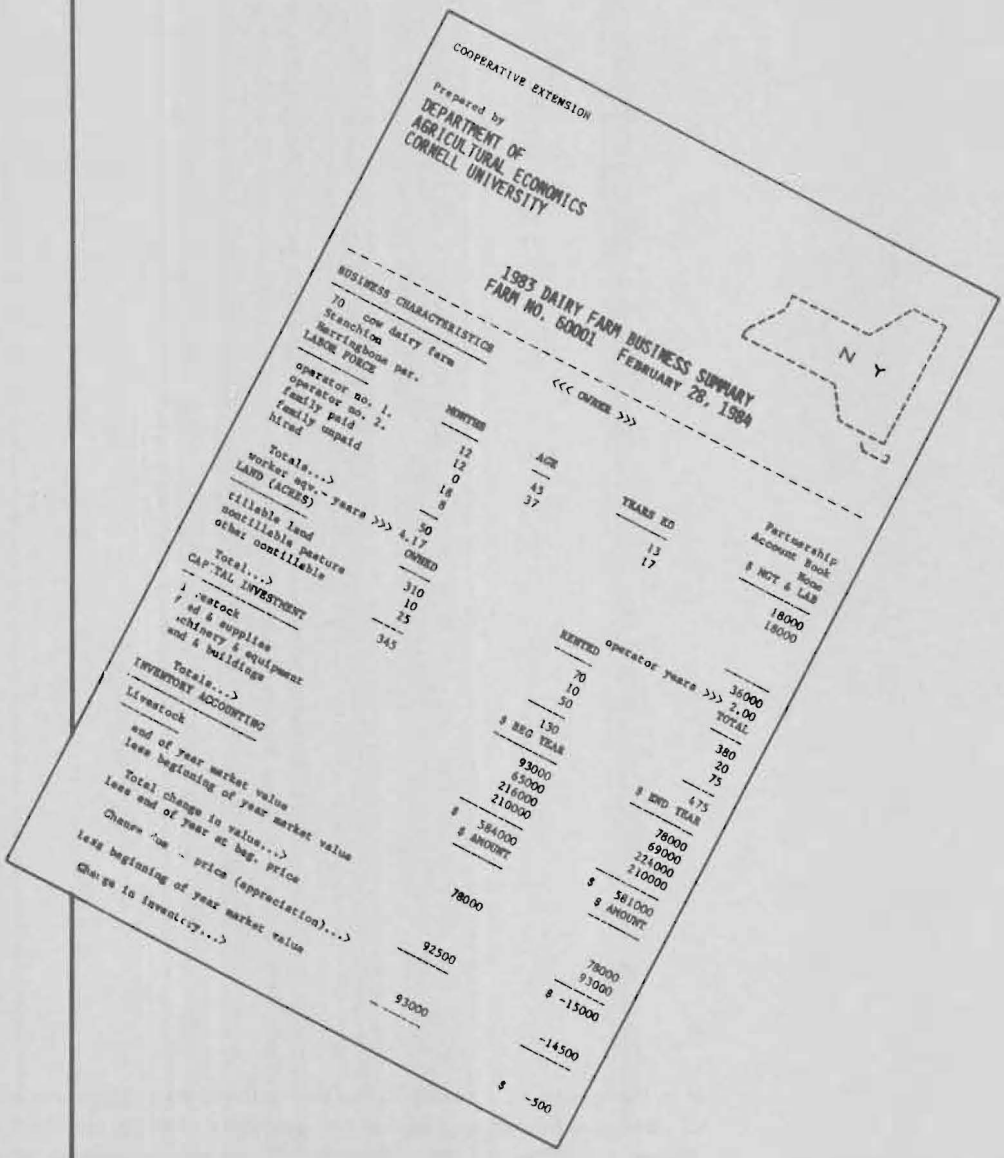
DAIRY FARM BUSINESS SUMMARY

May 1984

A.E. Ext. 84-15

COLUMBIA AND DUTCHESS COUNTIES 1983



COOPERATIVE EXTENSION

Prepared by
DEPARTMENT OF
AGRICULTURAL ECONOMICS
CORNELL UNIVERSITY

1983 DAIRY FARM BUSINESS SUMMARY
FARM NO. 60001 FEBRUARY 28, 1984

<<< OWNED >>>

BUSINESS CHARACTERISTICS
70 cow dairy farm
Stanchion par.
Herringbone par.
LABOR FORCE

	NUMBER	AGE	YEARS ED	Partnership Account Book Room $ NET $ LAB
operator no. 1.	12	43	13	18000
operator no. 2.	12	37	17	18000
family paid	0			
family unpaid	16			
hired	8			
Totals...>	50			

worker equv. years >>> 4.17

LAND (ACRES)

	OWNED	RENTED	operator years >>> 2.00	TOTAL
tillable land	310	70	36000	380
untillable pasture	10	10		20
other untillable	25	50		75
Total...>	345	130		475

CAPITAL INVESTMENT

	$ BEG YEAR	$ END YEAR
Livestock	93000	78000
Feed & supplies	65000	69000
Machinery & equipment	216000	224000
Land & buildings	210000	210000
Totals...>	$ 584000	$ 581000

INVENTORY ACCOUNTING

	$ AMOUNT
Livestock	
end of year market value	78000
less beginning of year market value	92500
Total change in value...>	$ -15000
less end of year at beg. price	93000
Change due - price (appreciation)...>	-14500
less beginning of year market value	
Change in inventory...>	$ -500

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DAIRY FARM BUSINESS SUMMARY

Columbia and Dutchess Counties

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INTRODUCTION

Dairyfarmers throughout New York State submit business records for summarization and analysis through Cooperative Extension's Farm Business Management Program. Each participating farmer receives an individual farm analysis report containing all the management information found in this publication. Averages from a compilation of the individual farm reports are published in several regional summaries and in a statewide summary.

The year ahead will bring increased economic pressures on the dairy farming industry. The Dairy Production Stabilization Act of 1983 is expected to reduce milk prices two to three percent while production costs may increase four to six percent. Dairy farmers must continue to place emphasis on operating efficiency and cost control in order to maintain adequate farm incomes. This year, more than ever, improving weak links in the business and projecting cash flows will be critical management steps to enhance business survival probabilities.

Program Objectives

Primary objectives of the dairy farm business management program are to (1) assist farmers in developing and maintaining more complete farm business data for use in management decisions and (2) help farmers improve their management skills through appropriate use of farm record data and application of modern decision-making techniques. This report is prepared in workbook form for use in the systematic study of individual farm business performance.

Changes in Computation

The interest charge made for using equity capital in the farm business was changed in 1982 to five percent. This real rate of interest reflects the long time average rate of return that a farmer might expect to earn in investments with comparable risk to farm businesses in an economy with little or no inflation. Labor and management income does not include appreciation of farm assets, therefore, appreciation has been excluded in determining the use charge for equity capital.

