



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

DAIRY FARM BUSINESS SUMMARY

March 1980

A.E. Ext. 80-6

EASTERN PLATEAU 1979

Stuart F. Smith

Department of Agricultural Economics
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York 14853

It is the policy of Cornell University actively to support equality of educational and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, national or ethnic origin, sex, age or handicap. The University is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.

DAIRY FARM BUSINESS SUMMARY
EASTERN PLATEAU REGION, 1979

The 1979 Eastern Plateau Region dairy farm business summary includes data from 84 farms located in Broome, Delaware, Chenango, Chemung, Otsego, Tioga, Tompkins and Schuyler counties. The Cooperative Extension Associations in these counties have been sponsoring farm business management projects for 25 years and the Eastern Plateau summary has been published for 12 years.

The primary purpose of this project is to assist cooperators in farm record keeping and business analysis and thereby improve their skills as managers. This report is prepared in workbook form for use in the systematic study of individual farm business operations.

The following data gives a view of the characteristics of farms participating in the Eastern Plateau Region farm management program over the last five years.

Eastern Plateau Dairy Farm Management Summary

Item	1975	1976	1977	1978	1979
Number of farms	129	97	97	87	84
Cows per farm	64	68	66	67	71
Man equivalent	2.3	2.3	2.4	2.3	2.4
Investment per farm	\$238,577	\$249,545	\$256,727	\$283,452	\$342,514
Investment per cow	\$3,728	\$3,670	\$3,890	\$4,108	\$4,824
Milk sold per cow, lbs.	13,014	13,516	13,738	14,363	14,344
Milk sold per man, lbs.	370,178	394,464	374,669	413,004	420,826
Average price per cwt. milk sold	\$8.49	\$9.85	\$9.66	\$10.39	\$11.84
Average operating expense per cwt. milk sold	\$7.24	\$7.21	\$8.15	\$8.65	\$10.01
Labor & management income per operator	\$3,305	\$9,524	\$3,517	\$17,432	\$17,849

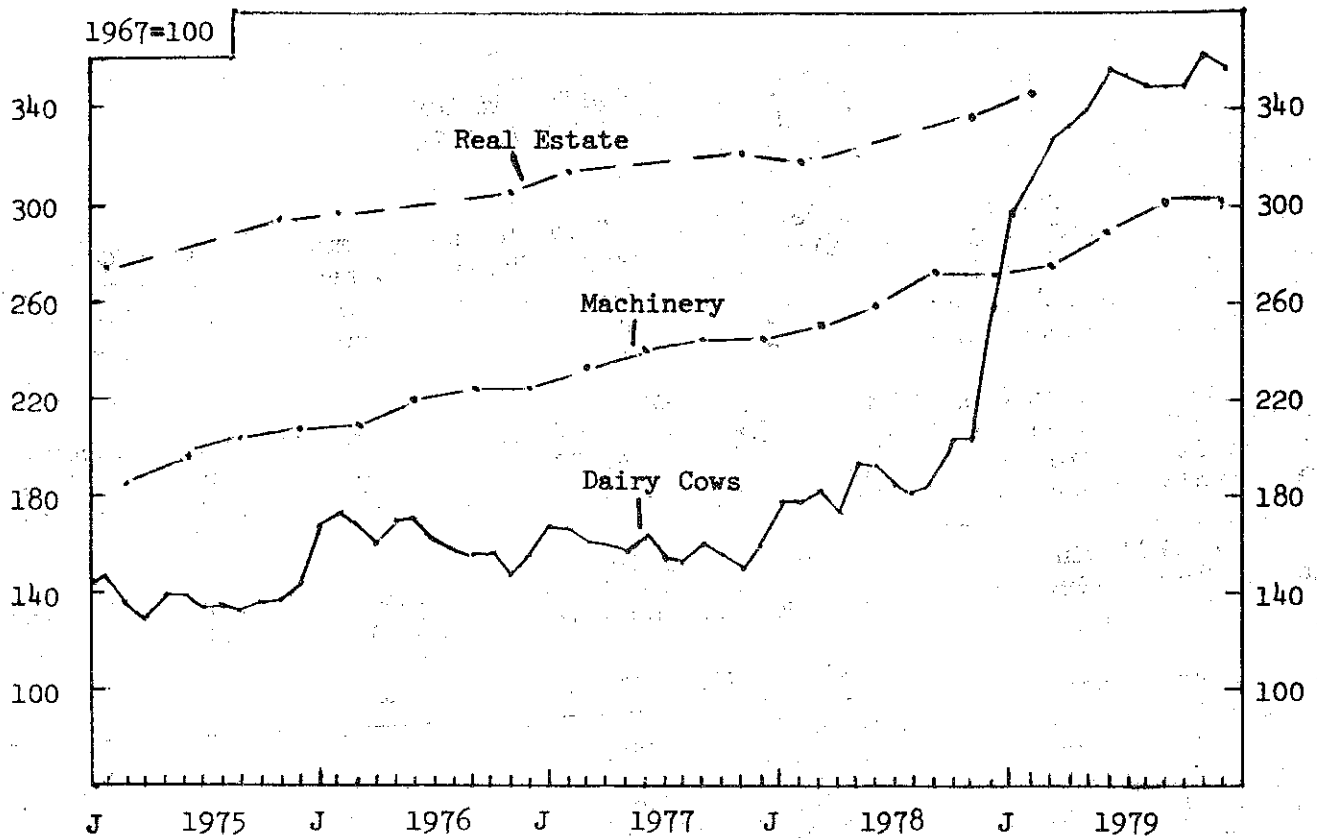
Economic conditions for dairymen have changed and the mix of farms included in the Eastern Plateau regional summary has also changed since 1975. The average 1979 farm data shows more cows, and substantial increases in capital invested, the price of milk and operating costs.

The high 1979 labor and management income was boosted by rising cow values and reduced by higher costs of capital. The average cattle inventory increased \$17,000 during the year, \$13,500 of the increase was due to higher prices. The charge for using equity capital was increased from seven to nine percent in 1979, resulting in an increased cost of \$4,627 per farm.

This summary was prepared by Stuart F. Smith, Department of Agricultural Economics, New York State College of Agriculture and Life Sciences, Cornell University, in cooperation with Richard Eschler, Earl Feinman, Gerald LeClair, Paul Mattern, and Clarence Padgham, Cooperative Extension Agents and Specialists serving the Eastern Plateau counties.

Prices

VALUE OF NEW YORK FARM REAL ESTATE, DAIRY COWS & MACHINERY
1975-1979



Price changes affect the inventory values on New York dairy farms. Real estate and machinery prices have risen steadily during the past five years. Dairy cow prices dropped during 1974, rose sharply in late 1975, fluctuated throughout 1976 and 1977, and then jumped 62 percent in 1978. Dairy cow prices continued upward in 1979 and were reported at \$1,105 for December, or 38 percent above the December 1978 price. From 1967 to 1979, machinery prices increased 202 percent, dairy cows 256 percent and real estate increased an estimated 255 percent.

Table 1. REPORTED VALUES OF DAIRY FARM INVENTORY ITEMS, 1975-1979

Year	N.Y. Dairy Cows		Machinery	N.Y. Farm Real Estate	
	Value/Head	1967=100	1967=100	Value/Acre	1967=100
1975	(Dec.) \$450	145	(Dec.) 222	(Nov.) \$543	294
1976	(Dec.) 485	156	(Dec.) 233	(Nov.) 562	304
1977	(Dec.) 495	160	(Dec.) 253	(Nov.) 593	320
1978	(Dec.) 800	258	(Dec.) 276	(Nov.) 629	339
1979	(Dec.) 1105	356	(Dec.) 302	(est.)	355
Percent change:					
1975 to 1976	+ 8%		+ 5%	+ 3%	
1976 to 1977	+ 3%		+ 9%	+ 5%	
1977 to 1978	+62%		+ 9%	+ 6%	
1978 to 1979	+38%		+ 9%	+ 5% (est.)	

