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WESTERN PLAINS REGION FARM BUSINESS SUMMARY 1974

Kind of expense			FARM EXPENSES	
brought forward			1	2
			Enter all items in this column	Hired labor enter here on pages 48

**GOOD RECORDS
ARE ESSENTIAL**

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WESTERN PLAINS REGION
DAIRY FARM BUSINESS SUMMARY
1974

This publication presents a summary of the 1974 farm business records of 32 Livingston, Wyoming, Niagara, Genesee, Monroe, and Orleans County dairy farms. These records were submitted by dairymen participating in Cooperative Extension's Farm Business Management Program. There are approximately 40 counties in New York State in which such projects are conducted in cooperation with the College of Agriculture and Life Sciences at Cornell.

The primary objectives of the business management program are to (1) assist farmers in developing and maintaining more complete farm business data for use in management decisions and (2) to help farmers improve their management skills through appropriate use of farm record data and application of modern decision making techniques. The rapidly increasing size of New York dairy farms and the dynamic nature of the environment within which they operate make farm incomes increasingly dependent upon the accuracy of management decisions. An indication of the type and magnitude of changes taking place in the Western Plains region are shown below.

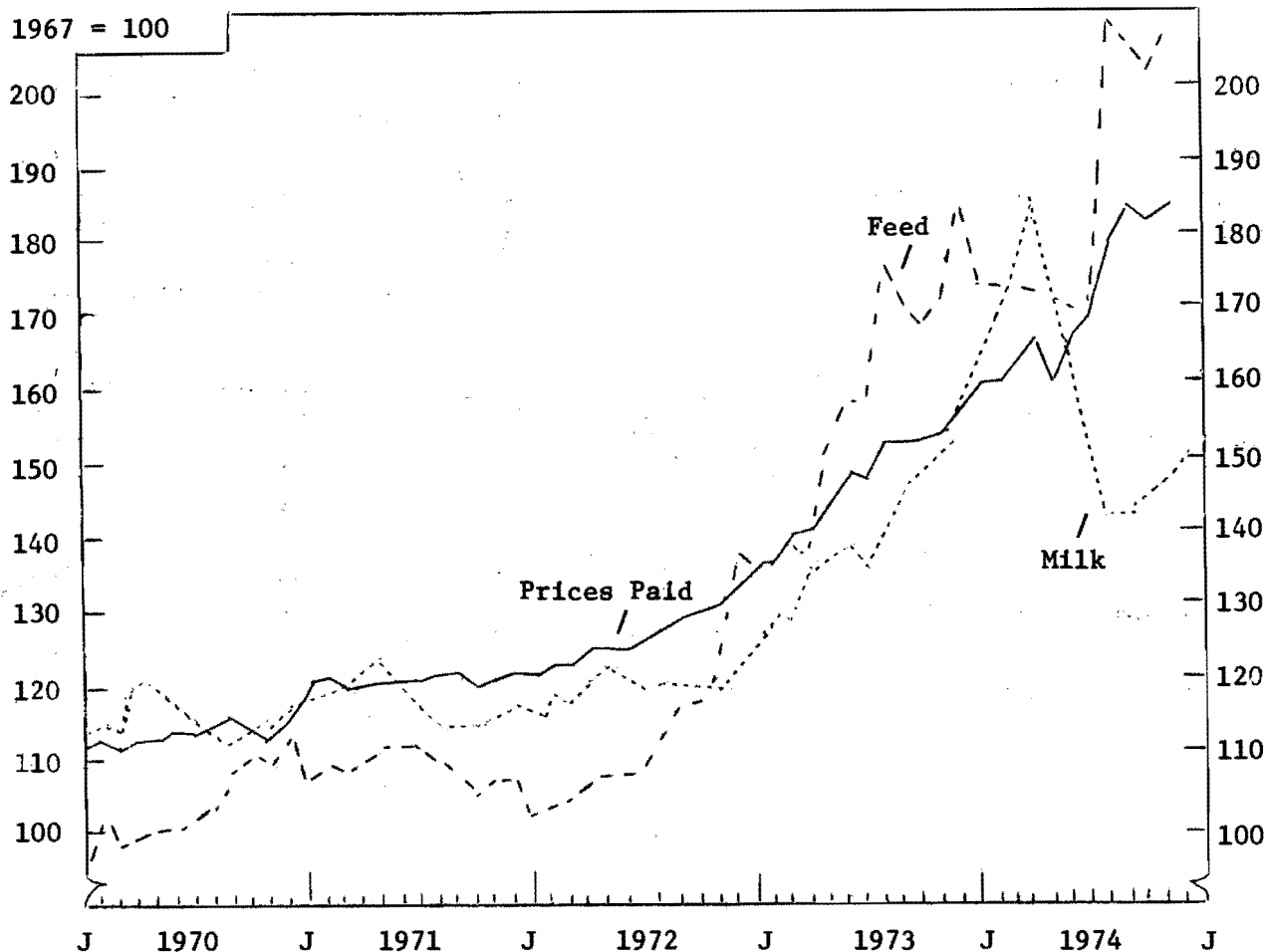
	<u>1968</u>	<u>1971</u>	<u>1974</u>
Number of farms	70	30	32
Cows per farm	67	85	109
Machinery per farm	\$29,854	\$40,046	\$ 59,547
Investment per man	\$56,716	\$80,023	\$104,675
Investment per cow	\$ 2,116	\$ 2,448	\$ 3,044
Milk sold per cow (lbs.)	12,300	12,900	13,500
Milk sold per man (lbs.)	328,600	421,300	465,300
Milk price per Cwt.	\$ 5.43	\$ 6.13	\$ 8.56
Feed bought per cow	117	157	299
Crop expense per cow	53	76	115
Gas and oil per cow	26	26	41
Fertilizer expense per acre	12	14	21

This report is organized into three sections. The first two sections present the data for the 32 Western Plains farms. The first section presents a summary of the 1974 business record. Analysis of this record in terms of some of the major measures of management performance is presented in the second section. The last section presents average 1973 data for New York State as well as family living and dairy business summary data from other states.

This publication has been prepared in workbook form to assist individual farmers in analyzing their businesses. Any dairy farm business can be analyzed by systematically following the procedures outlined.

This summary was prepared by Eddy L. LaDue, Department of Agricultural Economics, New York State College of Agriculture and Life Sciences, in cooperation with David L. Thorp, Livingston County Cooperative Extension, William D. Goewey, Wyoming County Cooperative Extension and George Allhusen, Western Plains Region Cooperative Extension Dairy and Field Crops Team.

PRICES RECEIVED AND PAID BY NEW YORK DAIRY FARMERS
(Seasonally Adjusted to Show Trends)



SOURCE: U.S.D.A. Agricultural Prices.

The spectacular changes in prices received and paid have had a disruptive effect on 1974 dairy farm incomes. The 1974 feed price index averaged 17 percent higher than in 1972, 69 percent higher than in 1970 through 1972. The 1974 index of prices paid rose 18 percent over 1973. The blend price received for 3.5 percent milk averaged \$8.26 per cwt. in 1974, up 13 percent from 1973, but last quarter prices were down 2.5 percent from year-earlier levels.