Renting and leasing farm assets is becoming more common on New York dairy farms. Rental and lease payments are included as cash farm expenses. The discounted values of future financial lease payments have been added as a liability and an asset on the farm balance sheet to reflect the farmer's committed liability as well as the value of an asset.

This summary was prepared by Stuart F. Smith and Linda D. Putnam, Department of Agricultural Economics, New York State College of Agriculture and Life Sciences, Cornell University, in cooperation with Cooperative Extension Agents Steve Hadcock, Ken Piester, Dave Tetor, and the Hudson Valley Farm Credit Association. This region is comprised of Columbia and Dutchess Counties.

SUMMARY OF THE FARM BUSINESS

Business Characteristics

The combination of resources and management techniques used to put resources to work is an important part of planning. The tables below show important farm business characteristics, the number of farms reporting these characteristics, and the average level of resources used in production.

MANAGEMENT SYSTEMS, PRODUCTION TECHNOLOGY AND FARM SIZE
37 Columbia-Dutchess County Dairy Farms, 1983

Type of Business	Number	Business Records	Number	Dairy Records	Number
Proprietorship	25	CAMIS	6	D.H.I.C.	32
Partnership	9	Account Book	3	Owner Sampler	1
Corporation	3	Agrifax	26	Other	0
		Farm Bureau	1	None	4
Owner	29	Other	1		
Renter	8				

Barn Type	Number	Milking System	Number		Number
Stanchion	24	Bucket & Carry	0	Herringbone	10
Freestall	13	Dumping Station	2	Other Parlor	4
Other	0	Pipeline	21		

Labor Force	My Farm	Average	Land Use	My Farm	Average
Operator 1.	_____ mo.	12	Total acres owned	_____	232
2.	_____ mo.	4	Total acres rented	_____	211
3.	_____ mo.	1	Total tillable acres	_____	294
Family paid	_____ mo.	4	Tillable acres rented	_____	151
Family unpaid	_____ mo.	2			
Hired	_____ mo.	21	Number of Cows	My Farm	Average
Total	_____ mo.	44			
Age of operator(s) 1.	_____ yrs.	49	Beginning of year	_____	91
2.	_____ yrs.	40	End of year	_____	98
3.	_____ yrs.	44	Average for year	_____	96

Capital Investment-Farm Inventory represents the market value of resources committed to the farm business at the beginning and end of the year. Increases in inventory occur with herd expansion, new machinery, and building additions and appreciation of land, buildings and livestock.

CAPITAL INVESTMENT - FARM INVENTORY
37 Columbia-Dutchess County Dairy Farms, 1983

Item	My Farm 1/1/83	My Farm 1/1/84	Average 1/1/83	Average 1/1/84
Livestock	$_____	$_____	$123,194	$118,436
Feed & supplies	_____	_____	44,677	42,676
Machinery & equipment	_____	_____	85,489	86,169
Land & buildings	_____	_____	238,206	240,295
TOTAL	$_____	$_____	$491,566	$487,576

Inventory Accounting

The value of the dairy herd is influenced by market prices, herd quality and quantity. Changes in market value caused by inflationary or deflationary price changes, are separated from changes in inventory caused by changes in herd quality and quantity.

CHANGE IN LIVESTOCK INVENTORY
37 Columbia-Dutchess County Dairy Farms, 1983

Item	My Farm		Average	
End of year market value	$_____		$118,436	
less end at beginning prices	-_____		-129,069	
Change due to price		$_____		$-10,633
End inventory at beginning prices	$_____		$129,069	
less beginning of year inventory	-_____		-123,194	
Change due to quality & quantity		$_____		$ 5,875

Machinery and real estate inventories, based on current market values, include a depreciation charge and are balanced by the residual called appreciation.

MACHINERY AND EQUIPMENT INVENTORY
37 Columbia-Dutchess County Dairy Farms, 1983

Item	My Farm		Average	
End of year market value		(1)$_____		$86,169
Beginning market value	$_____		$85,489	
Plus machinery purchased	+_____		+11,357	
Less machinery sold	-_____		- 463	
Less depreciation	-_____		-13,618	
Net end investment		(2)$_____		$82,765
APPRECIATION (1 minus 2)		$_____		$ 3,404

The change in real estate value is affected by market forces, building depreciation, and lost capital which is the portion of a new building investment that is not reflected in the value of the farm.

REAL ESTATE INVENTORY CALCULATIONS
37 Columbia-Dutchess County Dairy Farms, 1983

Item	My Farm		Average	
End of year market value		(1)$_____		$240,295
Beginning market value		$_____		$238,206
Cost of new real estate	$_____		$5,107	
Less lost capital	-_____		- 803	
Value of new added		+_____		+ 4,304
Less building depreciation		-_____		- 5,947
Less real estate sold		-_____		- 149
Net end investment		(2)$_____		$236,414
APPRECIATION (1 minus 2)		$_____		$ 3,881

Receipts

Receipts from the business should be large enough to cover all expenses and leave a reasonable return for the operator's labor and management. Cash receipts occur when farm products and livestock are sold or services are performed and payment is received during the year. Noncash receipts do not result from sales, but are due to appreciation in value or increases in physical quantities of inventories that occurred during the year. Most of these items could be readily transformed into cash.

FARM RECEIPTS
37 Columbia-Dutchess County Dairy Farms, 1983

Item	My Farm	Per Farm	Per Cow
CASH RECEIPTS			
Milk sales	$_____	$208,691	$2,174
Crop sales	_____	2,419	25
Dairy cattle sold	_____	14,828	155
Calves & other livestock sales	_____	2,325	24
Gas tax refunds	_____	124	1
Government payments	_____	941	10
Custom machine work	_____	287	3
Other	_____	3,439	36
Total Cash Receipts	$_____	$233,054	$2,428
NONCASH RECEIPTS			
Increase in livestock inventory[1]	_____	5,875	61
Increase in feed & supplies	_____	0	0
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION	$_____	$238,929	$2,489
Livestock appreciation[2]	_____	- 10,633	- 111
Machinery appreciation[3]	_____	3,404	36
Real estate appreciation[3]	_____	3,881	40
TOTAL FARM RECEIPTS	$_____	$235,581	$2,454

[1]The increase in herd market value attributed to a change in numbers and/or a definite change in herd quality.

[2]The increase in herd market value, caused by inflationary price increase.

[3]Defined on page 3.

Income Analysis provides a means of examining the annual receipt producing capability of the farm business.

INCOME ANALYSIS
Columbia-Dutchess County Dairy Farms, 1983 & 1982

Item	My Farm	37 Farms 1983	38 Farms 1982
Average price/cwt. milk sold	$_____	$14.64	$14.52
Milk and cattle sales per cow	_____	$2,353	$2,380
Total cash receipts/worker	_____	$63,502	$61,393

Expenses

All farm expenses, cash operating and overhead, are summarized below.