SUMMARY OF THE FARM BUSINESS

Business Characteristics and Resources Used

Knowledge about the availability of farm resources and their characteristics is fundamental to judging management performance. The tables on this page identify some important farm business characteristics and show the use of farm resources on this group of farms.

BUSINESS CHARACTERISTICS AND RESOURCES USED
84 Eastern Plateau Dairy Farms, 1979

Type of Business	Number	Business Records	Number	Dairy Records	Number
Individual	66	CAMIS	21	D.H.I.C.	69
Partnership	16	Account Book	37	Owner Sampler	8
Corporation	2	Agrifax	8	Other	4
		Agway	6	None	3
		Farm Bureau & other	12		

Barn Type	Number	Milking System	Number	Number	
Stanchion	49	Bucket & carry	2	Herringbone	21
Freestall	29	Dumping station	18	Other parlor	6
Other	6	Pipeline	37		

Labor Force	My Farm	Average	Land Used	My Farm	Average
Operator		15 mo.	Total acres owned		308
Family paid		4 mo.	Total acres rented		125
Family unpaid		3 mo.	Total crop acres		201
Hired		7 mo.	Crop acres rented		79
Total		29 mo.			
Age of operator(s)		41 yrs.	Number of Cows	My Farm	Average
			Beginning of year		71
Estimated value oper's			End of year		74
labor & management		\$13,718	Average for year		71

There were 105 operators on the 84 farms for an average of 1.25 per farm. Seventy-five of the 84 farms rented an average of .75 crop acres per farm. Four farmers rented all their cropland.

Total farm inventory increased \$41,000 or 13 percent during 1979. The end of year farm inventory values are used in determining farm assets in this report.

CAPITAL INVESTMENT - FARM INVENTORY VALUE
84 Eastern Plateau Dairy Farms, 1979

Item	My Farm		Average 84 Farms	
	1/1/79	1/1/80	1/1/79	1/1/80
Livestock	\$	\$	\$ 79,041	\$ 96,078
Feed & supplies			21,217	23,857
Machinery & equipment			56,700	64,680
Land & buildings*			151,990	165,684
TOTAL	\$	\$	\$308,948	\$350,299

* Average of 80 farmers owning main farm unit.

Machinery and Real Estate Inventory Calculations

The costs of owning machinery and real estate are charged out as depreciation, interest, insurance, taxes and maintenance. In recent years machinery depreciation has been minimized by rising market values.

MACHINERY & EQUIPMENT DEPRECIATION
84 Eastern Plateau Dairy Farms, 1979

Item	My Farm	Average 84 Farms
Beginning inventory	\$ _____	\$56,700
Machinery purchases	_____	15,609
Total (1)	\$ _____	\$72,309
End of year inventory	\$ _____	\$64,680
Machinery sold	_____	437
Total (2)	\$ _____	\$65,117
DEPRECIATION (1 minus 2)	\$ _____	\$ 7,192
Percent depreciation	_____ %	10%

REAL ESTATE INVENTORY CALCULATIONS ON OWNED FARMS
80 Eastern Plateau Dairy Farms, 1979

Item	My Farm	Average 80 Farms
Beginning market value	\$ _____	\$151,990
Cost of new real estate	\$ _____	\$13,169
Less lost capital	- _____	- 1,598
Value of new added	+\$ _____	+ 11,571
Less building depreciation	- _____	- 3,994
Less real estate sold	- _____	- 551
Total Without Appreciation	\$ _____	\$159,016
Appreciation of beginning real estate	+ _____	+ 6,668
End of Year Market Value	\$ _____	\$165,684

Lost capital is the difference between the cost of new buildings and the amount these improvements added to the value of the farm. It is not included in farm expenses, since building depreciation is based on the full cost of new buildings and will account for lost capital over the life of the building. Building depreciation was taken from the farm depreciation schedule and is included as a farm expense. Real estate appreciation was estimated by each farm operator. It is the increase in value of real estate caused by demand and inflation. Appreciation averaged 4.4 percent of beginning market value in 1979.

Receipts

Receipts from the business should be large enough to cover the operating and overhead costs and provide a return to the operator's labor and management. The size and sources of receipts on this group of farms are examined below.

FARM RECEIPTS
84 Eastern Plateau Dairy Farms, 1979

Item	My Farm	Average 84 Farms	
		Amount	Percent
Milk sales	\$ _____	\$120,571	87
Crop sales	_____	1,050	1
Dairy cattle sold	_____	10,650	8
Calves & other livestock sales	_____	3,168	2
Gas tax refunds	_____	128	}
Government payments	_____	488	
Work off farm	_____	627	
Custom machine work	_____	124	
Other	_____	926	_____
Total Cash Receipts	\$ _____	\$137,732	100
Increase in livestock	_____	17,037*	
Increase in feed & supplies	_____	2,640	
TOTAL FARM RECEIPTS	\$ _____	\$157,409	

* Primarily due to higher dairy cattle prices at end of year. The increase attributed to more cattle was estimated as \$3,500, (three additional cows plus some growth in the youngstock herd).

Total cash receipts increased more than \$24,000 per farm in 1979 compared to the 1978 Eastern Plateau region average. About \$15,000 of the increase was due to higher milk and cattle prices.

INCOME ANALYSIS
Eastern Plateau Dairy Farms, 1978 & 1979

Item	Average 87 Farms 1978	Average 84 Farms 1979	My Farm
Average price/cwt. sold	\$ 10.39	\$ 11.84	\$ _____
Milk sales per cow	\$ 1,493	\$ 1,698	\$ _____
Total cash receipts per man	\$48,521	\$56,914	\$ _____

The price of milk sold increased 14 percent and milk sales per cow went up 17 percent compared with the 1978 average.

Expenses

There are many cost control opportunities when cash farm expenses average \$259 per day. Compare your farm expenses with the averages listed below.

FARM EXPENSES
84 Eastern Plateau Dairy Farms, 1979

Item	My Farm	Average 84 Farms	
		Amount	Percent
<u>Hired Labor</u>	\$ _____	\$ 8,277	8
<u>Feed</u>			
Dairy concentrate	_____	35,178	35
Other feed	_____	1,415	1
<u>Machinery</u>			
Machine hire	_____	1,046	1
Machinery repairs	_____	5,748	6
Auto expense (farm share)	_____	409	—
Gas & oil	_____	3,969	4
<u>Livestock</u>			
Purchased livestock	_____	5,101	5
Breeding fees	_____	1,719	2
Veterinary & medicine	_____	1,902	2
Milk marketing	_____	2,258	2
Other livestock expense	_____	4,533	4
<u>Crops</u>			
Fertilizer & lime	_____	5,662	6
Seeds & plants	_____	1,663	2
Spray, other crop expense	_____	1,346	1
<u>Real Estate</u>	(Owners)		
Land, building, fence repair	(2,581)	2,537	2
Taxes	(2,739)	2,652	3
Insurance	(2,326)	2,280	2
Rent	(1,831)	2,042	2
<u>Other</u>			
Telephone (farm share)	_____	562	1
Electricity (farm share)	_____	2,039	2
Interest paid	(8,742)	8,409	8
Miscellaneous	_____	1,185	1
Total Cash Expenses	\$ _____ (103,503)	\$101,932	100
<u>Noncash Items</u>			
Machinery depreciation	\$ _____	\$ 7,192	
Building depreciation	(3,994)	3,804	
Unpaid family labor @ \$450/month	_____	1,350	
Interest on equity capital @ 9%	(21,279)	20,820	
Decrease in livestock & feed	_____	0	
TOTAL FARM EXPENSES	\$ _____ (137,471)	\$135,098	