AVERAGE YEARLY PRICES RECEIVED AND PAID BY N.Y. FARMERS, 1964 to 1974

Year	Milk (cwt.)	Slaughter Cows (cwt.)	Dairy Cows (head)	Dairy Ration (ton)	Wages per Month With House	Prices Paid by New York Dairymen 1967 = 100
1964	\$4.21	\$13.17	\$237	\$75	\$228	92
1969	5.66	19.30	336	74	321	107
1970	5.89	20.70	353	78	356	113
1971	6.02	21.20	372	83	375	120
1972	6.25	24.50	410	85	393	126
1973	7.30	32.80	494	119	418	146
1974*	8.26	28.02	509	141	435	172
1975	—	—	—	—	—	—

* Preliminary.

SUMMARY OF THE FARM BUSINESS

Physical resources used, cash flows, and financial structure are all important facets of a business. Each of these facets is summarized in detail on the following pages.

Physical Resources and Business Characteristics

Nineteen of the 32 Western Plains businesses were individual proprietorships, 12 were partnerships and one was a corporation.

Nearly half of the farmers kept records in the Cornell Farm account book (or other similar books). Six farmers used the Cornell Electronic Record System (CAMIS); five used Agrifax. The remainder used Farm Bureau, Agway or other record keeping systems. All but two of the farms used some type of Dairy Records Service; 16 were on DHIC and 9 were on owner sample.

LABOR AND LAND USED
32 Western Plains Farms, 1974

<u>Labor Force</u>	<u>My Farm</u>	<u>Average</u>
Operator, months	_____	16
Family Paid, months	_____	2
Family Unpaid, months	_____	1
Hired, months	_____	20
Total Months	_____	39
Man Equivalent (years)	_____	3.2
Average Age of Operator	_____	41
<u>Land</u>	<u>Farms Reporting</u>	
Total Acres Owned	30	324
Total Crop Acres	32	355
Crop Acres Rented	30	161

Although stanchion barns remain the most predominate method of housing for all of New York State, two-thirds of the farms in this group had free stall barns.

CAPITAL INVESTMENT, JANUARY 1, 1975
32 Western Plains Farms

<u>Item</u>	<u>My Farm</u>	<u>Average</u>	<u>Average Per Cow</u>
Livestock	_____	\$ 82,065	\$ 753
Feed and Supplies	_____	36,142	332
Machinery & Equipment	_____	59,547	546
Land and Buildings	_____	154,066	1,413
TOTAL INVENTORY	_____	\$331,820	\$3,044

Machinery and Real Estate Calculations

Expenditures for both machinery and buildings involve purchase of items which have a large capital cost and are used over a number of years. Because each item is used over a number of years, its capital cost is an expense which must be spread over the life of the investment. Depreciation is the amount of the capital cost which is allocated to this year's use of the investment. Machinery and building depreciation are both included in farm expenses.

MACHINERY & EQUIPMENT DEPRECIATION 32 Western Plains Farms, 1974

Item	My Farm	Average 32 Farms
Beginning Inventory	\$ _____	\$50,010
Machinery Purchases	_____	<u>16,667</u>
Total (1)	\$ _____	\$66,677
End of Year Inventory	\$ _____	\$59,547
Machinery Sold	_____	<u>566</u>
Total (2)	\$ _____	60,113
DEPRECIATION (1 minus 2)	\$ _____	\$ 6,564
Percent Depreciation	_____ %	10%

LAND & BUILDING INVENTORY BALANCE 32 Western Plains Farms, 1974

Item	My Farm	Average 32 Farms
Beginning Market Value	\$ _____	\$139,798
Cost of New Real Estate	\$ _____	\$14,212
Less Lost Capital	- _____	<u>- 3,127</u>
Value of New Added	+ _____	+ 11,085
Less Building Depreciation	- _____	- 3,708
Less Real Estate Sold	- _____	- <u>140</u>
Total Without Depreciation	\$ _____	<u>\$147,035</u>
Appreciation of Beginning Real Estate	+ _____	+ <u>7,031</u>
End of Year Market Value	\$ _____	<u>\$154,066</u>

Lost capital is the difference between the cost of new buildings and the amount these improvements added to the value of the farm. It is not included in farm expenses, since building depreciation is based on the full cost of new buildings and will account for lost capital over the life of the building. Building depreciation was taken from the farm depreciation schedule and is included as a farm expense. Real estate appreciation was estimated by each farm operator. It is the increase in value of the beginning package of real estate, had no land or buildings been added during the year. It averaged 5.0% on these farms in 1974.

Receipts

A successful farm business must have a total income large enough to cover operating and overhead costs and leave a return for the operator's labor and management. The table below lists the sources and amounts of income for this group of dairy farms.

FARM RECEIPTS
32 Western Plains Farms, 1974

Item	My Farm	Average 32 Farms	
		Amount	Percent
Milk sales	\$ _____	\$126,187	78
Crop sales	_____	4,682	3
Dairy cattle sold	_____	8,739	5
Calves & other livestock sales	_____	2,661	2
Gas tax refunds	_____	226	} 3
Government payments	_____	481	
Work off farm	_____	726	
Custom machine work	_____	1,089	
Other	_____	2,405	
Total Cash Receipts	\$ _____	147,196	91
Increase in livestock	_____	4,405	3
Increase in feed & supplies	_____	9,783	6
TOTAL FARM RECEIPTS	\$ _____	\$161,384	100

In a normal year most going farm businesses are expanding and therefore have an increase in inventory due to more livestock and crops raised. These increases are included in the farm receipts since the costs of producing or acquiring these assets are in the expenses.

The increase in livestock inventories on these Western Plains farms resulted from an increase in herd size of eight cows. Although market price for both cull cows and replacement animals declined sharply during the year, inventory values for livestock on these farms were reduced very little. A better crop year, higher end of year crop prices and larger Fall feed corn purchases contributed to the increase in feed and supplies.

INCOME ANALYSIS

Item	My Farm	Western Plains Average	
		32 Farms 1974	23 Farms 1973
Average price/cwt. milk sold	\$ _____	\$8.56	\$7.32
Milk sales per cow	\$ _____	\$1,158	\$977
Total cash receipts/man	\$ _____	\$46,434	\$42,423

Expenses

With the large amount of cash flowing through a farm business today it is important that the manager study expenses closely. Classifying expenses into the categories on this page will help you identify those that need tighter control.