FARM EXPENSES
37 Columbia-Dutchess County Dairy Farms, 1983

Item	My Farm	Per Farm	Per Cow
Hired Labor	$_____	$ 24,192	$ 252
Feed			
Dairy concentrate	_____	45,705	476
Hay and other	_____	2,414	25
Machinery			
Machine hire, rent and lease	_____	2,408	25
Machinery repairs	_____	10,437	109
Auto expense (farm share)	_____	174	2
Gas and oil	_____	8,444	88
Livestock			
Replacement livestock	_____	1,748	18
Breeding fees	_____	3,526	37
Veterinary and medicine	_____	4,397	46
Milk marketing	_____	17,845	186
Cattle lease	_____	243	2
Other livestock expense	_____	9,236	96
Crops			
Fertilizer and lime	_____	11,020	115
Seeds and plants	_____	3,360	35
Spray, other crop expense	_____	2,663	28
Real Estate			
Land, building, fence repair	_____	3,324	34
Taxes	_____	5,402	56
Insurance	_____	3,544	37
Rent and lease	_____	9,056	94
Other			
Telephone (farm share)	_____	740	8
Electricity (farm share)	_____	5,195	54
Interest paid	_____	19,177	200
Miscellaneous	_____	3,523	37
Total Cash Expenses	$_____	$197,773	2,060
Decrease in feed and supplies	_____	2,001	21
Expansion livestock	_____	2,756	28
Machinery depreciation	_____	13,618	142
Building depreciation	_____	5,947	62
Unpaid family labor @ $500/month	_____	1,243	13
TOTAL FARM EXPENSES EXCLUDING INTEREST ON EQUITY CAPITAL	$_____	$223,338	$2,326
Interest on equity capital @ 5%	_____	16,696	174
TOTAL FARM EXPENSES	$_____	$240,034	$2,500

Farm Business Profitability

The results of management are reflected in the net return from the business. Four common ways to measure the returns from a farm business are calculated.

Net cash farm income reflects the cash available from the year's operation of the business. Family living has first claim on cash income followed by fixed payments on debts. A family may have additional cash available if they have nonfarm income. Cash flow is not a good measure of farm business profits, but it is useful when planning debt repayment programs. Guidelines for annual cash flow planning are presented on page 9. Monthly cash flow planning is also recommended and may be required in order to identify cash flow problems in the year ahead. This is particularly true when major changes in the business are planned or when the price of important factors such as milk or purchased grain are expected to change significantly.

NET CASH FARM INCOME
Columbia-Dutchess County Dairy Farms, 1983 & 1982

Item	My Farm	37 Farms 1983	38 Farms 1982
Cash Farm Receipts	$_____	$233,054	$214,874
Cash Farm Expenses	_____	197,773	177,726
NET CASH FARM INCOME	$_____	$ 35,281	$ 37,148

Labor and management income is the return to the operator for his or her labor and management input into the business. A five percent charge for the use of the operator's equity capital in the business has been included as a farm expense. This interest charge reflects the long term average rate of return that a farmer might expect to earn in investments with comparable risk to farm businesses in an economy with little or no inflation. Labor and management income is the measure used most commonly when comparing farm businesses. Appreciation in livestock, machinery and real estate inventories is included as ownership income, not return to operator labor and management.

LABOR AND MANAGEMENT INCOME
Columbia-Dutchess County Dairy Farms, 1983 & 1982

Item	My Farm	37 Farms 1983	38 Farms 1982
Total farm receipts excluding appreciation	$_____	$238,929	$216,650
Total farm expenses	_____	240,034	215,651
LABOR & MANAGEMENT INCOME	$_____	$ -1,105	$ 999
Full-time operator-manager equivalents	s_____	1.41	1.45
LABOR & MANAGEMENT INCOME PER OPERATOR-MANAGER	$_____	$ -784	$ 689

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

LABOR, MANAGEMENT AND OWNERSHIP INCOME
Columbia-Dutchess County Dairy Farms, 1983 & 1982

Item	My Farm	37 Farms 1983	38 Farms 1982
Total farm receipts	$_____	$235,581	$221,180
Total farm expenses excluding interest on equity capital	_____	223,338	198,844
LABOR, MANAGEMENT AND OWNERSHIP INCOME PER FARM	$_____	$ 12,243	$ 22,336
Full-time operator-manager equivalents	_____	1.41	1.45
LABOR, MANAGEMENT AND OWNERSHIP INCOME PER OPERATOR-MANAGER	$_____	$ 8,683	$ 15,404

Return on equity capital measures the net profit remaining for the farmer's owned or equity capital after earnings have been allocated to the owner-operator's labor and management. The earnings or amount of gross profit allocated to labor and management is the opportunity cost or value of operator's labor and management estimated by the cooperators. Return on equity capital is computed including and excluding appreciation.

RETURN ON EQUITY CAPITAL
Columbia-Dutchess County Dairy Farms, 1983 & 1982

Item	My Farm	37 Farms 1983	38 Farms 1982
Labor, management & ownership income per farm	$_____	$12,243	$22,336
Less value of operator's labor & management	_____	20,797	20,529
Return on equity capital	$_____	$-8,554	$ 1,807
RATE OF RETURN INCLUDING APPRECIATION	_____%	-2.6%	0.5%
RATE OF RETURN EXCLUDING APPRECIATION	_____%	-1.6%	-0.8%

The rate of return on equity capital is computed as the amount returned divided by farm net worth or equity capital.

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

FARM FAMILY NET WORTH

37 Columbia-Dutchess County Dairy Farms, January 1, 1984

Item	My Farm	Average
Assets		
Livestock	$_____	$118,439
(includes discounted lease pymts)		(3)
Feed and supplies	_____	42,676
Machinery and equipment	_____	87,903
(includes discounted lease pymts)		(1,734)
Land and buildings	_____	243,024
(includes discounted lease pymts)		(2,729)
Co-op investments	_____	19,328
Accounts receivable	_____	18,247
Cash and checking accounts	_____	3,259
Total Farm Assets	$_____	$532,876
Savings accounts	$_____	$ 3,753
Cash value life insurance	_____	1,847
Stocks and bonds	_____	4,737
Nonfarm real estate	_____	3,366
Auto (personal share)	_____	278
All Other	_____	3,069
TOTAL FARM & NONFARM ASSETS	$_____	$549,926
Liabilities		
Long term	$_____	$119,095
Intermediate	_____	64,174
Financial lease	_____	4,466
Short term	_____	3,560
Other farm accounts	_____	7,658
Total Farm Liabilities	$_____	$198,953
Nonfarm Liabilities	_____	854
TOTAL LIABILITIES	$_____	$199,807
FARM NET WORTH (EQUITY CAPITAL)	$_____	$333,923
FAMILY NET WORTH	$_____	$350,119

Payment ability is the most important consideration in determining if and how proposed investments should be financed. The farm business must produce sufficient cash income to meet operating expenses, to cover family or personal living expenses, to make payments on debts and to cover cash purchases of capital items that occur during the year. Interest paid and income from off-farm work are added to net cash farm income because planned or budgeted debt payments will include interest as well as principal. Estimate family living expenses for your farm to calculate cash available for debt payment and capital purchases made in cash.