Financial Summary of Year's Business

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

NET CASH FARM INCOME
Eastern Plateau Dairy Farms, 1979

Item	Average 84 Farms 1979	Average 80 Owners 1979	My Farm
Cash Farm Receipts	\$137,732	\$139,476	\$ _____
Cash Farm Expenses	<u>101,932</u>	<u>103,503</u>	_____
NET CASH FARM INCOME	\$ 35,800	\$ 35,973	\$ _____

Net Cash Farm Income shows the cash available from the year's operation of the business. Family living has first claim on cash income followed by fixed payments on debts. A family may have additional cash available if they have a nonfarm income. Cash flow is not a good measure of farm business profits, but, it is useful when planning debt repayment programs. Guidelines for annual cash flow planning are presented on page 10. Monthly cash flow planning is also recommended and may be required in order to identify cash flow problems in the year ahead. This is particularly true when major changes in the business are planned or when prices of important factors are expected to change significantly.

LABOR AND MANAGEMENT INCOME
Eastern Plateau Dairy Farms, 1979

Item	Average 84 Farms		My Farm
	Including Cattle Price Increase	Excluding Cattle Price Increase	
Total Farm Receipts	\$157,409	\$143,872	\$ _____
Total Farm Expenses	<u>135,098</u>	<u>133,880</u>	_____
LABOR & MANAGEMENT INCOME PER FARM	\$ 22,311	\$ 9,992	\$ _____
Number of Operators	1.25	1.25	_____
LABOR & MANAGEMENT INCOME PER OPERATOR	\$ 17,849	\$ 7,994	\$ _____

Labor and Management Income is the return to the operator for his efforts in operating the business. It is computed with and without the effect of the large increase in livestock inventory caused by higher cattle prices. Dairy men who used realistic cow values in their beginning and end inventories should recognize this increase as part of the return for operating the farm. A nine percent charge for the use of the operator's equity capital has been included as a farm expense. This interest charge reflects what the operator could have earned from this capital had it been invested elsewhere.

Labor, management and ownership income per operator measures the combined return to the farmer for his triple role of worker-manager, financier and owner. The return here provides for the operator's living and his gain in business net worth.

LABOR, MANAGEMENT AND OWNERSHIP INCOME
Eastern Plateau Dairy Farms, 1978 & 1979

Item	Average 87 Farms 1978	Average 84 Farms 1979	My Farm
Labor & management income	\$21,424	\$22,311	\$ _____
Real estate appreciation	4,801	6,363	_____
Interest on equity capital	<u>13,454</u>	<u>20,820</u>	_____
Total Per Farm	\$39,679	\$49,494	\$ _____
Number of operators	1.23	1.25	_____
LABOR, MANAGEMENT AND OWNERSHIP INCOME PER OPERATOR	\$32,286	\$39,595	\$ _____

Return on equity capital is a common measure for non-farm businesses. It can be computed below with and without real estate appreciation. The rate of return is the average return to all the equity capital invested in the farm during 1979.

RETURN ON EQUITY CAPITAL
Eastern Plateau Dairy Farms, 1978 & 1979

Item	Average 87 Farms 1978	Average 84 Farms 1979	My Farm
	<u>Including Real Estate Appreciation</u>		
Labor, Mgmt. & Ownership Income/Farm	\$39,679	\$49,494	\$ _____
Less: Value of Operator's Labor & Mgmt.*	<u>15,466</u>	<u>17,148</u>	_____
Return on Equity Capital	\$24,213	\$32,346	\$ _____
Rate of Return on Equity Capital	12.6%	14%	_____ %
	<u>Excluding Real Estate Appreciation</u>		
Return on Equity Capital (from above)	\$24,213	\$32,346	\$ _____
Less: Real Estate Appreciation	<u>4,801</u>	<u>6,363</u>	_____
Return on Equity Capital	\$19,412	\$25,983	\$ _____
Rate of Return on Equity Capital	10%	11.2%	_____ %

* Value of operator's labor and management estimated by operators (\$13,718 times 1.25 operators per farm in 1979).

Farm Family Financial Situation

The financial situation is an important part of the farm business summary. It has a direct affect on current cash outflow and future capital investment decisions. A farmer may have a good labor and management income, but a high debt payment schedule may seriously restrict his management flexibility.

FARM FAMILY FINANCIAL SITUATION
84 Eastern Plateau Dairy Farms, January 1, 1980

Item	My Farm	Average 84 Farms
<u>Assets</u>		
Livestock	\$ _____	\$ 96,078
Feed & supplies	_____	23,857
Machinery & equipment	_____	64,680
Land & buildings	_____	157,900
Co-op investment	_____	2,342
Accounts receivable	_____	10,421
Cash & checking accounts	_____	2,748
Total Farm Assets	\$ _____	\$358,026
Savings accounts	\$ _____	\$ 3,619
Cash value life insurance	_____	2,475
Stocks & bonds	_____	2,899
Non-farm real estate	_____	2,892
Auto (personal share)	_____	1,461
All other	_____	5,314
Total Non-Farm Assets	\$ _____	\$ 18,660
TOTAL ASSETS	\$ _____	\$376,686
<u>Liabilities</u>		
Real estate mortgage	\$ _____	\$ 71,574
Liens on cattle & equipment	_____	38,838
Installment contracts	_____	5,775
Notes & other farm debt	_____	10,507
Total Farm Liabilities	\$ _____	\$126,694
Non-Farm Liabilities	_____	245
TOTAL LIABILITIES	\$ _____	\$126,939
Farm Net Worth (equity capital)	\$ _____	\$231,332
Family Net Worth	\$ _____	\$249,747

Farm Net Worth (equity capital) averaged \$231,332 on the 84 Eastern Plateau farms, \$39,000 more than the average farm net worth reported by 87 farms on January 1, 1979. The 80 farm owners farm net worths averaged \$236,435 on January 1, 1980. Farm net worth is total farm assets less total farm liabilities. Family net worth is total assets less all liabilities reported.

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

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

Debt payments planned for 1980 are the scheduled debt payments as of January 1980. Some farms in the group had scheduled debt payments exceeding 40 percent of the milk receipts. Committing this much cash inflow to debt payments can put a "big squeeze" on cash available for operating the business and family living.

FINANCIAL MEASURES & DEBT COMMITMENT
84 Eastern Plateau Dairy Farms, January 1, 1980

Item	My Farm	Average 84 Farms
<u>Payment Ability</u>		
Net cash farm income	\$ _____	\$35,800
Add: Interest paid	_____	8,403
CASH AVAILABLE FOR DEBT SERVICE & LIVING	\$ _____	\$44,203
Less: Family living expenses	_____	13,009*
CASH AVAILABLE FOR DEBT PAYMENT & CAPITAL PURCHASES	\$ _____	\$31,194
<u>Scheduled Annual Debt Payments</u>		
Real estate mortgage	\$ _____	\$ 8,146
Cattle & equipment liens	_____	9,817
Installment contracts	_____	2,036
Notes & other	_____	3,436
TOTAL PAYMENTS PLANNED 1980	\$ _____	\$23,435
<u>Measure of Debt Commitment & Equity Position</u>		
Scheduled debt payments per cow	\$ _____	\$ 317
Scheduled debt payments as % of milk sales	_____ %	19%
Farm debt per cow	\$ _____	\$ 1,712
Percent equity (total)	_____ %	66%

* Estimated at \$6,000 per family, (assuming 1.25 families per farm and one family per operator) plus four percent of cash farm receipts.