FARM EXPENSES
32 Western Plains Farms, 1974

Item	My Farm	Average 32 Farms Amount	Percent
<u>Hired Labor</u>	\$ _____	\$ 15,079	11
<u>Feed</u>			
Dairy Concentrate	\$ _____	32,610	23
Other Feed	_____	1,212	1
<u>Machinery</u>			
Machine Hire	\$ _____	1,529	1
Machinery Repairs	_____	6,386	5
Auto Expense (farm share)	_____	304	*
Gas & Oil	_____	4,415	3
<u>Livestock</u>			
Purchased Livestock	\$ _____	6,327	5
Breeding Fees	_____	1,299	1
Veterinary & Medicine	_____	2,516	2
Milk Marketing	_____	2,906	2
Other Livestock Expense	_____	3,508	3
<u>Crops</u>			
Fertilizer & Lime	\$ _____	7,396	5
Seeds & Plants	_____	2,705	2
Spray, Other Crop Expense	_____	2,478	2
<u>Real Estate</u>			
Land, Building, Fence Repair	\$ _____	1,684	1
Taxes	_____	3,118	2
Insurance	_____	1,685	1
Rent	_____	3,210	2
<u>Other</u>			
Telephone (farm share)	\$ _____	294	*
Electricity (farm share)	_____	1,591	1
Interest Paid	_____	8,433	6
Miscellaneous	_____	3,149	2
Total Cash Expenses	\$ _____	\$113,834	81
<u>Non-Cash Items</u>			
Machinery Depreciation	\$ _____	6,564	5
Building Depreciation	_____	3,708	3
Unpaid Family Labor	_____	339	*
Interest on Equity Capital @ 7%	_____	16,182	11
TOTAL FARM EXPENSES	\$ _____	\$140,627	100

* Less than .5 percent.

Financial Summary of Year's Business

The net returns for any business can be measured in several different ways. Each measure calculates the net return to a selected resource or group of resources such as labor or capital. Some of the common farm business measures are given below.

Net cash farm income reflects the cash available from the year's operation of the farm business for family living, payments on debt principal, and new purchases or investments. A family may have had additional cash available for these items if one or more family members has non-farm income.

NET CASH FARM INCOME Western Plains Farms, 1974 & 1973

Item	My Farm	32 Farms 1974	23 Farms 1973
Cash Farm Receipts	\$ _____	\$147,196	\$106,057
Cash Farm Expenses	_____	<u>113,834</u>	<u>81,242</u>
NET CASH FARM INCOME	\$ _____	\$ 33,362	\$ 24,815

Labor and Management Income is the return to the farm operator(s) for labor and management. It is the measure most commonly used when comparing the profitability of farm businesses. Labor and management income is the amount left after paying all cash farm expenses and deducting charges for depreciation, unpaid family labor and interest on equity capital. Increases in feed and supply inventories are included as farm receipts and are partly offset by the increased costs associated with growing and harvesting crops.

LABOR AND MANAGEMENT INCOME Western Plains Farms, 1974 & 1973

Item	My Farm	32 Farms 1974	23 Farms 1973
Total farm receipts	\$ _____	\$161,384	\$126,301
Total farm expenses	_____	<u>140,627</u>	<u>102,503</u>
LABOR AND MANAGEMENT INCOME/FARM	\$ _____	\$ 20,757	\$ 23,798
Number of Operators	_____	1.5	1.3
LABOR AND MANAGEMENT INCOME/OPER	\$ _____	\$ 14,132	\$ 18,250

Labor incomes on this group of farms were reduced by the deteriorating cost-price situation experienced by dairy farmers during 1974. In spite of this, however, the level of incomes on these farms remained above those found in many other parts of New York State. Part of this may be attributable to use of more home grown grain and less dependence on purchased concentrates.

In addition to labor and management income, the owner-operator of a farm business should receive income for his capital investment in the business. He receives this income in the form of interest on his equity in the business and real estate appreciation. These two "ownership income" items are added to labor and management income to determine labor, management, and ownership income. This indicates the total return the owner-operator receives for owning and operating the business.

LABOR, MANAGEMENT AND OWNERSHIP INCOME
32 Western Plains Farms, 1974

Item	My Farm	Average 32 Farms
Labor and Management income per farm	\$ _____	\$20,757
Add: Real estate appreciation	_____	7,031
Add: Interest on equity capital @ 7%	_____	16,182
LABOR, MANAGEMENT & OWNERSHIP INCOME PER FARM	\$ _____	\$43,970
Number of operators	_____	1.5
LABOR, MANAGEMENT & OWNERSHIP INCOME PER OPERATOR	\$ _____	\$29,937

Return on equity capital can be computed with or without real estate appreciation. To calculate return on equity capital (including real estate appreciation) the value of operator's labor and management is deducted from labor, management and ownership income. This return to equity capital is divided by the owners' equity investment in the business to compute the rate of return on equity capital. To compute return on equity capital excluding real estate appreciation, real estate appreciation must be deducted from ownership income.

RETURN ON EQUITY CAPITAL
32 Western Plains Farms, 1974

Item	My Farm	Average 32 Farms
	<u>Including Real Estate Appreciation</u>	
Labor, mgt. and ownership income	\$ _____	\$43,970
Less: Value of operator's labor & management*	_____	<u>10,628</u>
Return on equity capital	\$ _____	\$33,342
Rate of return on equity capital (equity capital = \$231,169)	_____ %	14%
	<u>Excluding Real Estate Appreciation</u>	
Return on equity capital (from above)	\$ _____	\$33,342
Less: Real estate appreciation	_____	<u>7,031</u>
Return on equity capital	\$ _____	\$26,311
Rate of return on equity capital	_____ %	11%

*As estimated by the operators. The commonly used charge of \$6,000 per operator for labor plus 5% of cash receipts would provide a value of \$16,172. Using this value, the return on equity capital would be 12% and 9% when real estate appreciation is included and excluded, respectively.

Farm Family Financial Situation

Appropriate use of credit is an important factor in the successful operation of any business. Too little credit may be costly in terms of foregone investment opportunities. Too much credit can cause cash flow problems and limit flexibility in considering future capital investment decisions.

FARM FAMILY FINANCIAL SITUATION
32 Western Plains Farms, January 1, 1975

Item	My Farm	Average 32 Farms
<u>Assets</u>		
Livestock	\$ _____	\$ 82,066
Feed and supplies	_____	36,143
Machinery and equipment	_____	59,548
Land and buildings	_____	154,067
Co-op investment	_____	10,239
Accounts receivable	_____	15,803
Cash and checking account	_____	<u>3,273</u>
Total Farm Assets	\$ _____	\$361,139
Savings accounts	_____	1,087
Cash value life insurance	_____	2,488
Stocks and bonds	_____	870
Non-farm real estate	_____	4,073
Auto (personal share)	_____	1,132
All other	_____	<u>1,279</u>
Total Non-farm Assets	\$ _____	\$ 10,929
TOTAL ASSETS	\$ _____	\$372,068
<u>Liabilities</u>		
Real estate mortgage	\$ _____	\$ 54,446
Liens on cattle & equipment	_____	54,622
Installment contracts	_____	1,129
Notes & other farm debt	_____	<u>19,773</u>
Total Farm Liabilities	\$ _____	\$129,970
Non-farm Liabilities	_____	<u>1,235</u>
TOTAL LIABILITIES	\$ _____	\$131,205
Farm Net Worth (equity capital)	\$ _____	\$231,169
Family Net Worth	\$ _____	\$240,863

Farm Net Worth or equity capital is total farm assets less total farm liabilities. It is the amount of farm capital owned by the owner-operator. Family net worth is the difference between total assets and total liabilities. Both measures are shown at the bottom of page 9.

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

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

Debt payments planned for 1975 are the scheduled debt payments as of January, 1975. Based on the 1974 herd size, level of milk production, and milk price, this scheduled level of payments will average \$236 per cow and 21 percent of milk receipts. Some farms in the group have scheduled debt payments exceeding 30 percent of the milk receipts. Committing this much cash inflow to debt payments puts a "big squeeze" on cash available for family living and operating the business.

