Feed Costs</u> | | | | | |
| Feed purchased per cow | | \$515 | \$495 | \$493 | \$477 |
| Crop expense per cow | | \$113 | \$114 | \$158 | \$164 |
| Feed cost per cwt. milk | | \$3.84 | \$3.50 | \$3.27 | \$3.16 |
| Feed & crop exp. per cwt. milk | | \$5.05 | \$4.52 | \$4.56 | \$4.38 |
| % feed is of milk receipts | | 29% | 26% | 24% | 24% |
| Tons forage dry matter per cow | | 7.6 | 7.7 | 7.8 | 8.0 |
| Tillable acres per cow | | 3.4 | 3.5 | 3.5 | 3.5 |
| Fertilizer & lime per crop acre | | \$21 | \$21 | \$30 | \$30 |
| <u>Machinery & Labor Costs</u> | | | | | |
| Total machinery costs | | \$14,820 | \$18,829 | \$27,749 | \$35,813 |
| Machinery cost per cow | | \$449 | \$401 | \$455 | \$465 |
| Machinery cost per cwt. milk | | \$3.35 | \$2.83 | \$3.02 | \$3.09 |
| Labor cost per cow | | \$425 | \$376 | \$364 | \$358 |
| Labor cost per cwt. milk | | \$3.17 | \$2.66 | \$2.42 | \$2.38 |
| <u>Capital Efficiency</u> | | | | | |
| Investment per worker | | \$121,378 | \$131,148 | \$151,046 | \$156,783 |
| Investment per cow | | \$6,247 | \$5,683 | \$6,190 | \$5,795 |
| Investment per cwt. milk | | \$48 | \$41 | \$41 | \$39 |
| Land & buildings per cow | | \$3,558 | \$2,962 | \$3,176 | \$2,852 |
| Machinery investment per cow | | \$1,188 | \$1,125 | \$1,257 | \$1,240 |
| Capital turnover | | 3.0 | 2.6 | 2.5 | 2.5 |
| <u>Other</u> | | | | | |
| Price per cwt. milk sold | | \$13.22 | \$13.45 | \$13.38 | \$13.37 |
| Acres hay crops* | | 77 | 104 | 125 | 140 |
| Acres corn silage* | | 17 | 28 | 41 | 53 |

*Average of all farms.