ANALYSIS OF THE FARM BUSINESS

Research has shown that certain factors controlled by management affect farm incomes. In analyzing a farm business, we examine the factors of size, rates of production, labor efficiency, capital efficiency and cost control.

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 on which to make a profit. It is imperative to remember, however, all large farms are not profitable and big size without good management can lead to big trouble!

MEASURES OF SIZE OF BUSINESS
Eastern Plateau Dairy Farms, 1978 & 1979

Measure	Average 87 Farms 1978	Average 84 Farms 1979	My Farm
Number of cows	67	71	_____
Number of heifers	45	50	_____
Pounds of milk sold	962,300	1,018,400	_____
Man equivalent	2.3	2.4	_____
Total work units	727	773	_____
Total acres of crops	189	201	_____

The average Eastern Plateau farm summarized for 1979 had four more cows, four percent more labor and 12 more crop acres than the farms summarized for 1978.

In the table below, the 527 New York farms for 1978 are sorted by number of cows and the labor income is shown for each size group. In general, the large farms paid better, but, variability of income was significant.

COWS PER FARM AND LABOR AND MANAGEMENT INCOME
527 New York Dairy Farms, 1978

Number of Cows	Number of Farms	Percent of Farms	Labor & Management Income	
			Per Operator	Per Cow
Under 40	73	13%	\$ 9,865	\$307
40 - 54	156	30	14,480	345
55 - 69	104	20	18,505	376
70 - 84	68	13	20,246	345
85 - 99	34	6	18,818	286
100 - 114	28	5	32,417	382
115 - 129	19	4	27,440	358
130 - 149	16	3	32,752	341
150 and over	29	6	45,387	329

Rates of Production

Crop yields and animal production rates are factors that affect farm incomes. Crop acres, yields and pounds of milk sold per cow are compared in the following table.

CROP YIELDS & MILK SOLD PER COW
84 Eastern Plateau Dairy Farms, 1979

Crop	Average of Farms Reporting			My Farm	
	Farms Reporting	Acres	Yield	Acres	Yield
Dry hay	75	76	(combined below)	_____	_____
Hay crop silage	67	71		_____	_____
Corn silage	80	51	13.2 ton	_____	_____
Grain corn	32	47	90.9 bu.	_____	_____
Oats	20	27	71.0 bu.	_____	_____
Wheat	3	20	53.0 bu.	_____	_____

Hay equivalent:					
All hay crops	84	125	2.6 ton	_____	_____
All hay & silage	84	175	3.0 ton	_____	_____
Milk sold per cow			14,344 lbs.	_____	_____

Tons of hay equivalent of all hay and silage is a good measure of the overall rate of forage production. One ton of hay equivalent is equal to one ton of dry hay containing 90 percent dry matter.

The hay crop yields reported in 1979 were down four percent and corn silage yields were one ton lower than the average reported for 1978. There was no significant change in milk sold per cow.

The importance of strong milk output per cow is shown in the table below.

MILK SOLD PER COW AND LABOR AND MANAGEMENT INCOME
527 New York Dairy Farms, 1978

Pounds of Milk Sold Per Cow	Number of Farms	Number of Cows	Feed Bought Per Cow	Labor & Management Income	
				Per Operator	Per Cow
Under 10,000	28	60	\$294	\$ 3,400	\$ 64
10,000 - 10,999	37	52	339	10,170	227
11,000 - 11,999	37	67	334	19,230	349
12,000 - 12,999	76	69	370	18,680	296
13,000 - 13,999	99	75	378	18,680	294
14,000 - 14,999	99	79	442	23,650	369
15,000 - 15,999	85	75	465	26,690	456
16,000 and over	66	65	499	21,590	438

Labor Efficiency

Labor utilization is an important factor in milk production. Several measures of accomplishment per man or labor efficiency are shown below.

MEASURES OF LABOR EFFICIENCY
Eastern Plateau Dairy Farms, 1978 & 1979

Item	Average 87 Farms 1978	Average 84 Farms 1979	My Farm
Man equivalent	2.3	2.4	_____
Cows per man	29	29	_____
Pounds of milk sold per man	413,004	420,826	_____
Work units per man	312	319	_____

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. There was no change in cows per man when the average for 1979 is compared with 1978 because cow numbers and the labor force increased proportionately.

Pounds of milk sold per man is the single best measure of labor efficiency on the dairy farm. It measures the ability of the labor force to handle a large number of cows without sacrificing milk output per cow. The farms summarized for 1979 were slightly more efficient than those in the 1978 study as milk output per man increased two percent or less than 8,000 pounds.

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

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 performance of the workers. All of these should be under the control of the owner-operator.

MILK SOLD PER MAN AND LABOR AND MANAGEMENT INCOME
527 New York Dairy Farms, 1978

Pounds of Milk Sold Per Man	Number of Farms	Number of Cows	Lbs. Milk Per Cow	Labor & Management Income	
				Per Operator	Per Cow
Under 250,000	62	41	11,200	\$ 6,760	\$191
250,000 - 299,999	60	49	12,900	12,830	309
300,000 - 349,999	71	68	13,100	14,170	279
350,000 - 399,999	91	66	13,800	21,000	376
400,000 - 449,999	82	73	14,400	23,090	392
450,000 - 499,999	64	79	14,500	23,500	337
500,000 - 599,999	67	97	15,200	25,570	366
600,000 and over	30	120	14,500	34,840	413

Capital Efficiency

Capital is a key resource and a manager must continually analyze its use in the business. The measures of capital efficiency shown in the following table include owned as well as borrowed capital. The management of borrowed capital has been analyzed on page 10. It's possible for the business to be under capitalized, but, investing too much capital per productive unit is a more common problem. The best way a farmer can get a good return on capital invested in his business is to "put it to work".

MEASURES OF CAPITAL EFFICIENCY
Eastern Plateau Dairy Farms, 1979

Item	Average 84 Farms 1979	Ave. 80 Owned Farms 1979	My Farm
Farm capital per man	\$141,535	\$145,496	\$ _____
Farm capital per cow	4,629	4,758	_____
Land & buildings per cow	2,134	2,239	_____
Land & buildings per crop acre owned	1,294	1,294	_____
Machinery investment per cow	874	890	_____
Capital turnover	2.2 years	2.2 years	_____

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

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

SIZE OF HERD AND CAPITAL EFFICIENCY
527 New York Dairy Farms, 1978

Number of Cows	Number of Farms	Capital Investment Per Cow			Total Capital Per Cwt. Milk
		Total	Real Estate	Machinery	
Under 40	73	\$4,860	\$2,660	\$900	\$38
40 - 54	156	4,780	2,500	890	36
55 - 69	104	4,570	2,300	890	33
70 - 84	68	4,880	2,500	940	34
85 - 99	34	4,390	2,200	800	33
100 - 114	28	4,480	2,200	800	32
115 - 129	19	4,100	2,000	750	30
130 - 149	16	4,000	2,000	700	28
150 and over	29	3,800	1,800	680	28

Cost Control

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

Feed Costs

Feed purchased is the largest single expenditure category on the dairy farm. These Eastern Plateau dairy farmers put 35 cents of each dollar spent during 1979 into purchased dairy feed. Feed costs can be controlled by making sure that only required nutrients are fed and that required nutrients are purchased from their most economical source.