FINANCIAL MEASURES & DEBT COMMITMENT
32 Western Plains Farms, January 1, 1975

Item	My Farm	Average of 32 Farms
<u>Payment Ability</u>		
Net cash farm income	\$ _____	\$33,362
Add: Interest paid	_____	8,433
CASH AVAILABLE FOR DEBT SERVICE & LIVING	\$ _____	\$41,795
Less: Cash family living expenses	_____	- 11,750*
CASH AVAIL. FOR DEBT PYMT. & CAP. PURCH.	\$ _____	\$30,045
Debt Pymt. planned for 1975	\$ _____	\$26,011
<u>Measures of Debt Commitment & Equity Position</u>		
Scheduled debt pymts. per cow	\$ _____	\$ 236
Scheduled debt pymts. as % of milk sales	_____ %	21%
Farm debt per cow	\$ _____	\$ 1,182
Percent equity (total)	_____ %	65%

*Estimated at \$8,000 per family and one family per operator.

ANALYSIS OF THE FARM BUSINESS

Research and experience have shown that certain factors affect farm incomes. Many of these factors are within the control of management. In analyzing a farm business, we examine it in terms of these basic factors. This will be done on the pages that follow. Average data for the 609 New York farms that participated in the 1973 Farm Business Management Program are presented for comparison.

Size of Business

Studies have shown that in general larger farms pay better. Two basic reasons for this are that larger businesses make possible more efficient use of overhead inputs such as labor and machinery and there are more units of production (milk) on which to make a profit. However, if a large farm is poorly operated, the losses also will be larger.

MEASURES OF SIZE OF BUSINESS
32 Western Plains Farms, 1974

Measure	My Farm	Average 32 Farms, 1974	Average 609 N.Y. Farms, 1973
Number of cows	_____	109	69
Number of heifers	_____	81	46
Pounds of milk sold	_____	1,474,900	851,900
Man equivalent	_____	3.2	2.2
Total work units	_____	1,252	750
Total acres of crops	_____	355	198

Volume of output is one measure of size. In the table below, the 609 New York farms for 1973 are sorted by number of cows and the labor income is shown for each size group. In general, the large farms paid better.

COWS PER FARM AND LABOR AND MANAGEMENT INCOME
609 New York Dairy Farms, 1973

Number of cows	Number of farms	Percent of farms	Labor & Management Income per Operator
Less than 40	92	15	\$ 4,310
40 - 54	179	29	7,670
55 - 69	123	20	9,920
70 - 84	71	12	9,310
85 - 99	40	7	12,220
100 - 114	36	6	11,330
115 - 129	23	4	14,950
130 - 149	19	3	14,730
150 & Over	26	4	27,720

Rates of Production

Crop yields and rates of animal production have an important influence on farm incomes. Although maximum possible yields and production levels are not necessarily the most profitable rates at which to produce, low yields and/or production levels definitely do limit income.

CROP YIELDS & MILK SOLD PER COW
32 Western Plains Farms, 1974

Crop	My Farm		Average of Farms Reporting		
	Acres	Yield	Farms Reporting	Acres	Yield
Dry hay	_____	_____	32	51	(combined below)
Hay crop silage	_____	_____	29	122	
Other hay crops	_____	_____	7	10	
Corn silage	_____	_____	32	98	13.1 tn.
Grain corn	_____	_____	27	77	73.6 bu.
Oats	_____	_____	18	24	75.5 bu.
Wheat	_____	_____	22	40	51.0 bu.

Hay equivalent:					
All hay crops	_____	_____	32	147	3.4 tn.
All hay & silage	_____	_____	32	245	3.8 tn.
Milk sold per cow	_____			13,531 lbs.	

Tons of hay equivalent of all hay and silage is a measure of the overall rate of roughage production for all the acres used for roughage crops. One ton of hay equivalent is equal to one ton of dry hay containing 88 to 90 percent dry matter.

1974 crop yields for all crops except corn silage were higher on this group of farms than yields reported by the 23 farms summarized last year. Corn silage yields were approximately the same for both years.

The importance of high milk output per cow is shown in the table below. Average milk production per cow on the 609 farms was 12,300 pounds.

MILK SOLD PER COW & LABOR INCOME
609 New York Dairy Farms, 1973

Pounds of Milk Sold Per Cow	Number of Farms	Number of Cows	Feed Bought Per Cow	Labor Income Per Operator
Under 10,000	89	59	\$199	\$ 3,625
10,000 - 10,999	77	60	244	6,667
11,000 - 11,999	111	68	264	7,845
12,000 - 12,999	119	75	279	10,920
13,000 - 13,999	105	76	307	13,369
14,000 - 14,999	64	72	325	14,945
15,000 - 15,999	35	73	329	13,633
16,000 & over	9	77	289	18,863

Labor Efficiency

Increased wage rates and reduced net return per pound of milk produced makes labor efficiency an important factor in farm production. Several measures of accomplishment per man or labor efficiency are shown below.

MEASURES OF LABOR EFFICIENCY 32 Western Plains Farms, 1974

Item	My Farm	Average 32 Farms, 1974	Average 609 N.Y. Farms, 1973
Man equivalent	_____	3.2	2.2
Cows per man	_____	34	32
Lbs. milk sold per man	_____	465,268	392,600
Work units per man	_____	395	346

Number of cows per man is calculated by dividing the average number of cows by the man equivalent which includes the total farm labor force. This group of farms had a slightly larger number of cows per man than the group summarized for 1973.

Pounds of milk sold per man is the best measure of labor efficiency on a dairy farm. It is a physical measure of the total productivity of the labor force which accounts for both the quantity (number of cows) and the quality (milk per cow) of work accomplished.

It is important to look at other measures of labor efficiency, such as work units per man because all dairy farms do not have the same relationship between cows, heifers, and crops grown. For example, this group of Western Plains farms grows more crops than the average New York farm.

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

MILK SOLD PER MAN AND LABOR AND MANAGEMENT INCOME 609 New York Dairy Farms, 1973

Pounds of Milk Sold per Man	Number of Farms	Number of Cows	Lbs. Milk per Cow	Labor & Management Income per Operator
Under 250,000	81	45	10,000	\$ 1,730
250,000 - 299,999	119	54	11,400	5,790
300,000 - 349,999	99	67	11,900	7,040
350,000 - 399,999	95	66	12,400	10,290
400,000 - 449,999	92	78	13,000	12,880
450,000 - 499,999	50	87	13,300	14,620
500,000 - 599,999	55	104	13,600	19,330
600,000 and Over	18	115	13,500	29,510

Capital Efficiency

Efficient use of capital is an important factor in the success of any business. The high capital requirements of modern dairy farms make capital efficiency extremely important to dairy farm managers. Although it is possible for farms to be under capitalized per productive unit, a more frequent problem is excessive investment per productive unit. Selected measures of capital efficiency are shown in the table below.