Some farms in the group have scheduled debt payments exceeding 50 percent of the milk receipts. Committing this much cash inflow to debt payments can create a serious cash flow problem.

FARM FAMILY DEBT REPAYMENT
37 Columbia-Dutchess County Dairy Farms, January 1, 1984

Item	My Farm	Average
Payment Ability		
Net cash farm income	$_____	$35,281
Plus interest paid	_____	19,177
Plus off-farm income	_____	2,564
CASH AVAILABLE FOR DEBT SERVICE AND LIVING	$_____	$57,022
Less family living expenses*	_____	24,127
CASH AVAILABLE FOR DEBT PAYMENT AND CAPITAL PURCHASES	$_____	$32,895
Scheduled Annual Debt Payments		
Long term	$_____	$12,953
Intermediate	_____	21,842
Short term	_____	3,449
Other farm accounts	_____	1,703
TOTAL FARM DEBT PAYMENTS	$_____	$39,947
Nonfarm debt payments	_____	0
TOTAL PAYMENTS PLANNED 1984	$_____	$39,947
Commitment and Measures of Debt Equity Position		
Farm debt payments planned per cow	$_____	$408
Farm debt payments as % milk sales	_____%	19%
Farm debt/asset ratio-long term	_____	0.49
Farm debt/asset ratio-intermediate and short term	_____	0.25
Farm debt per cow	$_____	$2,030
Percent equity (total)	_____%	64%

*Estimated as $10,500 per family plus four percent of cash farm receipts.

ANALYSIS OF THE FARM BUSINESS

When analyzing a farm business, a manager must consider measures or factors that reflect the performance of specified parts of the farm business. To do this one must look at factors of size, rates of production, labor efficiency, capital efficiency and cost control. These measures and factors are detailed on the following pages.

Size of Business

Studies have shown that, in general, larger farms are more profitable than smaller farms. 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 earn a profit. Profitable farm businesses with good management have the ability and incentive to become larger. Large farms are not necessarily more profitable however, and size increases are only profitable with good management.

MEASURES OF SIZE OF BUSINESS
Columbia-Dutchess County Dairy Farms, 1983 & 1982

Item	My Farm	37 Farms 1983	38 Farms 1982
Number of cows	_____	96	88
Number of heifers	_____	77	67
Pounds of milk sold	_____	1,425,800	1,316,400
Worker equivalent	_____	3.67	3.50
Total work units	_____	1,052	965
Total tillable acres	_____	294	265

In the table below, the 572 New York farms for 1982 are sorted by number of cows and the labor and management 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
572 New York Dairy Farms, 1982

Number of Cows	Ave. Number of Cows	Number of Farms	Percent of Farms	Labor & Mgmt. Income Per Operator
Under 40	34	76	13	$ 812
40 to 54	47	128	22	-19
55 to 69	61	107	19	3,225
70 to 84	76	82	14	3,064
85 to 99	90	52	9	2,152
100 to 149	120	69	12	4,073
150 to 199	169	33	6	-3,577
200 to 249	230	15	3	27,218
250 & over	363	10	2	45,479

Rates of Production

Crop yields and rates of animal production are factors that have a significant impact on farm incomes. Here is a description of crops grown and yields along with the pounds of milk sold per cow.

CROP YIELDS & MILK SOLD PER COW
37 Columbia-Dutchess County Dairy Farms, 1983

Crop	My Farm		Average of Farms Reporting		
	Acres	Yield	Farms	Acres	Yield/Acre
Dry hay	_____		36	(combined below)	
Hay crop silage	_____		20	(combined below)	
Total hay crops	_____	_____	36	146	2.9 tons D.M.
Corn silage	_____	_____	35	90	11.6 tons
Other forage	_____	_____	1	23	1.3 tons D.M.
Total forage crops	_____	_____	36	233	3.3 tons D.M.
Grain corn	_____	_____	20	71	83.7 bushels
Oats	_____	_____	3	23	39.4 bushels
Wheat	_____	_____	0		
Other crops	_____	_____	4	11	
Tillable pasture	_____		8	27	
Idle tillable land	_____		17	44	
Milk sold per cow	_____			14,852 pounds	

Tons of dry matter per acre from all hay and silage is a good measure of the overall rate of forage production.

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

MILK SOLD PER COW AND LABOR AND MANAGEMENT INCOME
572 New York Dairy Farms, 1982

Pounds of Milk Sold Per Cow	Number of Farms	Number of Cows	Labor & Mgmt. Income/Oper.	Labor, Mgmt., & Ownership Income/Operator
Under 11,000	52	53	$-6,028	$-1,924
11,000 to 11,999	27	55	-3,637	5,492
12,000 to 12,999	50	74	-4,893	7,908
13,000 to 13,999	88	88	348	15,624
14,000 to 14,999	109	86	2,475	15,311
15,000 to 15,999	117	87	6,453	22,074
16,000 to 16,999	64	88	10,715	26,851
17,000 to 17,999	43	97	7,024	26,668
18,000 & over	22	91	22,966	49,864

Labor Efficiency

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

MEASURES OF LABOR EFFICIENCY
Columbia-Dutchess County Dairy Farms, 1983 & 1982

Item	My Farm	37 Farms 1983	38 Farms 1982
Worker equivalent	_____	3.67	3.50
Cows per worker	_____	26	25
Lbs. milk sold per worker	_____	388,501	376,114
Work units per worker	_____	287	276

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

It is important to look at other measures of labor efficiency, such as work units per worker because all dairy farms do not have the same relationship between cows, heifers, and crops grown.

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

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

MILK SOLD PER WORKER AND LABOR AND MANAGEMENT INCOME
572 New York Dairy Farms, 1982

Pounds of Milk Sold Per Worker	Number of Farms	Number of Cows	Lbs. Milk Per Cow	Labor & Mgmt. Income Per Operator	Labor, Mgmt. & Ownership Inc. Per Operator
Under 250,000	73	43	11,553	$-3,985	$ 2,967
250,000 to 299,999	55	54	13,296	-4,001	3,414
300,000 to 349,999	60	59	13,854	-957	10,220
350,000 to 399,999	92	73	14,625	2,010	13,878
400,000 to 449,000	101	77	15,090	3,319	18,200
450,000 to 499,999	68	98	14,979	2,949	21,393
500,000 to 599,999	86	111	15,317	7,271	23,823
600,000 & over	37	180	15,917	31,180	65,277

Capital Efficiency

Capital is a key resource in dairy farm businesses and a manager must continually analyze its use in the business. The measures of capital efficiency shown in the following table include owned as well as borrowed capital. It is possible for the business to be undercapitalized, but investing too much capital per productive unit is a more common problem.