The crop program has an important influence on purchased feed costs. Both roughages and grains grown have a bearing on the purchased feed expense. Also, the heifer raising practices affect feed costs. The overall feed situation must be examined and evaluated as a "system".

FEED COSTS AND RELATED MEASURES
Eastern Plateau Dairy Farms, 1978 & 1979

Item	Average 87 Farms 1978	Average 84 Farms 1979	My Farm
Feed bought per cow	\$ 424	\$ 495	\$ _____
Crop expense per cow	\$ 110	\$ 122	\$ _____
Feed bought per cwt. milk	\$2.95	\$3.45	\$ _____
Feed & crop expense per cwt. milk	\$3.72	\$4.31	\$ _____
Percent feed is of milk receipts	28%	29%	_____ %
Hay equivalent per cow (tons)	8.2	7.5	_____
Crop acres per cow	2.8	2.8	_____
Lime & fertilizer per crop acre	\$ 25	\$ 28	\$ _____
Heifers as percent of cow numbers	67%	70%	_____ %

Feed bought per cow increased 17 percent in 1979 compared to the amount spent in 1978. Although feed bought increased \$0.50 per hundredweight of milk sold, the farms summarized for 1979 spent just one percent more of their milk check to buy dairy feed compared to the farms summarized for 1978.

Crop expenses increased five percent per cow in 1979 as lime and fertilizer costs increased \$3 per crop acre. Forage production decreased 21 percent per cow.

There were .7 heifers for every cow in 1978, an increase of .03 heifers per cow from 1978.

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
Eastern Plateau Dairy Farms, 1978 & 1979

Item	Average 87 Farms 1978	Average 84 Farms 1979	My Farm
Total machinery ^{1/}	\$18,871	\$23,826	\$ _____
Machinery cost per cow	282	336	_____
Machinery costs per cwt. of milk	1.96	2.34	_____
Total labor costs ^{2/}	17,956	19,002	_____
Labor costs per cow	268	268	_____
Labor costs per cwt. of milk	1.87	1.87	_____
Labor & machinery costs/cwt. of milk	3.83	4.21	_____

^{1/} Machinery depreciation, interest on the average machinery inventory, machine hire, machinery repairs, farm share of auto expense and gas and oil are all included.

^{2/} Includes hired labor and paid family labor, plus unpaid family labor valued at \$425 per month and operator's labor valued at \$650 per month.

Machinery costs increased 19 percent or \$52 per cow compared to 1978. Higher costs of fuel, repairs and capital were major causes.

MISCELLANEOUS COSTS CONTROL MEASURES
Eastern Plateau Dairy Farms, 1978 & 1979

Item	Average 87 Farms 1978	Average 84 Farms 1979	My Farm
Veterinary & medicine per cow	\$ 24.16	\$ 26.79	\$ _____
Other livestock expense per cow	52.96	63.85	_____
Real estate expense per cow	116.22	133.96	_____
Total farm expense per cow	1,593	1,903	_____

Other livestock expenses per cow include dairy supplies, bedding and DHIC fees, but, exclude breeding fees and milk marketing. Real estate expenses include repairs, taxes, insurance and rent.

Total farm expenses per cow were 19 percent higher in 1979.

YEARLY FINANCIAL PLANNING & ANALYSIS
 84 Eastern Plateau Farms, 1979
 Average: 71 Cows, 14,344 Lbs. Milk Per Cow, \$11.84 Per Cwt.

Item	Average Per Cow	My Farm, _____ Cows		
		Per Cow	Total	Goal
<u>CASH RECEIPTS</u>				
Milk sales	\$1,698	\$ _____	\$ _____	\$ _____
Crop sales	15	_____	_____	_____
Dairy cattle	150	_____	_____	_____
Calves & other livestock	45	_____	_____	_____
Other	32	_____	_____	_____
Total Cash Receipts	\$1,940	\$ _____	\$ _____	\$ _____
<u>CASH EXPENSES</u>				
Hired labor	\$ 117	\$ _____	\$ _____	\$ _____
Dairy concentrate	495	_____	_____	_____
Hay & other	20	_____	_____	_____
Machine hire	15	_____	_____	_____
Machine repair & auto expense	87	_____	_____	_____
Gas & oil	56	_____	_____	_____
Breeding fees	24	_____	_____	_____
Vet & medicine	28	_____	_____	_____
Milk marketing (ADA, dues, hauling)	32	_____	_____	_____
Other livestock expense	64	_____	_____	_____
Fertilizer & lime	80	_____	_____	_____
Seeds & plants	23	_____	_____	_____
Spray & other	19	_____	_____	_____
Land, building, fence repair (owner)	36	_____	_____	_____
Taxes (owner)	39	_____	_____	_____
Insurance (owner)	33	_____	_____	_____
Rent (owner)	26	_____	_____	_____
Telephone (farm share)	8	_____	_____	_____
Electricity (farm share)	29	_____	_____	_____
Miscellaneous	17	_____	_____	_____
Total Cash Expenses ^{1/}	\$1,248	\$ _____	\$ _____	\$ _____
Total Cash Receipts	\$1,940	\$ _____	\$ _____	\$ _____
Total Cash Expenses ^{1/}	- 1,248	- _____	- _____	- _____
Net Cash Flow	\$ 692	\$ _____	\$ _____	\$ _____
Cash Family Living Expense ^{2/}	- 183	- _____	- _____	- _____
Amount Left for Debt Service, Capital Investment & Retained Earnings	\$ 509	\$ _____	\$ _____	\$ _____
Scheduled Debt Service	- 317	- _____	- _____	- _____
Available for Capital Investment ^{3/}	\$ 192	\$ _____	\$ _____	\$ _____
Planned Cattle Purchase		_____	_____	_____
Planned Equipment Purchase		_____	_____	_____
Borrowed Funds Needed ^{4/}		\$ _____	\$ _____	\$ _____

^{1/} Interest paid excluded from cash expenses as it is contained in Scheduled Debt Service. Purchased livestock are also excluded.

^{2/} Estimated: \$6,000 per family and four percent of cash receipts.

^{3/} Retained earnings are \$0.

^{4/} May be replaced by equity capital.

How Does Your Management Measure Up?

After you have entered your farm business data on the previous pages of this workbook, summarize the facts by listing the strong and weak points below. Your business factors that exceed the regional average should be listed as strong points, factors that are close to the regional average should be identified as average, and factors that are below average should be listed under need improvement.

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

STRONG POINTS:

AVERAGE:

NEED IMPROVEMENT:

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

A third and probably the best comparison that you should make can be accomplished by comparing your current business factors with your farm data from previous years. Page 26 is provided for this purpose. Answer the following questions to help evaluate the progress your business is making.