MEASURES OF CAPITAL EFFICIENCY
32 Western Plains Farms, 1974

Item	My Farm	Average 32 Farms, 1974	Average 609 N.Y. Farms, 1973
Farm Capital per man	\$ _____	\$104,675	\$95,667
Farm capital per cow	_____	3,044	3,009
Land & buildings per cow	_____	1,413	1,547
Land & buildings/crop acre owned	_____	794	785
Machinery investment per cow	_____	546	527
Capital turnover (years)	_____	2.1	2.5
Return on investment*	_____	11%	7%

*Excluding real estate appreciation based on average capital investment of \$312,824.

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

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

SIZE OF HERD AND CAPITAL EFFICIENCY
609 New York Dairy Farms, 1973

Number of Cows	Number of Farms	Capital Investment Per Cow		
		Total	Real Estate	Machinery
Under 40	92	\$3,589	\$2,041	\$630
40 - 54	179	3,055	1,552	600
55 - 69	123	3,035	1,563	550
70 - 84	71	3,109	1,633	552
85 - 99	40	2,891	1,421	521
100 - 114	36	3,115	1,592	527
115 - 129	23	3,166	1,673	476
130 - 149	19	2,579	1,281	423
150 & Over	26	2,535	1,251	369

Cost Control

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

Feed costs are the largest single expense item on dairy farms. For the 32 Western Plains farms, purchased feed accounted for 30 percent of the cash expenses. In general, all feed costs account for about half the cost of producing milk. This includes the expenses of growing crops.

The crop program has an important influence on purchased feed costs. Increasing the amount of roughage and/or grain grown on the farm will reduce the quantity of feed to be purchased. However, this will reduce the total cost of feeding the animals only if the cost of growing feed on the farm is less than the cost of purchased feed. Also, the number of heifers being raised on the farm will affect the total feed cost per cow or hundredweight of milk sold. The overall feed situation must be examined and evaluated as a "system".

FEED COSTS AND RELATED MEASURES 32 Western Plains Farms, 1974

Item	My Farm	Average 32 Farms, 1974	Average 609 N.Y. Farms, 1973
Feed bought per cow	\$ _____	\$ 299	\$ 278
Crop expense per cow	\$ _____	\$ 115	\$ 70
Feed bought per cwt. milk	\$ _____	\$2.21	\$2.25
Feed & Crop expense per cwt. milk	\$ _____	\$3.06	\$2.81
Percent feed is of milk receipts	_____ %	26%	31%
Hay equivalent per cow (tons)	_____	8.5	7.8
Crop acres per cow	_____	3.3	2.9
Lime and fertilizer per crop acre	\$ _____	\$ 21	\$ 16
Heifers as % of cow numbers	_____ %	74%	67%

Several factors are known to have an important influence on feed and crop expense per hundredweight of milk. Early cutting of hay and hay crop silage increases the amount of protein and energy that can be supplied by forage. Feeding according to production so that cows in early lactation are not underfed and cows in late lactation are not overfed increases the efficiency of concentrate use. Feeding a balanced, least-cost ration reduces the cost of the concentrate required to meet the cow's needs.

Machinery, Labor, and Miscellaneous Costs

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

LABOR & MACHINERY COSTS
32 Western Plains Farms, 1974

Item	My Farm	Average 32 Farms, 1974	Average 609 N.Y. Farms, 1973
Total machinery <u>1/</u>	\$ _____	\$23,032	\$12,661
Machinery cost per cow	_____	211	183
Machinery costs/cwt. milk	_____	1.56	1.49
Total Labor costs <u>2/</u>	_____	23,418	13,235
Labor costs per cow	_____	215	192
Labor costs/cwt. milk	_____	1.59	1.55
Labor & machinery costs/cwt. milk	_____	3.15	3.04

1/ Includes machinery depreciation, 7 percent interest on the average machinery inventory, machine hire, machinery repairs, farm share of auto expense and gas and oil.

2/ Hired labor, unpaid family labor, and operator's labor valued at \$500 per month.

Milk hauling is not included under machinery costs in this report. It is included as a milk marketing expense.

MISCELLANEOUS COST CONTROL MEASURES
32 Western Plains Farms, 1974

Item	My Farm	Average 32 Farms, 1974	Average 609 N.Y. Farms, 1973
Veterinary & Medicine per cow	\$ _____	\$23.08	\$15.37
Other Livestock expense per cow	\$ _____	\$32.18	\$31.57
Real Estate expense per cow	\$ _____	\$88.96	\$73.30
Total Farm expenses per cow	\$ _____	\$1,290	\$1,052

Other livestock expenses per cow include dairy supplies, bedding, and DHIC fees but exclude breeding fees and milk marketing. Breeding fees averaged \$12 per cow. Real estate expenses include repairs, taxes, insurance, and rent. For this group of Western Plains farms, total farm expenses, which include interest on all capital invested, were up \$125 per cow or 11 percent from the level experienced by the 23 Western Plains farms that summarized last year.

Family Living Expenditures

For business financial planning, the family living expenses must be considered along with the farm expenses. Below is a summary of the living expenditures for families in Minnesota who recorded their living expenses as part of their farm business management project.

FAMILY LIVING EXPENDITURES 93 Minnesota Farm Families, 1973

Item	My Family	<u>Average of 93 Families</u>	
		Amount	Percent
Number in family	_____	4.5	
<u>Living Expenses</u>			
Food and meals bought*	\$ _____	\$1,953	24
Medical and hospital insurance	_____	1,014	12
Clothing and clothing materials	_____	846	10
Furnishings and equipment	_____	775	9
Operating and supplies	_____	602	7
Upkeep on dwelling	_____	119	1
Personal share of auto expense	_____	465	6
Church and welfare	_____	680	8
Gifts and special events	_____	451	6
Education	_____	353	4
Recreation	_____	469	6
Personal care and spending	_____	332	4
Electricity & telephone (home share)	_____	206	3
TOTAL LIVING EXPENSES	\$ _____	\$8,265	100
Taxes	_____	1,801	
Life insurance	_____	1,027	
Dwelling improvements	_____	389	
Home share of new autos	_____	430	
Other savings and investments	_____	1,365	
TOTAL FAMILY EXPENDITURES	\$ _____	\$13,277	
<hr style="border-top: 1px dashed black;"/>			
<u>Sources of Family Income</u>			
Return from farm business	\$ _____	\$55,685	
Income from outside investments	_____	686	
Other personal income	_____	1,111	

SOURCE: Minnesota Econ. Reports R74-3 and R74-4.

* In addition, the family used farm produce valued at \$546.

The average living expenses for 114 Minnesota families in 1972 was \$7,347. The average for 1973 was \$8,265, or an increase of 12 percent. All living expense items for 1973 were higher than for 1972.

Many factors affect the expenditures of an individual family. The number in the family, ages of children, health problems, and special interests are examples. When comparing a family with the averages, these factors should be taken into consideration.