MEASURES OF CAPITAL EFFICIENCY
Columbia-Dutchess County Dairy Farms, 1983 & 1982

Item	My Farm	37 Farms 1983	38 Farms 1982
Farm capital per worker	$_____	$132,854	$135,871
Farm capital per cow	$_____	4,975	5,284
Machinery investment per cow	$_____	879	921
Machinery per tillable acre	$_____	293	313
Land & buildings per cow	$_____	2,452	2,594
Land & buildings per tillable acre owned	$_____	1,313	1,381
Capital turnover	_____ years	2.1 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 builds many farm buildings will have a relatively large land and building investment per crop acre owned. This could be an indication that capital use is out of balance.

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

CAPITAL TURNOVER AND LABOR AND MANAGEMENT INCOME
572 New York Dairy Farms, 1982

Capital Turnover Rate - Years	Number of Farms	Number of Cows	Capital Investment Per Cow	Capital Investment Per Worker	Labor & Mgmt. Income Per Operator
less than 1.5	11	112	$3,293	$ 97,431	$ 23,365
1.5 to 1.99	74	124	4,513	152,003	20,036
2.0 to 2.49	173	90	5,126	165,015	3,603
2.5 to 2.99	157	71	5,993	171,893	-662
3.0 to 3.49	90	70	6,602	184,237	-1,843
3.5 & over	67	54	7,551	181,486	-4,766

Cost Control

The control of costs is a big factor in the success of modern commercial dairy operations. Feed, machinery and labor costs are major items and should be examined in detail. It is important to check all cost items both large and small. Expenses should be incurred only when the returns from the expense are expected to be greater than the cost incurred.

Feed Costs

Purchased feed is the largest single expenditure on most dairy farms. Two considerations are important in keeping the feed bill down: (1) Be careful that only nutrients required by the cow are being fed. A dairy farmer cannot afford to buy a feed mix that overfeeds energy or protein. (2) Be certain that the required nutrients are being obtained from their least expensive source. For example, is the lowest cost source of protein, urea, soybean meal or a commercial protein? Help in answering these questions can come from budgeting, from agribusiness people selling feeds, and from dairy and management extension agents. Extension is supporting computerized decision aids to assist in answering these questions including the NEWPLAN program, Least-Cost Balanced Dairy Rations, and the dairy ration analyzers.

The size and productivity of the cropping program has an important influence on the amount of the purchased feed bill. Increased production of either roughages or grains should reduce the purchased feed expense unless cow numbers are increased. Also, heifer raising practices affect feed costs. The overall feed situation must be examined and evaluated as a "system".

FEED COSTS AND RELATED MEASURES
Columbia-Dutchess County Dairy Farms, 1983 & 1982

Item	My Farm	37 Farms 1983	38 Farms 1982
Dairy concentrate purchased per cow	$_____	$476	$451
Dairy concentrate purchased per cwt. of milk sold	$_____	$3.21	$3.02
Percent dairy concentrate is of milk receipts	_____%	22%	21%
Crop expense per cow	$_____	$178	$183
Feed & crop expense/cwt. milk	$_____	$4.57	$4.40
Forage dry matter harv./cow (tons)	_____	7.9	7.8
Acres of forage per cow	_____	2.4	2.4
Total tillable acres per cow	_____	3.1	3.0
Fertilizer and lime/tillable acre	$_____	$37	$39
Heifers as % of cow numbers	_____%	80%	76%

Machinery, Labor and Miscellaneous Costs

Labor and machinery operate as a team on a dairy farm. The challenge is to obtain an efficient combination of these two inputs that will result in a low cost per unit of output.

MACHINERY AND LABOR COSTS
Columbia-Dutchess County Dairy Farms, 1983 & 1982

Item		My Farm	37 Farms 1983	38 Farms 1982
Machinery:	Depreciation[1]	$_____	$13,618	$12,561
	Interest[2]	_____	4,292	4,064
	Operating expense[3]	_____	21,463	20,126
Total machinery		$_____	$39,373	$36,751
	Per cow	_____	$410	$418
Labor:	Value of operators[4]	$_____	$12,426	$12,474
	Unpaid family[5]	_____	1,243	776
	Hired	_____	24,192	22,957
Total labor		$_____	$37,861	$36,207
	Per cow	_____	$394	$411
	Per cwt. milk	_____	$2.66	$2.75
Labor & machinery costs per cow		_____	$804	$829
Labor & machinery costs/cwt. milk		$_____	$5.42	$5.54

[1]Regular depreciation from last year's tax plus 10 percent of new purchases.

[2]Five percent of average machinery investment.

[3]Machine hire, repairs, farm share auto expense, and gas and oil.

[4]$750 per month.

[5]$500 per month.

MISCELLANEOUS COST CONTROL MEASURES
Columbia-Dutchess County Dairy Farms, 1983 & 1982

Item	My Farm	37 Farms 1983	38 Farms 1982
Livestock expense per cow	$_____	$367	$317
Real estate expense per cow	$_____	$222	$218
Total farm expense per cow	$_____	$2,500	$2,450

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

YEARLY CASH FLOW PLANNING & ANALYSIS

This worksheet is a valuable tool in financial planning, expansions and for setting goals for improving the farm business. The average is from 37 Columbia-Dutchess County farms.

Item	Average Per Cow	My Farm, _____ Cows Per Cow	Total	Goal
CASH RECEIPTS				
Milk sales	$2,174	$_____	$_____	$_____
Crop sales	25	_____	_____	_____
Dairy cattle	155	_____	_____	_____
Calves & other livestock	24	_____	_____	_____
Other	50	_____	_____	_____
Total Cash Receipts	$2,428	$_____	$_____	$_____
CASH EXPENSES				
Hired labor	$ 252	$_____	$_____	$_____
Dairy concentrate	476	_____	_____	_____
Hay and other	25	_____	_____	_____
Machine hire	25	_____	_____	_____
Machine repair & auto expense	110	_____	_____	_____
Gas & oil	88	_____	_____	_____
Replacement livestock	18	_____	_____	_____
Breeding fees	37	_____	_____	_____
Vet & medicine	46	_____	_____	_____
Milk marketing (ADA, Dues)	186	_____	_____	_____
Other livestock exp. (incl. $2 lease)	98	_____	_____	_____
Fertilizer & lime	115	_____	_____	_____
Seeds & plants	35	_____	_____	_____
Spray & other	28	_____	_____	_____
Land, bldg. fence repair	35	_____	_____	_____
Taxes	56	_____	_____	_____
Insurance	37	_____	_____	_____
Rent	94	_____	_____	_____
Telephone & elec. (farm share)	62	_____	_____	_____
Miscellaneous	37	_____	_____	_____
Total Cash Expenses[1]	$1,860	$_____	$_____	$_____
Total Cash Receipts	$2,428	_____	_____	_____
Total Cash Expenses[1]	-1,860	-_____	-_____	-_____
Net Cash Flow	$ 568	$_____	$_____	$_____
Cash Family Living Expense[2]	- 251	-_____	-_____	-_____
Amount Left for Debt Service, Capital Investment & Retained Earnings	$ 317	$_____	$_____	$_____
Scheduled Debt Service	- 408	-_____	-_____	-_____
Available for Capital Investment	$ -91	$_____	$_____	$_____
Planned Expansion Livestock Purch.		_____	_____	_____
Planned Equipment Purchase		_____	_____	_____
Borrowed or Equity Funds Needed		$_____	$_____	$_____