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

Farm Business Chart

The Farm Business Chart is a tool which can be used in analyzing a business to determine the strong and weak points. The figure at the top of each column is the average of the top 10 percent of the 527 farms for that factor. The other figures in each column are the average for the second 10 percent, third 10 percent, etc. Each column of the chart is independent of the others. The farms which are in the top 10 percent for one factor would not necessarily be the same farms which make up the top 10 percent for any other factor.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS
527 New York Dairy Farms, 1978

Size of Business			Rates of Production			Labor Efficiency	
Man Equivalent	No. of Cows	Pounds of Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crops Per Acre	Tons Corn Silage Per Acre	Cows Per Man	Pounds Milk Sold Per Man
5.0	168	2,333,700	17,100	4.4	20	44	631,900
3.4	106	1,499,800	15,800	3.4	17	37	518,900
2.9	83	1,188,200	15,200	3.0	16	33	473,100
2.5	70	1,004,200	14,700	2.7	15	31	434,000
2.3	62	875,000	14,100	2.5	14	29	403,100

2.0	55	769,700	13,600	2.3	13	27	373,500
2.0	50	671,400	13,000	2.1	12	25	340,700
1.7	44	578,000	12,400	1.9	11	23	306,000
1.5	39	487,500	11,300	1.7	9	21	264,200
1.2	31	352,100	9,400	1.2	6	17	192,400

Per Cow	Feed Bought % of Milk Receipts	Machinery Cost Per Cow	Labor and Machinery Cost Per Cow	Feed and Crop Expense Per Cwt. Milk
\$178	13%	\$151	\$382	\$2.36
263	20	197	443	2.98
322	24	226	482	3.24
371	26	250	517	3.48
398	28	271	541	3.67

424	30	288	565	3.85
455	32	311	598	4.04
489	34	338	636	4.29
539	37	376	695	4.62
644	43	476	826	5.27

The cost control factors are ranked from low to high, but the lowest cost is not necessarily the most profitable. Many things affect the level of costs, and these items must be taken into account when analyzing the factors.

This chart can be used to analyze a dairy business by drawing a line through the figure in each column which represents the level of management for this farm.

FARM BUSINESS SUMMARY BY HERD SIZE
527 New York Dairy Farms, 1978

Item	Farms with:			
	Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Capital Investment (end of year)				
Livestock	\$ 35,739	\$ 52,755	\$ 65,255	\$ 78,468
Feed and supplies	8,173	13,258	19,892	28,543
Machinery and equipment	30,530	42,334	56,067	70,121
Land and buildings	89,130	119,477	144,548	187,022
TOTAL INVESTMENT	\$163,572	\$227,824	\$285,762	\$364,154
Receipts				
Milk sales	\$ 44,369	\$ 64,277	\$ 88,791	\$113,625
Dairy cattle sold	3,822	5,553	8,146	9,008
Other livestock sales	1,260	1,481	1,623	2,366
Crop sales	327	610	855	659
Miscellaneous receipts	1,474	1,612	1,969	2,739
Total Cash Receipts	\$ 51,252	\$ 73,533	\$101,384	\$128,397
Increase in livestock	9,421	13,303	15,071	17,986
Increase in feed & supplies	1,470	2,855	4,074	4,797
TOTAL FARM RECEIPTS	\$ 62,143	\$ 89,691	\$120,529	\$151,180
Expenses				
Hired labor	\$ 1,371	\$ 2,682	\$ 5,625	\$ 9,875
Dairy feed	12,936	18,960	24,903	31,012
Other feed	830	1,067	1,242	1,048
Machine hire	299	476	637	1,081
Machinery repair	2,287	3,202	4,783	6,270
Auto expense (farm share)	281	308	283	374
Gas and oil	1,534	1,996	2,823	3,497
Purchased animals	2,402	3,242	2,776	1,885
Breeding fees	606	912	1,085	1,338
Veterinary and medicine	841	1,236	1,559	1,953
Milk marketing	1,218	1,581	2,516	3,161
Other livestock expense	1,734	2,543	3,185	4,233
Fertilizer and lime	1,922	2,788	4,508	6,902
Seeds and plants	612	1,044	1,525	2,101
Spray and other crop expense	327	744	877	1,455
Land, bldg, fence repair	1,085	1,091	1,708	2,158
Taxes and insurance	2,304	3,068	3,752	4,805
Electric & phone (farm share)	1,218	1,622	2,098	2,548
Interest paid	3,190	5,806	7,232	8,654
Miscellaneous expenses	885	1,467	2,190	3,321
Total Cash Expenses	\$ 37,882	\$ 55,835	\$ 75,307	\$ 97,671
Machinery depreciation	3,077	4,280	5,626	6,504
Building depreciation	1,283	1,835	2,574	2,957
Unpaid family labor	1,700	1,700	1,275	850
Interest on equity @ 7%	8,070	10,171	12,801	17,303
Decrease in feed & supplies	--	--	--	--
TOTAL FARM EXPENSES	\$ 52,012	\$ 73,821	\$ 97,583	\$125,285
Financial Summary				
Total Farm Receipts	\$ 62,143	\$ 89,691	\$120,529	\$151,180
Total Farm Expenses	52,012	73,821	97,583	125,285
Labor & Mgt. Income	\$ 10,131	\$ 15,870	\$ 22,946	\$ 25,895
Number of operators	1.03	1.10	1.24	1.28
LABOR & MGT. INCOME/OPERATOR	\$ 9,865	\$ 14,480	\$ 18,505	\$ 20,246

FARM BUSINESS SUMMARY BY HERD SIZE
527 New York Dairy Farms, 1978

Item	Farms with:				
	85 to 99 Cows	100 to 114 Cows	115 to 129 Cows	130 to 149 Cows	150 or More Cows
<u>Capital Investment (end of year)</u>					
Livestock	\$ 97,347	\$121,909	\$119,719	\$141,329	\$190,365
Feed and supplies	30,205	35,548	41,538	45,886	64,626
Machinery and equipment	74,732	87,843	93,068	99,001	132,126
Land and buildings	207,813	233,434	253,252	280,079	367,009
TOTAL INVESTMENT	\$410,097	\$478,734	\$507,577	\$566,295	\$754,126
<u>Receipts</u>					
Milk sales	\$131,892	\$154,734	\$178,211	\$209,111	\$292,088
Dairy cattle sold	12,876	14,438	12,279	17,746	23,754
Other livestock sales	2,776	4,671	2,549	3,182	5,066
Crop sales	1,537	1,051	1,479	944	2,102
Miscellaneous receipts	2,717	3,977	3,514	5,236	7,646
Total Cash Receipts	\$151,798	\$178,871	\$198,032	\$236,219	\$330,656
Increase in livestock	22,212	35,079	29,387	34,682	46,650
Increase in feed & supplies	2,474	8,471	5,959	3,937	9,566
TOTAL FARM RECEIPTS	\$176,484	\$222,421	\$233,378	\$274,834	\$386,872
<u>Expenses</u>					
Hired labor	\$ 12,139	\$ 14,607	\$ 18,495	\$ 24,385	\$ 41,507
Dairy feed	36,223	48,215	46,532	58,126	78,730
Other feed	2,093	3,096	3,003	2,422	3,797
Machine hire	1,325	1,025	950	972	3,918
Machinery repair	8,028	8,105	9,079	12,487	15,440
Auto expense (farm share)	584	523	448	379	572
Gas and oil	4,808	4,963	5,854	6,361	9,147
Purchased animals	2,219	8,158	4,912	4,120	9,642
Breeding fees	1,764	1,938	2,186	2,640	3,151
Veterinary and medicine	2,419	2,870	3,102	4,394	4,704
Milk marketing	4,026	3,733	5,333	5,473	9,729
Other livestock expense	4,170	5,089	5,572	6,937	9,295
Fertilizer and lime	7,551	7,293	7,886	9,950	16,339
Seeds and plants	2,415	2,844	2,785	3,767	5,176
Spray and other crop expense	1,583	2,026	2,815	3,429	4,364
Land, bldg., fence repair	2,524	1,957	2,740	4,565	4,788
Taxes and insurance	5,970	5,919	7,178	8,028	11,419
Electric & phone (farm share)	3,176	3,258	3,914	3,406	5,161
Interest paid	10,676	13,477	12,395	14,610	20,567
Miscellaneous expenses	3,854	4,016	5,995	5,297	8,626
Total Cash Expenses	\$117,547	\$143,112	\$151,174	\$181,748	\$266,072
Machinery depreciation	9,155	9,979	9,912	10,443	15,674
Building depreciation	3,284	5,885	4,293	7,095	7,289
Unpaid family labor	850	1,700	425	425	850
Interest on equity @ 7%	19,641	21,224	24,274	28,063	32,855
Decrease in feed & supplies	--	--	--	--	--
TOTAL FARM EXPENSES	\$150,477	\$181,900	\$190,078	\$227,774	\$322,740
<u>Financial Summary</u>					
Total Farm Receipts	\$176,484	\$222,421	\$233,378	\$274,838	\$386,872
Total Farm Expenses	150,477	181,900	190,078	227,774	322,740
Labor & Mgt. Income	\$ 26,007	\$ 40,521	\$ 43,300	\$ 47,064	\$ 64,132
Number of operators	1.38	1.25	1.58	1.44	1.41
LABOR & MGT. INCOME/OPR	\$ 18,818	\$ 32,417	\$ 27,440	\$ 32,752	\$ 45,387