Farm Business Chart

The farm business chart is a tool for use in analyzing a dairy farm business. It is a series of measuring sticks combined into one tool.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS 609 New York Dairy Farms, 1973*

Size of Business			Rates of Production			Labor Efficiency	
Man Equiv- alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold per Cow	Tons Hay/ Acre	Tons Corn Silage per Acre	Cows per Man	Pounds Milk Sold per Man
4.7	161	2,059,900	15,400	5.1	20	44	572,700
3.3	105	1,357,600	14,200	3.6	17	38	479,500
2.8	82	1,006,800	13,500	3.2	15	35	434,000
2.4	69	843,400	13,000	2.9	14	33	399,200
2.2	61	742,500	12,400	2.7	13	30	368,600

2.0	55	663,900	12,000	2.5	12	28	335,900
1.8	49	594,900	11,400	2.3	11	26	307,000
1.5	44	508,500	10,800	2.1	10	24	281,400
1.4	39	425,000	10,000	1.9	8	22	253,300
1.2	30	307,500	8,300	1.4	5	18	189,000

* These farms are considerably above the average for all farms in New York State. For example, the median number of cows for the 609 farms was 58 compared with 39 for all farms in the State.

The Farm Business Chart is a tool which can be used in analyzing a business to determine the strong and weak points. The chart shows how far the individual farm is above or below the midpoint of the 609 farms for each factor.

The figure at the top of each column is the average of the top 10 percent of the farms for that factor. For example, the figure 4.7 at the top of the column headed "man equivalent" is the average man equivalent on the 10 percent of the farms with the most men. The other figures in each column are the average for the second 10 percent, third 10 percent, etc. The figure at the bottom of each column (1.2 for man equivalent) is the average for the 10 percent of the farms which ranked lowest in that factor.

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.

This chart is used in analyzing a particular dairy business by drawing a line through the figure in each column which shows where the farm being analyzed stands for that factor. This helps identify the strengths and weaknesses. Summarize these and list them at the bottom of the next page.

Farm Business Chart contd.

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

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS
609 New York Dairy Farms, 1973

Feed Bought per Cow	% Feed is of Milk Receipts	Machinery Cost per Cow	Labor and Machinery Cost per Cow	Feed and Crop Expense per cwt. Milk
\$133	17	\$102	\$264	\$1.79
189	23	132	311	2.20
215	26	149	336	2.39
238	28	162	354	2.55
261	30	176	373	2.69

279	32	188	393	2.80
299	34	203	417	2.94
325	36	223	444	3.13
358	40	246	479	3.37
432	47	315	572	3.97

Based on the analyzed results shown on the business chart, list below the strong and weak points of the business. Then identify the major problems.

STRONG POINTS:

WEAK POINTS:

MAJOR PROBLEMS:

After identifying problems, consider alternative ways of solving each problem. Each alternative should be studied in detail. A budgeting form can be used for projecting the likely results of each alternative.

FARM BUSINESS SUMMARY BY HERD SIZE
609 New York Dairy Farms, 1973

Item	My Farm	Farms with:		
		Less than 40 Cows	40 to 54 Cows	55 to 69 Cows
Capital Investment (end of year)				
Livestock	\$ _____	\$ 24,408	\$ 34,502	\$ 45,227
Feed and supplies	_____	5,446	7,381	10,980
Machinery and equipment	_____	20,320	27,768	33,572
Land and buildings	_____	65,761	71,876	94,994
TOTAL INVESTMENT	\$ _____	\$115,935	\$141,527	\$184,773
Receipts				
Milk sales	\$ _____	\$ 27,287	\$ 39,866	\$ 52,838
Livestock sales	_____	4,134	5,479	7,185
Crop sales	_____	224	320	317
Miscellaneous receipts	_____	1,705	2,887	2,745
Total Cash Receipts	\$ _____	\$ 33,350	\$ 48,552	\$ 63,085
Increase in livestock	_____	3,527	5,081	6,829
Increase in feed & supplies	_____	1,135	1,659	3,090
TOTAL FARM RECEIPTS	\$ _____	\$ 38,012	\$ 55,292	\$ 73,004
Expenses				
Hired labor	\$ _____	\$ 937	\$ 1,994	\$ 3,633
Dairy feed	_____	8,591	12,719	15,847
Other feed	_____	207	372	514
Machine hire	_____	211	415	394
Machinery repair	_____	1,269	1,997	2,350
Auto expense (farm share)	_____	241	281	304
Gas and oil	_____	939	1,225	1,625
Purchased animals	_____	2,238	2,470	2,826
Breeding fees	_____	338	507	651
Veterinary and medicine	_____	434	691	921
Other livestock expense	_____	1,416	2,057	2,423
Fertilizer and lime	_____	925	1,630	2,627
Seeds and plants	_____	329	618	862
Spray and other crop expense	_____	215	444	674
Land, bldg., fence repair	_____	633	876	1,238
Taxes and insurance	_____	1,451	1,945	2,524
Electricity & phone (farm share)	_____	701	928	1,133
Interest paid	_____	2,119	2,986	3,742
Miscellaneous expenses	_____	571	951	1,170
Total Cash Operating Exp.	\$ _____	\$ 23,765	\$ 35,106	\$ 45,458
Machinery depreciation	_____	2,560	3,491	4,453
Real estate depreciation	_____	1,054	1,327	1,791
Unpaid family labor	_____	700	700	1,050
Interest on equity capital @ 7%	_____	5,536	6,402	8,563
TOTAL FARM EXPENSES	\$ _____	\$ 33,615	\$ 47,026	\$ 61,315
Financial Summary				
Total Farm Receipts	\$ _____	\$ 38,012	\$ 55,292	\$ 73,004
Total Farm Expenses	_____	33,615	47,026	61,315
Labor & Management Income	\$ _____	\$ 4,397	\$ 8,266	\$ 11,689
Number of operators	_____	1.02	1.08	1.17
LABOR & MANAGEMENT INCOME PER OPERATOR	\$ _____	\$ 4,307	\$ 7,668	\$ 9,991