SELECTED BUSINESS FACTORS BY HERD SIZE
458 New York Dairy Farms, 1984

| Item | Farms with: | 85 to 99 Cows | 100 to 149 Cows | 150 to 199 Cows | 200 to 249 Cows | 250 or More Cows |
|------------------------------------|-------------|------------------|--------------------|--------------------|--------------------|---------------------|
| Number of farms | | 43 | 56 | 25 | 16 | 15 |
| <u>Size of Business</u> | | | | | | |
| Number of cows | | 91 | 124 | 170 | 229 | 359 |
| Number of heifers | | 83 | 111 | 134 | 200 | 285 |
| Pounds of milk sold | | 1,399,400 | 1,878,500 | 2,553,000 | 3,692,600 | 6,247,600 |
| Worker equivalent | | 3.08 | 3.92 | 4.67 | 6.17 | 8.58 |
| Total work units | | 1,030 | 1,398 | 1,907 | 2,541 | 3,801 |
| Total tillable acres | | 290 | 383 | 549 | 622 | 790 |
| (Tillable acres rented)* | | (101) | (136) | (220) | (222) | (260) |
| <u>Rates of Production</u> | | | | | | |
| Milk sold per cow | | 15,378 | 15,149 | 15,018 | 16,125 | 17,403 |
| Tons hay crop dry matter/acre | | 2.7 | 2.9 | 3.0 | 3.3 | 4.0 |
| Tons corn silage per acre | | 13.4 | 13.8 | 14.4 | 15.4 | 16.3 |
| Bushels of oats per acre | | 53.0 | 45.8 | 50.1 | 57.1 | 80.0 |
| <u>Labor Efficiency</u> | | | | | | |
| Cows per worker | | 30 | 32 | 36 | 37 | 42 |
| Pounds milk sold/worker | | 454,351 | 479,209 | 546,681 | 598,476 | 728,159 |
| Work units per worker | | 334 | 357 | 408 | 412 | 443 |
| <u>Feed Costs</u> | | | | | | |
| Feed purchased per cow | | \$544 | \$494 | \$461 | \$504 | \$561 |
| Crop expense per cow | | \$161 | \$179 | \$211 | \$185 | \$167 |
| Feed cost per cwt. milk | | \$3.54 | \$3.26 | \$3.07 | \$3.13 | \$3.22 |
| Feed & crop exp./cwt. milk | | \$4.70 | \$4.62 | \$4.62 | \$4.38 | \$4.36 |
| % feed is of milk receipts | | 26% | 24% | 23% | 23% | 24% |
| Tons forage dry matter/cow | | 8.1 | 8.0 | 8.7 | 8.5 | 8.0 |
| Tillable acres per cow | | 3.2 | 3.1 | 3.2 | 2.7 | 2.2 |
| Fertilizer & lime/crop acre | | \$32 | \$35 | \$39 | \$42 | \$41 |
| <u>Machinery & Labor Costs</u> | | | | | | |
| Total machinery costs | | \$41,499 | \$54,991 | \$75,651 | \$94,090 | \$129,309 |
| Machinery cost per cow | | \$456 | \$443 | \$445 | \$411 | \$360 |
| Machinery cost per cwt. milk | | \$2.97 | \$2.93 | \$2.96 | \$2.55 | \$2.07 |
| Labor cost per cow | | \$337 | \$338 | \$360 | \$399 | \$375 |
| Labor cost per cwt. milk | | \$2.19 | \$2.23 | \$2.39 | \$2.47 | \$2.15 |
| <u>Capital Efficiency</u> | | | | | | |
| Investment per worker | | \$168,777 | \$181,169 | \$193,557 | \$195,094 | \$209,738 |
| Investment per cow | | \$5,590 | \$5,636 | \$5,165 | \$5,144 | \$4,699 |
| Investment per cwt. milk | | \$37 | \$38 | \$35 | \$33 | \$29 |
| Land & buildings per cow | | \$2,603 | \$2,762 | \$2,377 | \$2,483 | \$2,298 |
| Machinery investment per cow | | \$1,203 | \$1,067 | \$1,047 | \$816 | \$678 |
| Capital turnover | | 2.4 | 2.3 | 2.1 | 2.0 | 1.8 |
| <u>Other</u> | | | | | | |
| Price per cwt. milk sold | | \$13.55 | \$13.64 | \$13.46 | \$13.70 | \$13.42 |
| Acres hay crops* | | 154 | 176 | 258 | 237 | 245 |
| Acres corn silage* | | 71 | 102 | 144 | 235 | 326 |

*Average of all farms.

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
458 New York Dairy Farms, January 1, 1985