SELECTED BUSINESS FACTORS BY HERD SIZE
527 New York Dairy Farms, 1978

Item	Farms with:			
	Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	73	156	104	68
<u>Size of Business</u>				
Number of cows	33	46	61	75
Number of heifers	22	31	41	54
Pounds of milk sold	426,800	624,700	855,100	1,085,500
Man equivalent	1.6	1.8	2.3	2.6
Total work units	370	512	677	839
Total crop acres	111	147	199	244
(Crop acres rented)	(17)	(29)	(50)	(70)
<u>Rates of Production</u>				
Milk sold per cow	12,930	13,600	14,000	14,500
Tons hay crops per acre	2.1	2.3	2.4	2.6
Tons corn silage per acre	13.0	13.2	13.3	14.2
Bushels of oats per acre	55	72	58	61
<u>Labor Efficiency</u>				
Cows per man	21	25	27	29
Pounds milk sold per man	270,100	341,400	380,000	420,700
Work units per man	234	280	301	325
<u>Feed Costs</u>				
Feed purchased per cow	\$392	\$412	\$408	\$413
Crop expense per cow	\$87	\$99	\$113	\$139
Feed cost per cwt. milk	\$3.03	\$3.04	\$2.91	\$2.86
Feed & crop exp./cwt. milk	\$3.70	\$3.77	\$3.72	\$3.82
% feed is of milk receipts	29%	29%	28%	27%
Hay equivalent per cow	7.8	8.3	8.5	8.8
Crop acres per cow	3.4	3.2	3.3	3.3
Fertilizer & lime/crop acre	\$17	\$19	\$23	\$28
<u>Machinery and Labor Costs</u>				
Total machinery costs	\$9,501	\$13,110	\$17,825	\$22,372
Machinery cost per cow	\$288	\$285	\$292	\$298
Machinery cost/cwt. milk	\$2.23	\$2.10	\$2.08	\$2.06
Labor cost per cow	\$329	\$279	\$273	\$273
Labor cost per cwt. milk	\$2.55	\$2.05	\$1.95	\$1.89
<u>Capital Efficiency</u>				
Investment per man	\$103,500	\$124,500	\$127,000	\$141,100
Investment per cow	\$4,800	\$4,850	\$4,600	\$4,860
Investment per cwt. milk	\$38	\$36	\$33	\$34
Land & buildings per cow	\$2,620	\$2,540	\$2,330	\$2,490
Machinery investment/cow	\$900	\$900	\$900	\$935
Capital turnover	2.6	2.5	2.4	2.4
<u>Other</u>				
Price per cwt. milk sold	\$10.40	\$10.29	\$10.38	\$10.47
Acres hay crops	85	99	123	140
Acres corn silage	22	37	52	66
Inventory changes 1978*:				
Number of cows	0	0	0	+1
Invt. value per cow**	+\$277	+\$348	+\$243	+\$229

* Change from 1/1/78 to 1/1/79.

** Livestock inventory includes heifers.

SELECTED BUSINESS FACTORS BY HERD SIZE
527 New York Dairy Farms, 1978

Item	Farms with:				
	85 to 99 Cows	100 to 114 Cows	115 to 129 Cows	130 to 149 Cows	150 or More Cows
Number of farms	34	28	19	16	29
<u>Size of Business</u>					
Number of cows	91	106	121	138	195
Number of heifers	72	77	90	90	124
Pounds of milk sold	1,240,100	1,482,800	1,699,200	1,999,300	2,651,400
Man equivalent	2.8	3.4	3.5	3.8	5.4
Total work units	1,014	1,183	1,333	1,487	2,064
Total crop acres	271	331	361	382	506
(Crop acres rented)	(83)	(115)	(159)	(111)	(212)
<u>Rates of Production</u>					
Milk sold per cow	13,600	14,000	14,000	14,500	13,600
Tons hay crops per acre	3.0	2.5	2.6	2.5	2.6
Tons corn silage/acre	14.1	13.6	14.4	14.6	14.4
Bushels oats/acre	52	52	64	66	73
<u>Labor Efficiency</u>					
Cows per man	32	31	35	36	36
Pounds milk sold/man	438,200	433,600	485,500	522,000	489,200
Work units per man	358	346	381	388	381
<u>Feed Costs</u>					
Feed purchased per cow	\$398	\$455	\$385	\$421	\$404
Crop expense per cow	\$127	\$115	\$111	\$124	\$133
Feed cost per cwt. milk	\$2.92	\$3.25	\$2.74	\$2.91	\$2.97
Feed & crop exp./cwt. milk	\$3.85	\$4.07	\$3.53	\$3.76	\$3.95
% feed is of milk receipts	27%	31%	26%	28%	27%
Hay equivalent per cow	8.7	8.9	8.8	8.2	7.7
Crop acres per cow	3.0	3.1	3.0	2.8	2.6
Fertilizer & lime/crop acre	\$28	\$22	\$22	\$26	\$32
<u>Machinery and Labor Costs</u>					
Total machinery costs	\$28,917	\$30,361	\$32,366	\$37,230	\$53,376
Machinery cost per cow	\$318	\$286	\$267	\$270	\$274
Machinery cost/cwt. milk	\$2.33	\$2.05	\$1.90	\$1.86	\$2.01
Labor cost per cow	\$257	\$246	\$258	\$260	\$274
Labor cost/cwt. milk	\$1.89	\$1.76	\$1.84	\$1.79	\$2.01
<u>Capital Efficiency</u>					
Investment per man	\$144,900	\$140,000	\$145,000	\$147,900	\$139,100
Investment per cow	\$4,410	\$4,470	\$4,100	\$4,000	\$3,800
Investment/cwt. milk	\$33	\$32	\$30	\$28	\$28
Land & buildings/cow	\$2,235	\$2,180	\$2,000	\$2,000	\$1,840
Machinery investment/cow	\$800	\$820	\$750	\$700	\$660
Capital turnover	2.3	2.2	2.2	2.1	1.9
<u>Other</u>					
Price per cwt. milk sold	\$10.64	\$10.44	\$10.49	\$10.46	\$11.02
Acres hay crops	141	180	194	198	234
Acres corn silage	80	110	115	130	185
Inventory changes 1978*:					
Number of cows	+3	+1	+4	+1	+3
Invt. value per cow**	+\$212	+\$320	+\$212	+\$239	+\$222

* Change from 1/1/78 to 1/1/79.