FARM BUSINESS SUMMARY BY HERD SIZE
609 New York Dairy Farms, 1973

Item	Farms with:			
	70 to 84 Cows	85 to 99 Cows	100 to 149 Cows	150 or More Cows
<u>Capital Investment (end of year)</u>				
Livestock	\$ 55,789	\$ 67,206	\$ 87,086	\$137,294
Feed and supplies	13,894	19,292	27,873	44,461
Machinery and equipment	41,649	47,298	57,159	72,379
Land and buildings	<u>123,090</u>	<u>129,298</u>	<u>181,005</u>	<u>245,450</u>
TOTAL INVESTMENT	\$234,422	\$263,094	\$353,123	\$499,584
<u>Receipts</u>				
Milk sales	\$ 66,659	\$ 79,853	\$115,554	\$183,897
Livestock sales	8,602	8,746	15,196	25,568
Crop sales	479	702	936	1,677
Miscellaneous receipts	2,488	2,861	3,388	5,494
Total Cash Receipts	<u>\$ 78,228</u>	<u>\$ 92,162</u>	<u>\$135,074</u>	<u>\$216,636</u>
Increase in livestock	7,219	9,345	8,895	21,611
Increase in feed & supplies	<u>4,025</u>	<u>5,656</u>	<u>9,130</u>	<u>16,246</u>
TOTAL FARM RECEIPTS	\$ 89,472	\$107,163	\$153,099	\$254,493
<u>Expenses</u>				
Hired labor	\$ 5,808	\$ 7,942	\$ 14,091	\$ 25,058
Dairy feed	20,797	23,909	35,458	56,087
Other feed	800	900	1,546	3,291
Machine hire	445	515	717	1,923
Machinery repair	3,188	3,554	5,613	8,546
Auto expense (farm share)	290	349	280	254
Gas and oil	1,951	2,178	3,274	5,293
Purchased animals	2,996	4,203	5,366	14,019
Breeding fees	837	1,162	1,484	1,691
Veterinary and medicine	1,187	1,128	1,972	3,307
Other livestock expense	3,393	3,855	6,033	8,948
Fertilizer and lime	3,248	4,652	6,012	11,713
Seeds and plants	989	1,349	1,957	2,714
Spray and other crop expense	668	770	1,438	2,497
Land, bldg., fence repair	1,098	1,479	2,297	3,770
Taxes and insurance	3,112	3,755	5,131	7,482
Electricity & phone (farm share)	1,290	1,550	2,026	2,924
Interest paid	5,810	5,616	7,678	11,855
Miscellaneous expenses	1,456	1,494	3,222	5,905
Total Cash Operating Expenses	<u>\$ 59,363</u>	<u>\$ 70,360</u>	<u>\$105,595</u>	<u>\$177,277</u>
Machinery depreciation	5,253	5,378	7,657	9,270
Real estate depreciation	2,297	2,730	3,950	6,409
Unpaid family labor	700	700	700	350
Interest on equity capital @ 7%	<u>10,067</u>	<u>12,108</u>	<u>16,039</u>	<u>20,685</u>
TOTAL FARM EXPENSES	\$ 77,680	\$ 91,276	\$133,941	\$213,991
<u>Financial Summary</u>				
Total Farm Receipts	\$ 89,472	\$107,163	\$153,099	\$254,493
Total Farm Expenses	<u>77,680</u>	<u>91,276</u>	<u>133,941</u>	<u>213,991</u>
Labor & Management Income	<u>\$ 11,792</u>	<u>\$ 15,887</u>	<u>\$ 19,158</u>	<u>\$ 40,502</u>
Number of operators	1.27	1.30	1.45	1.46
LABOR & MANAGEMENT INCOME PER OPERATOR	\$ 9,307	\$ 12,221	\$ 13,231	\$ 27,722

SELECTED BUSINESS FACTORS BY HERD SIZE
609 New York Dairy Farms, 1973

Item	My Farm	Farms with:		
		Less than 40 Cows	40 to 54 Cows	55 to 69 Cows
Number of farms		92	179	123
<u>Size of Business</u>				
Number of cows		32	46	60
Number of heifers		20	32	41
Pounds of milk sold		377,500	556,000	740,500
Man equivalent		1.3	1.5	2.0
Total work units		356	507	661
Crop acres		100	140	177
<u>Rates of Production</u>				
Milk sold per cow		11,800	12,100	12,300
Tons hay crops per acre		2.3	2.5	2.6
Tons corn silage per acre		12	12	13
Bushels of oats per acre		51	54	56
<u>Labor Efficiency</u>				
Cows per man		26	31	30
Pounds milk sold per man		302,000	370,700	370,200
Work units per man		285	338	331
<u>Feed Costs</u>				
Feed purchased per cow	\$	\$268	\$277	\$264
Crop expense per cow	\$	\$46	\$59	\$69
Feed cost per cwt. milk	\$	\$2.28	\$2.29	\$2.14
Feed and crop exp./cwt. milk	\$	\$2.66	\$2.77	\$2.70
% Feed is of milk receipts	%	31%	32%	30%
Hay equivalent per cow		7.3	7.9	7.9
Crop acres per cow		3.1	3.0	3.0
Fertilizer and lime/crop acre	\$	\$9	\$12	\$15
<u>Machinery and Labor Costs</u>				
Total machinery costs	\$	\$6,581	\$9,270	\$11,398
Machinery cost per cow	\$	\$206	\$202	\$190
Machinery cost per cwt. milk	\$	\$1.74	\$1.67	\$1.54
Labor cost per cow	\$	\$239	\$189	\$195
Labor cost per cwt. milk	\$	\$2.02	\$1.56	\$1.58
<u>Capital Efficiency</u>				
Investment per man	\$	\$92,748	\$94,351	\$92,387
Investment per cow	\$	\$3,623	\$3,077	\$3,080
Investment per cwt. milk sold	\$	\$31	\$25	\$25
Land and buildings per cow	\$	\$2,055	\$1,563	\$1,583
Machinery investment per cow	\$	\$635	\$604	\$560
Return on investment	%	1.7%	5.0%	6.9%
<u>Other</u>				
Price per cwt. milk sold	\$	\$7.23	\$7.17	\$7.14
Acres hay crops		73	92	110
Acres corn silage		20	34	46

SELECTED BUSINESS FACTORS BY HERD SIZE
609 New York Dairy Farms, 1973

Item	Farms with:			
	70 to 84 Cows	85 to 99 Cows	100 149 Cows	150 or More Cows
Number of farms	71	40	78	26
<u>Size of Business</u>				
Number of cows	75	91	118	199
Number of heifers	54	59	86	109
Pounds of milk sold	910,500	1,100,600	1,555,600	2,441,100
Man equivalent	2.3	2.5	3.6	4.9
Total work units	826	973	1,291	2,076
Crop acres	219	255	327	514
<u>Rates of Production</u>				
Milk sold per cow	12,140	12,100	13,200	12,300
Tons hay crops per acre	2.5	2.7	2.9	2.7
Tons corn silage per acre	13	14	14	13
Bushels oats per acre	49	61	57	64
<u>Labor Efficiency</u>				
Cows per man	32	36	33	40
Pounds milk sold per man	390,800	440,200	434,500	496,200
Work units per man	355	389	361	422
<u>Feed Costs</u>				
Feed purchased per cow	\$277	\$263	\$300	\$282
Crop expense per cow	\$65	\$74	\$80	\$85
Feed cost per cwt. milk	\$2.28	\$2.17	\$2.28	\$2.30
Feed & crop exp./cwt. milk	\$2.82	\$2.79	\$2.88	\$2.99
% Feed is of milk receipts	31%	30%	31%	30%
Hay equivalent per cow	7.9	7.6	8.1	7.4
Crop acres per cow	2.9	2.8	2.8	2.6
Fertilizer & lime/crop acre	\$15	\$18	\$18	\$23
<u>Machinery and Labor Costs</u>				
Total machinery costs	\$ 13,957	\$ 15,068	\$ 21,414	\$ 30,003
Machinery cost per cow	\$186	\$166	\$181	\$151
Machinery cost per cwt. milk	\$1.53	\$1.37	\$1.38	\$1.23
Labor cost per cow	\$187	\$177	\$197	\$170
Labor cost per cwt. milk	\$1.54	\$1.47	\$1.50	\$1.39
<u>Capital Efficiency</u>				
Investment per man	\$100,610	\$105,238	\$ 98,638	\$101,541
Investment per cow	\$3,126	\$2,891	\$2,993	\$2,510
Investment per cwt. milk sold	\$26	\$24	\$23	\$20
Land and buildings per cow	\$1,641	\$1,421	\$1,534	\$1,233
Machinery investment per cow	\$555	\$520	\$484	\$364
Return on investment	6.6%	8.3%	8.6%	12.5%
<u>Other</u>				
Price per cwt. milk sold	\$7.32	\$7.26	\$7.43	\$7.53
Acres hay crops	128	136	169	244
Acres corn silage	65	75	101	177