[1]Interest paid excluded for it is contained in Scheduled Debt Service.

[2]Estimated: $10,500 per family and four percent of cash farm receipts.

PROGRESS OF THE FARM BUSINESS

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

Item	1981	1982	1983	1984 Goal
Size of Business				
Number of cows	_____	_____	_____	_____
Number of heifers	_____	_____	_____	_____
Pounds of milk sold	_____	_____	_____	_____
Worker equivalent	_____	_____	_____	_____
Total tillable acres	_____	_____	_____	_____
Rates of Production				
Lbs. milk sold per cow	_____	_____	_____	_____
Tons hay D.M. per acre	_____	_____	_____	_____
Tons corn silage per acre	_____	_____	_____	_____
Labor Efficiency				
Cows per worker	_____	_____	_____	_____
Lbs. milk sold per worker	_____	_____	_____	_____
Cost Control				
Purch. feed as % milk sold	$_____	$_____	$_____	$_____
Feed & crop exp./cwt. milk	$_____	$_____	$_____	$_____
Labor & mach. cost per cow	$_____	$_____	$_____	$_____
Capital Efficiency				
Farm capital per cow	$_____	$_____	$_____	$_____
Capital turnover	$_____	$_____	$_____	$_____
Price				
Price per cwt. milk	$_____	$_____	$_____	$_____
Financial Summary				
Net cash farm income	$_____	$_____	$_____	$_____
Labor & mgmt. inc./oper.	$_____	$_____	$_____	$_____
Farm net worth	$_____	$_____	$_____	$_____
Rate of return on equity	_____%	_____%	_____%	_____%
Percent equity	_____%	_____%	_____%	_____%
Farm debt per cow	$_____	$_____	$_____	$_____

MANAGEMENT PERFORMANCE OF STATEWIDE COOPERATORS

The Farm Business Chart is a tool which can be used in analyzing a business by drawing a line through the figure in each column which represents the current level of management performance. The figure at the top of each column is the average of the top 10 percent of the 572 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
572 New York Dairy Farms, 1982

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivvalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons D.M./ Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
6.2	219	3,391,200	18,100	4.6	20	44	659,100
4.0	125	1,844,000	16,600	3.6	18	36	537,600
3.3	94	1,415,700	15,900	3.2	16	33	484,700
3.0	80	1,188,900	15,400	2.8	15	30	445,100
2.7	70	1,020,000	14,900	2.6	15	28	416,100
2.4	61	902,800	14,400	2.3	14	26	388,600
2.1	54	784,800	13,900	2.1	12	25	357,100
2.0	48	662,200	13,200	1.9	12	23	315,200
1.7	41	545,500	12,100	1.7	10	20	266,200
1.3	33	379,400	9,700	1.3	7	16	192,800

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
$197	10%	$231	$ 517	$2.79
290	15	304	613	3.39
357	19	341	666	3.83
407	22	372	719	4.15
456	24	407	755	4.44
501	26	439	792	4.67
544	29	469	840	4.93
593	31	512	883	5.21
651	33	564	962	5.60
791	39	696	1,158	6.53

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

FINANCIAL ANALYSIS CHART
572 New York Dairy Farms, 1982

Liquidity (Repayment)				
Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio[1]	Debt Payments as Percent of Milk Sales[2]	Debt Per Cow
$ 53	$828	8.55	3	$ 160
207	647	2.02	11	774
296	557	1.40	16	1,237
367	486	1.10	19	1,683
436	425	.91	23	2,035
493	371	.75	26	2,364
557	307	.61	30	2,772
635	244	.46	35	3,177
768	145	.29	42	3,751
1,010	-82	-.66	60	4,849

Solvency				Efficiency & Profitability		
		Debt/Asset Ratio			Rate of Return on	
Leverage Ratio[3]	Percent Equity	Current & Intermediate[4]	Long Term[5]	Capital Turnover[6] (years)	Equity[7]	Investment[8]
.03	97	.00	.00	1.36	14%	12%
.15	87	.05	.06	1.95	6	8
.27	78	.11	.19	2.16	4	6
.41	71	.18	.34	2.36	1	5
.56	64	.23	.44	2.55	- 1	3
.72	58	.30	.54	2.70	- 3	2
.95	51	.37	.63	2.90	- 5	1
1.25	44	.45	.73	3.23	- 9	- 1
1.81	36	.56	.87	3.69	-17	- 3
8.50	20	.79	1.25	5.68	-81	- 8

[1]Amount available for debt service per dollar of annual scheduled debt payment, computed by dividing the available dollars by the annual payments planned. A high positive ratio indicates a strong capacity to repay debt.

[2]Amount of milk income committed to debt repayment, calculated by dividing scheduled debt payments by total milk sales ($).

[3]Dollars of debt per dollar of equity, computed by dividing total liabilities by total equity.

[4]All farm liabilities on less than 10 year repayment divided by all farm assets excluding real estate and other long term assets.

[5]Farm liabilities on 10 years or more repayment, including all real estate mortgages, divided by the value of farm real estate and other long term assets.

[6]Year-end farm inventory divided by total farm receipts.

[7]Return on equity capital, including appreciation, divided by farm net worth.