| Item | Farms with: | Less Than 40 Cows | 40 to 54 Cows | 55 to 69 Cows | 70 to 84 Cows | 85 to 99 Cows |
|--|-------------|----------------------|--------------------|--------------------|--------------------|--------------------|
| Number of farms | | 45 | 100 | 94 | 64 | 43 |
| <u>Assets</u> | | | | | | |
| Livestock (includes discounted lease payments) | | \$ 39,803 (0) | \$ 59,013 (22) | \$ 81,180 (0) | \$100,161 (25) | \$124,747 (0) |
| Feed & supplies | | 11,239 | 17,653 | 26,056 | 34,432 | 41,199 |
| Machinery & equip (includes discounted lease payments) | | 40,617 (215) | 55,212 (1,228) | 77,650 (981) | 98,722 (771) | 112,637 (799) |
| Land & buildings (includes discounted lease payments) | | 121,757 (608) | 144,453 (2,293) | 194,790 (1,080) | 227,936 (2,649) | 246,366 (4,316) |
| Co-op investment | | 950 | 2,842 | 3,971 | 4,747 | 7,902 |
| Accounts receivable | | 5,903 | 8,170 | 11,281 | 14,229 | 17,314 |
| Cash & checking accounts | | 1,084 | 1,664 | 2,028 | 3,492 | 2,463 |
| Total Farm Assets | | \$221,171 | \$289,007 | \$396,956 | \$483,719 | \$552,628 |
| Savings accounts | | 2,892 | 3,025 | 2,751 | 4,773 | 3,694 |
| Cash value life insurance | | 2,071 | 2,119 | 3,115 | 2,670 | 1,908 |
| Stocks & bonds | | 990 | 2,082 | 2,195 | 3,755 | 2,155 |
| Nonfarm real estate | | 3,853 | 2,905 | 8,897 | 5,656 | 3,616 |
| Auto (personal share) | | 1,464 | 1,903 | 2,005 | 1,806 | 1,979 |
| All other | | 7,871 | 9,212 | 6,298 | 6,887 | 5,231 |
| Total Nonfarm Assets | | \$ 19,141 | \$ 21,246 | \$ 25,261 | \$ 25,547 | \$ 18,583 |
| TOTAL ASSETS | | \$240,312 | \$310,253 | \$422,217 | \$509,266 | \$571,211 |
| <u>Liabilities</u> | | | | | | |
| Long-term | | \$ 48,126 | \$ 61,437 | \$ 80,274 | \$ 97,144 | \$130,575 |
| Intermediate | | 20,644 | 35,075 | 54,202 | 59,859 | 68,539 |
| Financial lease | | 823 | 3,543 | 2,061 | 3,445 | 5,115 |
| Short-term | | 500 | 2,191 | 2,547 | 2,059 | 5,511 |
| Other farm accounts | | 2,414 | 3,526 | 4,311 | 5,789 | 5,209 |
| Total Farm Liabilities | | \$ 72,507 | \$105,772 | \$143,395 | \$168,296 | \$214,949 |
| Total Nonfarm Liabilities | | 190 | 830 | 856 | 1,816 | 570 |
| TOTAL LIABILITIES | | \$ 72,697 | \$106,602 | \$144,251 | \$170,112 | \$215,519 |
| Farm Net Worth (Eq. Cap.) | | \$148,664 | \$183,235 | \$253,561 | \$315,423 | \$337,679 |
| FAMILY NET WORTH | | \$167,615 | \$203,651 | \$277,966 | \$339,154 | \$355,692 |
| <u>Financial Measures</u> | | | | | | |
| Percent equity | | 70% | 66% | 66% | 67% | 62% |
| Farm debt per cow | | \$2,133 | \$2,204 | \$2,351 | \$2,130 | \$2,311 |
| Available for debt service & living | | \$22,264 | \$33,907 | \$43,287 | \$50,678 | \$57,557 |
| Scheduled annual debt pymt. | | \$13,695 | \$21,704 | \$29,930 | \$35,772 | \$45,664 |
| Scheduled debt pymts./cow | | \$398 | \$447 | \$486 | \$450 | \$487 |
| Payment as % of milk check | | 23% | 24% | 24% | 23% | 24% |
| Debt/Asset ratio - long-term | | 0.40 | 0.43 | 0.41 | 0.43 | 0.53 |
| Debt/Asset ratio - intermediate & short-term | | 0.22 | 0.28 | 0.29 | 0.26 | 0.26 |
| Cash flow coverage ratio | | 0.57 | 0.78 | 0.78 | 0.81 | 0.75 |

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
458 New York Dairy Farms, January 1, 1985