SELECTED FARM BUSINESS SUMMARY FACTORS
New York Dairy Farms, Selected Years 1963-1973

Item	Year			
	1963	1968	1972	1973
Number of farms	468	568	571	609
<u>Financial Summary</u>				
Average capital invested	\$55,304	\$107,854	\$173,780	\$195,322
Total farm receipts	\$23,891	\$53,247	\$68,376	\$84,682
Total farm expenses	\$17,278	\$37,717	\$49,636	\$72,570*
Labor income per operator	\$3,492	\$8,724	\$5,835	\$10,178
<u>Size of Business</u>				
Number of cows	39	58	70	69
Pounds of milk sold	427,000	715,200	887,500	851,900
Crop acres	105	155	188	198
Man equivalent	1.7	2.1	2.3	2.2
Total work units	527	692	754	750
<u>Rates of Production</u>				
Milk sold per cow	10,950	12,300	12,700	12,350
Tons hay per acre	2.3	2.8	2.4	2.6
Tons corn silage per acre	12	14	11	13
<u>Labor Efficiency</u>				
Cows per man	23	28	30	32
Pounds milk sold per man	251,200	340,600	385,900	392,600
Work units per man	310	330	328	346
<u>Cost Control Factors</u>				
Machinery cost per cow	\$108	\$151	\$177	\$183
Machinery cost/cwt. milk	\$.99	\$1.22	\$1.40	\$1.49
Feed bought per cow	\$150	\$163	\$206	\$278
Feed bought/cwt. milk	\$1.37	\$1.32	\$1.62	\$2.25
Feed & crop expense/cwt. milk	\$1.64	\$1.69	\$2.06	\$2.81
% Feed is of milk receipts	32%	24%	25%	31%
<u>Capital Efficiency</u>				
Total investment per man	\$33,258	\$53,302	\$75,560	\$95,667
Total investment per cow	\$1,450	\$1,930	\$2,480	\$3,009
Machinery investment/cow	\$304	\$435	\$489	\$527
Total investment/cwt. milk	\$13	\$16	\$20	\$24
<u>Other</u>				
Price per cwt. milk sold	\$4.31	\$5.52	\$6.41	\$7.30
Acres hay crops	73	90	156	116
Acres corn silage	14	41	57	57
Total acres in crops/cow	2.7	2.7	2.7	2.9
Fertilizer & lime expense per crop acre	\$8	\$11	\$13	\$16
Farm income per cow	\$170	\$268	\$268	\$262
Labor income per cow	\$99	\$175	\$99	\$176

* Includes interest paid, interest on equity capital, and building depreciation which were not included in total farm expenses in earlier years.

PROGRESS OF THE FARM BUSINESS

Comparing your business with that of other farmers is one part of a business checkup. A second part is to compare your current year's business with that of earlier years to show the progress you are making. In planning ahead, it helps to set business targets or goals. These should be in line with the progress you have been making.

Item	1972	1973	1974	1975 target
<u>Size of Business</u>				
Number of cows	_____	_____	_____	_____
Number of heifers	_____	_____	_____	_____
Pounds of milk sold	_____	_____	_____	_____
Acres of crops	_____	_____	_____	_____
<u>Rates of Production</u>				
Lbs. milk sold per cow	_____	_____	_____	_____
Tons corn silage/acre	_____	_____	_____	_____
<u>Labor Efficiency</u>				
Lbs. milk sold per man	_____	_____	_____	_____
<u>Cost Control</u>				
Feed bought per cow	\$ _____	\$ _____	\$ _____	\$ _____
Machinery cost/cow	\$ _____	\$ _____	\$ _____	\$ _____
Labor cost per cow	\$ _____	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency</u>				
Total end inventory	\$ _____	\$ _____	\$ _____	\$ _____
End inventory/cow	\$ _____	\$ _____	\$ _____	\$ _____
<u>Debt Situation</u>				
Total debt outstanding	\$ _____	\$ _____	\$ _____	\$ _____
Debt per cow	\$ _____	\$ _____	\$ _____	\$ _____
Net Worth	\$ _____	\$ _____	\$ _____	\$ _____
<u>Price</u>				
Price per cwt. milk	\$ _____	\$ _____	\$ _____	\$ _____
<u>Financial Summary</u>				
Total Farm Receipts	\$ _____	\$ _____	\$ _____	\$ _____
Total Farm Expenses	\$ _____	\$ _____	\$ _____	\$ _____
Labor Income/Operator	\$ _____	\$ _____	\$ _____	\$ _____

Are you satisfied with your progress?

Selected Competitive Dairy Areas

Dairy business summary data from four states are presented below. These were taken from reports on farm business management projects similar to the ones in New York. An examination of these data will show how New York's dairy operations compare with those in competing areas.

1973 DAIRY FARM BUSINESS SUMMARY DATA

Item	New York	Vermont	West Virginia	Michigan
Number of farms	609	125	25	365
<u>Size of Business</u>				
Number of cows	69	65	62	73
Total crop acres	198	178	124	334
Pounds of milk sold	851,900	796,781	790,178	936,590
Man equivalent	2.2	2.2	2.4	2.5
<u>Rates of Production</u>				
Milk sold per cow	12,350	12,242	12,746	12,830
Tons hay per acre	2.6	2.0	2.5	3.5
Tons corn silage per acre	13	13	19	12
<u>Labor Efficiency</u>				
Cows per man	32	29	25	29
Pounds milk sold per man	392,580	356,449	323,844	374,636
<u>Cost Control Factors</u>				
Feed bought per cow	\$278	\$304	\$328	\$132
% Feed is of milk receipts	31%	33%	37%	14%
Fertilizer & lime per cow	\$45	\$40	\$56	\$71
Taxes per cow	\$25	\$27	\$6	\$24
Veterinary per cow	\$15	\$14	\$15	\$17
Labor costs per cow	\$192	\$208	\$199	\$268
<u>Capital Efficiency</u>				
Total capital investment	\$207,598	\$156,654	\$156,158	\$237,211
Total investment per cow	\$3,009	\$2,407	\$2,519	\$3,249
Machinery investment/cow	\$527	\$392	\$355	\$552
<u>Prices</u>				
Price/cwt. 3.5% milk sold	\$7.31	\$7.59	\$7.02	\$7.15
<u>Financial Summary</u>				
Total farm receipts	\$84,682	\$84,394	\$82,349	\$93,294
Total farm expenses	\$72,570	\$76,134	\$74,833	\$71,166
Labor income per operator	\$10,195	\$8,260	\$7,517	\$18,830

SOURCE: Vermont and West Virginia NEC70 - 1973 Elfac Dairy Farm Business Analysis.
Michigan Agricultural Economics Report No. 273 - TelFarm Business Analysis Summary for Specialized Michigan Dairy Farms.