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

FARM BUSINESS SUMMARY BY HERD SIZE
572 New York Dairy Farms, 1982

Item — Farm Size:	Less than 40 cows	40 to 54 cows	55 to 69 cows	70 to 84 cows
Capital Investment (end of year)				
Livestock	$ 49,013	$ 72,347	$ 94,025	$115,565
Feed & supplies	9,858	16,105	24,793	32,663
Machinery & equipment	41,258	57,949	78,186	92,761
Land & buildings	111,530	149,346	187,417	217,564
TOTAL INVESTMENT	$211,659	$295,747	$384,421	$458,553
Receipts				
Milk sales	$ 59,250	$ 88,659	$124,138	$152,408
Dairy cattle sold	3,693	5,845	7,377	9,537
Other livestock sales	1,363	1,619	1,655	1,731
Crop sales	293	767	1,408	1,134
Miscellaneous receipts	792	1,623	1,934	1,898
Total Cash Receipts	$ 65,391	$ 98,513	$136,512	$166,708
Increase in livestock	1,622	3,541	4,838	5,835
Increase in feed & supplies	1,158	325	559	2,030
Appreciation	571	470	4,956	3,656
TOTAL FARM RECEIPTS	$ 68,742	$102,849	$146,865	$178,229
TOTAL FARM REC. EXCL. APPREC.	$ 68,171	$102,379	$141,909	$174,573
Expenses				
Hired labor	$ 2,352	$ 4,584	$ 8,441	$ 12,087
Dairy grain & concentrate	16,910	23,255	29,338	36,011
Other feed	761	1,164	1,285	1,075
Machine hire	479	795	1,417	1,235
Machinery repair	2,476	4,454	5,916	8,277
Auto expense (farm share)	393	432	479	407
Gas & oil	2,422	3,760	5,408	6,489
Replacement animals	1,136	1,318	1,542	1,638
Breeding fees	881	1,350	1,975	2,184
Veterinary & medicine	1,087	1,837	2,545	2,873
Milk marketing	2,272	3,550	4,399	5,690
Cattle lease	25	154	93	106
Other livestock expense	2,158	4,103	4,825	5,690
Fertilizer & lime	2,008	4,061	6,619	8,097
Seeds & plants	699	1,318	2,107	2,745
Spray & other crop expense	442	948	1,774	1,980
Land, bldg., fence repair	927	1,375	1,940	2,882
Taxes & insurance	3,218	4,268	5,457	6,685
Electricity & phone (farm share)	1,956	2,694	3,472	4,124
Interest paid	7,234	11,166	13,687	17,070
Miscellaneous expenses	1,394	2,766	3,635	5,188
Total Cash Expenses	$ 51,230	$ 79,352	$106,354	$132,533
Expansion livestock	275	688	1,154	1,101
Machinery depreciation	5,530	8,072	11,158	14,286
Building depreciation	1,600	2,794	4,638	5,699
Unpaid family labor	1,647	2,199	1,537	2,021
Interest on equity @ 5%	7,004	9,296	12,843	14,888
TOTAL FARM EXPENSES	$ 67,286	$102,401	$137,684	$170,528
Financial Summary				
NET CASH FARM INCOME	$ 14,161	$ 19,161	$ 30,158	$ 34,175
Labor & Management Income	$ 885	$ -22	$ 4,225	$ 4,045
Number of Operators	1.09	1.15	1.31	1.32
LABOR & MGT. INCOME/OPER.	$ 812	$ -19	$ 3,225	$ 3,064
LABOR, MGT. & OWNSHP. INC./OPER.	$ 7,761	$ 8,473	$ 16,812	$ 17,113

FARM BUSINESS SUMMARY BY HERD SIZE
572 New York Dairy Farms, 1982

Item — Farms with:	85 to 99 cows	100 to 149 cows	150 to 199 cows	200 to 249 cows	250 or more cows
Capital Investment (end of year)					
Livestock	$128,477	$174,890	$239,287	$ $353,216	$ 548,827
Feed & supplies	35,862	48,670	69,777	102,643	165,130
Machinery & equipment	98,966	128,766	170,864	178,901	264,266
Land & buildings	244,040	302,448	410,347	592,648	956,013
Crop sales	2,030	2,066	4,882	4,958	12,984
Miscellaneous receipts	3,004	4,075	6,258	10,459	16,016
Total Cash Receipts	$199,784	$265,316	$383,292	$531,096	$ 891,643
Increase in livestock	2,783	9,854	8,400	26,065	56,563
Increase in feed & supplies	(717)	(1,868)	(3,636)	3,561	11,030
Appreciation	544	1,486	4,746	8,263	51,414
TOTAL FARM RECEIPTS	$202,394	$274,788	$392,802	$568,985	$1,010,650
TOT. FARM REC. EXCL. APPREC.	$201,850	$273,302	$388,056	$560,722	$ 959,236
Expenses					
Hired labor	$ 15,498	$ 25,288	$ 45,839	$ 65,575	$125,058
Dairy feed & concentrate	42,613	53,405	78,634	117,640	199,718
Other feed	1,214	3,736	2,842	3,209	5,040
Machine hire	1,290	1,949	2,959	3,402	7,679
Machinery repair	9,801	12,681	18,860	26,189	35,401
Auto expense (farm share)	461	647	480	436	651
Gas & oil	8,514	10,550	15,190	17,942	33,572
Replacement animals	1,891	4,450	5,425	4,407	8,085
Breeding fees	2,371	3,119	4,284	6,997	10,348
Veterinary & medicine	3,444	4,995	7,484	13,727	19,137
Milk marketing	7,524	8,797	13,127	15,942	23,456
Cattle lease	382	72	284	347	0
Other livestock expense	6,477	8,379	12,027	16,256	30,513
Fertilizer & lime	9,727	13,053	19,779	26,312	41,403
Seeds & plants	2,911	4,394	7,201	9,096	12,189
Spray & other crop expense	2,744	3,297	5,441	5,990	10,462
Land, bldg., fence repair	3,265	3,824	5,881	5,987	5,668
Taxes & insurance	7,318	9,983	13,582	17,426	23,832
Elec. & phone (farm share)	4,701	5,979	8,146	9,060	14,792
Interest paid	21,779	26,397	36,645	44,507	99,366
Miscellaneous expenses	5,765	8,214	11,649	12,221	28,157
Total Cash Expenses	$159,690	$213,209	$315,759	$422,668	$734,527
Expansion livestock	931	4,540	6,025	7,528	19,319
Machinery depreciation	14,249	18,857	28,192	30,454	49,337
Building depreciation	5,952	9,130	11,857	18,398	27,895
Unpaid family labor	1,788	949	939	667	50
Interest on equity @ 5%	16,098	20,955	31,043	39,364	55,342
TOTAL FARM EXPENSES	$198,708	$267,640	$393,815	$519,079	$886,470
Financial Summary					
NET CASH FARM INCOME	$ 40,094	$ 52,107	$ 67,533	$108,428	$157,116
Labor & Management Income	$ 3,142	$ 5,662	$ -5,759	$ 41,643	$ 72,766
Number of Operators	1.46	1.39	1.61	1.53	1.60
LABOR & MGT. INCOME/OPER.	$ 2,152	$ 4,073	$ -3,577	$ 27,218	$ 45,479
LABOR, MGT. & OWNSHP. INC/OP.	$ 13,551	$ 20,218	$ 18,652	$ 58,346	$112,201