| Item | Farms with: | 100 to 149 Cows | 150 to 199 Cows | 200 to 249 Cows | 250 or More Cows |
|--|-------------|--------------------|--------------------|--------------------|---------------------|
| Number of farms | | 56 | 25 | 16 | 15 |
| <u>Assets</u> | | | | | |
| Livestock (includes discounted lease payments) | | \$166,776 | \$ 223,343 | \$ 317,993 | \$ 470,722 |
| Feed & supplies | | (0) | (0) | (0) | (0) |
| Machinery & equip (includes discounted lease payments) | | 60,934 | 81,393 | 113,736 | 189,321 |
| Land & buildings (includes discounted lease payments) | | 135,106 | 184,455 | 196,961 | 260,222 |
| Co-op investment | | (703) | (1,250) | (6,015) | (694) |
| Accounts receivable | | 348,754 | 415,970 | 581,058 | 879,980 |
| Cash & checking accounts | | (684) | (0) | (0) | (0) |
| Total Farm Assets | | 14,180 | 28,568 | 32,536 | 41,442 |
| Savings accounts | | 23,033 | 31,420 | 50,181 | 76,619 |
| Cash value life insurance | | 5,401 | 4,236 | 9,117 | 6,807 |
| Stocks & bonds | | \$754,184 | \$ 969,385 | \$1,301,582 | \$1,925,113 |
| Nonfarm real estate | | 3,921 | 8,721 | 3,796 | 9,126 |
| Auto (personal share) | | 3,560 | 6,789 | 3,796 | 9,126 |
| All other | | 5,664 | 8,108 | 2,455 | 4,079 |
| | | 7,632 | 13,880 | 0 | 6,867 |
| | | 1,817 | 3,173 | 1,063 | 667 |
| | | 8,148 | 7,340 | 7,019 | 4,411 |
| Total Nonfarm Assets | | \$ 30,742 | \$ 48,000 | \$ 16,029 | \$ 27,500 |
| TOTAL ASSETS | | \$784,926 | \$1,017,385 | \$1,317,611 | \$1,9523,613 |
| <u>Liabilities</u> | | | | | |
| Long-term | | \$164,375 | \$218,110 | \$272,541 | \$399,185 |
| Intermediate | | 116,134 | 135,883 | 228,449 | 298,210 |
| Financial lease | | 1,387 | 1,250 | 6,015 | 694 |
| Short-term | | 7,550 | 10,275 | 5,801 | 13,752 |
| Other farm accounts | | 10,893 | 12,494 | 15,708 | 22,605 |
| Total Farm Liabilities | | \$300,339 | \$378,012 | \$528,514 | \$734,446 |
| Total Nonfarm Liabilities | | 742 | 1,578 | 250 | 400 |
| TOTAL LIABILITIES | | \$301,081 | \$379,590 | \$528,764 | \$734,846 |
| Farm Net Worth (Eq. Cap.) | | \$453,845 | \$591,373 | \$773,068 | \$1,190,667 |
| FAMILY NET WORTH | | \$483,845 | \$637,795 | \$788,847 | \$1,217,767 |
| <u>Financial Measures</u> | | | | | |
| Percent equity | | 62% | 63% | 60% | 62% |
| Farm debt per cow | | \$2,384 | \$2,160 | \$2,259 | \$1,918 |
| Available for debt service & living | | \$79,761 | \$103,180 | \$150,134 | \$277,674 |
| Scheduled annual debt pymt. | | \$67,136 | \$92,504 | \$118,968 | \$186,887 |
| Scheduled debt pymts./cow | | \$531 | \$526 | \$508 | \$488 |
| Payment as % of milk check | | 26% | 27% | 34% | 22% |
| Debt/Asset ratio - long-term | | 0.47 | 0.52 | 0.47 | 0.45 |
| Debt/Asset ratio - intermediate & short-term | | 0.31 | 0.27 | 0.33 | 0.30 |
| Cash flow coverage ratio | | 0.78 | 0.76 | 0.94 | 1.18 |

MEASURE YOUR PERFORMANCE

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

The Farm Business Chart on page 20 and the Financial Analysis Chart on page 21 can be used to identify strengths and weaknesses by comparing your business with a large number of New York dairy farms summarized for the previous year. It is recommended that you use more than one standard for comparison when analyzing the farm business.

STRONG POINTS:

AVERAGE:

| | |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

NEED IMPROVEMENT:

| |
|-------|
| _____ |
| _____ |
| _____ |

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

Another way to measure your management performance is to compare your current business factors with those from previous years. Page 19 is provided for this purpose. Answering the following questions may also help evaluate your farm business progress.

1. Do livestock number, labor force, and crop acres make up a well balanced unit of resources?
2. Have rates of production shown a steady increase?
3. When will milk output per worker reach 700,000 pounds?
4. Have some costs of production declined over the last two years?
5. Is net farm income improving fast enough to meet your needs?
6. Is growth in net worth keeping up with increased capital investment?
7. Have you reached the business goals set for 1985 and have you set new goals for 1986?