** Livestock inventory includes heifers.

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
527 New York Dairy Farms, January 1, 1979

Item	Farms with:			
	Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	73	156	104	68
Assets				
Livestock	\$ 35,740	\$ 52,755	\$ 65,255	\$ 78,470
Feed and supplies	8,174	13,258	19,892	28,543
Machinery & equipment	30,530	42,335	56,068	70,121
Land and buildings	89,130	119,478	144,549	187,022
Co-op investment	838	2,393	2,585	3,794
Accounts receivable	3,226	4,828	6,532	8,284
Cash & checking accounts	1,275	1,374	1,971	2,617
Total Farm Assets	\$168,913	\$236,421	\$296,852	\$378,851
Savings accounts	2,336	3,254	4,117	3,505
Cash value life insurance	2,376	1,886	2,570	3,131
Stocks and bonds	982	520	1,808	3,695
Nonfarm real estate	2,201	2,698	3,157	4,945
Auto (personal share)	969	1,032	962	1,042
All other	3,816	3,620	4,336	4,843
Total Nonfarm Assets	\$ 12,680	\$ 13,010	\$ 16,950	\$ 21,161
TOTAL ASSETS	\$181,593	\$249,431	\$313,802	\$400,012
Liabilities				
Real estate mortgage	\$ 27,851	\$ 53,975	\$ 63,209	\$ 77,966
Liens on cattle & equipt.	18,893	29,321	38,989	40,351
Installment contracts	1,567	1,913	2,363	2,447
Other loans over 7 years	720	1,317	2,591	2,185
Other loans 1 to 7 years	2,696	2,481	3,040	5,201
Other loans less than 1 year	201	517	1,372	1,787
Feed store & other accounts	1,693	1,592	2,414	1,725
Total Farm Liabilities	\$ 53,621	\$ 91,116	\$113,978	\$131,662
Nonfarm Liabilities	412	587	711	729
TOTAL LIABILITIES	\$ 54,033	\$ 91,703	\$114,689	\$132,391
Farm Net Worth (Equity Capital)	\$115,292	\$145,305	\$182,874	\$247,189
FAMILY NET WORTH	\$127,560	\$157,728	\$199,113	\$267,621
Financial Measures				
Percent equity	70%	63%	63%	67%
Farm debt per cow	\$1,577	\$1,898	\$1,809	\$1,755
Available for debt service and living	\$16,555	\$23,498	\$33,303	\$39,376
Scheduled annual debt payment	\$9,140	\$14,216	\$19,411	\$23,752
Scheduled debt payment/cow	\$269	\$296	\$308	\$317
Scheduled debt payment as percent of milk check	21%	22%	22%	21%

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
527 New York Dairy Farms, January 1, 1979

Item	Farms with:				
	85 to 99 Cows	100 to 114 Cows	115 to 129 Cows	130 to 149 Cows	150 or More Cows
Number of farms	34	28	19	16	29
Assets					
Livestock	\$ 97,349	\$121,910	\$119,720	\$141,329	\$190,366
Feed and supplies	30,206	35,549	41,539	45,886	64,626
Machinery & equipment	74,733	87,844	93,069	99,001	132,127
Land and buildings	207,814	233,435	253,252	280,080	367,010
Co-op investment	5,970	5,439	8,301	8,186	12,723
Accounts receivable	10,338	10,866	20,992	18,651	24,789
Cash & checking accounts	1,929	2,476	4,846	5,012	3,992
Total Farm Assets	\$428,339	\$497,519	\$541,719	\$598,145	\$795,633
Savings accounts	4,607	4,087	3,571	3,327	2,497
Cash value life insurance	3,013	7,869	2,509	4,274	3,698
Stocks and bonds	3,118	4,885	1,465	5,580	4,771
Nonfarm real estate	2,058	250	7,236	15,656	15,442
Auto (personal share)	561	1,206	816	1,134	2,131
All other	3,191	3,780	2,942	4,281	9,901
Total Nonfarm Assets	\$ 16,548	\$ 22,077	\$ 18,539	\$ 34,252	\$ 38,440
TOTAL ASSETS	\$444,887	\$519,596	\$560,258	\$632,397	\$834,073
Liabilities					
Real estate mortgage	\$ 80,379	\$109,060	\$105,786	\$119,664	\$172,762
Liens on cattle & equipt.	52,117	62,451	74,989	70,337	129,739
Installment contracts	2,163	3,762	2,755	2,366	3,763
Other loans over 7 years	3,663	719	2,184	687	10,191
Other loans 1 to 7 years	6,754	10,783	3,793	1,666	5,731
Other loans less than 1 year	828	2,184	1,895	625	1,995
Feed store & other accounts	1,846	5,361	3,540	1,902	2,088
Total Farm Liabilities	\$147,750	\$194,320	\$194,942	\$197,247	\$326,269
Nonfarm Liabilities	276	324	3,476	687	1,724
TOTAL LIABILITIES	\$148,026	\$194,644	\$198,418	\$197,934	\$327,993
Farm Net Worth (Equity Capital)	\$280,589	\$303,199	\$346,777	\$400,898	\$469,364
FAMILY NET WORTH	\$296,861	\$324,952	\$361,840	\$434,463	\$506,080
Financial Measures					
Percent equity	67%	63%	65%	69%	61%
Farm debt per cow	\$1,572	\$1,799	\$1,572	\$1,379	\$1,623
Available for debt service and living	\$44,922	\$49,231	\$59,244	\$69,078	\$85,141
Scheduled annual debt payment	\$27,466	\$33,068	\$36,631	\$31,485	\$56,418
Scheduled debt payment/cow	\$292	\$306	\$295	\$220	\$281
Scheduled debt payment as percent of milk check	21%	21%	21%	15%	19%

PROGRESS OF THE FARM BUSINESS

Comparing your business with that of other farmers is one part of a business checkup. It is equally important to compare your current year's business with that of earlier years to show the progress you are making, and to plan ahead, by setting business targets or goals.

Item	1977	1978	1979	1980 Goal
<u>Size of Business</u>				
Number of cows	_____	_____	_____	_____
Number of heifers	_____	_____	_____	_____
Pounds of milk sold	_____	_____	_____	_____
Man equivalent	_____	_____	_____	_____
Acres of crops	_____	_____	_____	_____
<u>Rates of Production</u>				
Lbs. milk sold per cow	_____	_____	_____	_____
Tons hay crops per acre	_____	_____	_____	_____
Tons corn silage/acre	_____	_____	_____	_____
<u>Labor Efficiency</u>				
Cows per man	_____	_____	_____	_____
Lbs. milk sold per man	_____	_____	_____	_____
<u>Cost Control</u>				
Feed bought per cow	\$ _____	\$ _____	\$ _____	\$ _____
Machinery cost per cow	\$ _____	\$ _____	\$ _____	\$ _____
Labor cost per cow	\$ _____	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency</u>				
Farm capital per cow	\$ _____	\$ _____	\$ _____	\$ _____
Land & bldgs. per cow	\$ _____	\$ _____	\$ _____	\$ _____
Machinery investment per cow	\$ _____	\$ _____	\$ _____	\$ _____
<u>Price</u>				
Price per cwt. milk	\$ _____	\$ _____	\$ _____	\$ _____
<u>Financial Summary</u>				
Net cash farm income	\$ _____	\$ _____	\$ _____	\$ _____
Total farm receipts	\$ _____	\$ _____	\$ _____	\$ _____
Total farm expenses	\$ _____	\$ _____	\$ _____	\$ _____
Labor & mgmt. inc./oper.	\$ _____	\$ _____	\$ _____	\$ _____
Farm Net Worth	\$ _____	\$ _____	\$ _____	\$ _____

Are you satisfied with your progress? Have you set a realistic goal for 1980?