SELECTED BUSINESS FACTORS BY HERD SIZE
572 New York Dairy Farms, 1982

Item	Farms with: Less than 40 cows	40 to 54 cows	55 to 69 cows	70 to 84 cows
Number of farms	76	128	107	82
Size of Business				
Number of cows	34	47	61	76
Number of heifers	26	38	51	64
Pounds of milk sold	440,100	660,600	928,900	1,124,500
Worker equivalent	1.67	2.00	2.42	2.75
Total work units	374	539	687	867
Total tillable acres	116	171	211	256
(Tillable acres rented)	(27)	(42)	(63)	(82)
Rates of Production				
Milk sold per cow	12,944	14,055	15,228	14,796
Tons hay crop per acre	2.0	2.2	2.5	2.5
Tons corn silage per acre	11.8	12.7	13.3	13.1
Bushels of oats per acre	29.1	57.1	60.5	54.3
Labor Efficiency				
Cows per worker	20	24	25	28
Pounds milk sold per worker	263,533	330,300	383,843	408,909
Work units per worker	224	270	284	315
Feed Costs				
Feed purchased per cow	$497	$495	$481	$474
Crop expense per cow	$93	$135	$172	$169
Feed cost per cwt. milk	$3.84	$3.52	$3.16	$3.20
Feed & crop exp. per cwt. milk	$4.73	$4.65	$4.43	$4.44
% feed is of milk receipts	29%	26%	24%	24%
Tons forage dry matter per cow	6.8	7.6	7.7	8.2
Tillable acres per cow	3.4	3.6	3.5	3.4
Fertilizer & lime per crop acre	$17	$24	$31	$32
Machinery & Labor Costs				
Total machinery costs	$13,337	$20,376	$28,204	$35,234
Machinery cost per cow	$392	$434	$462	$464
Machinery cost per cwt. milk	$3.03	$3.08	$3.04	$3.13
Labor cost per cow	$406	$364	$353	$338
Labor cost per cwt. milk	$3.14	$2.59	$2.32	$2.29
Capital Efficiency				
Investment per worker	$126,742	$147,874	$158,852	$166,747
Investment per cow	$6,047	$6,036	$6,007	$5,804
Investment per cwt. milk	$48	$45	$41	$41
Land & buildings per cow	$3,187	$3,048	$2,928	$2,754
Machinery investment per cow	$1,179	$1,183	$1,222	$1,174
Capital turnover	3.1	2.9	2.6	2.6
Other				
Price per cwt. milk sold	$13.46	$13.42	$13.36	$13.55
Acres hay crops	83	103	109	142
Acres corn silage*	14	31	44	60

*Average of all farms.

SELECTED BUSINESS FACTORS BY HERD SIZE
572 New York Dairy Farms, 1982

Item	Farms with: 85 to 99 cows	100 to 149 cows	150 to 199 cows	200 to 249 cows	250 or more cows
Number of farms	52	69	33	15	10
Size of Business					
Number of cows	90	120	169	230	363
Number of heifers	70	98	127	212	284
Pounds of milk sold	1,303,200	1,753,400	2,528,300	3,464,100	5,868,500
Worker equivalent	3.08	3.67	4.83	6.25	8.75
Total work units	999	1,338	1,854	2,536	3,915
Total tillable acres	290	368	527	577	913
(Tillable acres rented)*	(106)	(132)	(181)	(184)	(348)
Rates of Production					
Milk sold per cow	14,480	14,612	14,960	15,061	16,167
Tons hay crop per acre	2.9	2.8	2.9	3.0	2.9
Tons corn silage per acre	13.5	13.8	15.6	15.6	15.4
Bushels of oats per acre	66.1	49.9	46.7	81.8	95.7
Labor Efficiency					
Cows per worker	29	33	35	37	41
Pounds milk sold per worker	423,117	477,766	523,458	554,256	670,686
Work units per worker	324	365	384	406	447
Feed Costs					
Feed purchased per cow	$473	$445	$465	$511	$550
Crop expense per cow	$171	$173	$192	$180	$176
Feed cost per cwt. milk	$3.27	$3.05	$3.11	$3.40	$3.40
Feed & crop exp. per cwt. milk	$4.54	$4.44	$4.50	$4.68	$4.58
% feed is of milk receipts	24%	22%	23%	25%	25%
Tons forage dry matter per cow	8.0	8.1	8.3	7.8	8.0
Tillable acres per cow	3.2	3.1	3.1	2.5	2.5
Fertilizer & lime per crop acre	$34	$35	$38	$46	$45
Machinery & Labor Costs					
Total machinery costs	$39,237	$51,045	$74,134	$87,122	$139,530
Machinery cost per cow	$436	$425	$439	$379	$384
Machinery cost per cwt. milk	$3.01	$2.91	$2.93	$2.51	$2.38
Labor cost per cow	$337	$321	$361	$348	$384
Labor cost per cwt. milk	$2.33	$2.20	$2.41	$2.31	$2.38
Capital Efficiency					
Investment per worker	$164,722	$178,413	$184,322	$196,385	$221,158
Investment per cow	$5,515	$5,156	$5,058	$5,072	$5,079
Investment per cwt. milk	$39	$37	$35	$35	$33
Land & buildings per cow	$2,653	$2,381	$2,332	$2,449	$2,512
Machinery investment per cow	$1,076	$1,014	$971	$739	$694
Capital turnover	2.5	2.4	2.2	2.2	1.9
Other					
Price per cwt. milk sold	$13.77	$13.64	$13.60	$13.67	$13.64
Acres hay crops	147	179	243	231	290
Acres corn silage*	69	102	131	209	406

*Average of all farms.

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
572 New York Dairy Farms, January 1, 1983

Item / Farms with:	Less than 40 cows	40 to 54 cows	55 to 69 cows	70 to 84 cows	85 to 99 cows
Number of farms	76	128	107	82	52
Assets					
Livestock (includes discounted	$ 49,013	$ 72,347	$ 94,219	$115,659	$128,688
lease payments)	(0)	(0)	(194)	(94)	(211)
Feed & supplies	9,858	16,105	24,793	32,663	35,862
Machinery & equipment (includes	41,577	58,063	78,479	93,274	99,079
discounted lease payments)	(319)	(114)	(293)	(513)	(113)
Land & buildings (includes	112,775	152,316	188,190	220,546	245,889
discounted lease payments)	(1,245)	(2,970)	(773)	(2,982)	(1,849)
Co-op investment	1,410	2,432	4,676	5,573	10,389
Accounts receivable	4,511	7,481	10,283	13,244	17,670
Cash & checking accounts	1,128	2,110	2,627	2,929	2,737
Total Farm Assets	$220,272	$310,854	$403,267	$483,888	$540,314
Savings accounts	2,422	1,907	3,258	3,124	3,253
Cash value life insurance	1,750	1,973	2,360	2,164	2,825
Stocks & bonds	1,581	1,396	1,634	1,275	5,075
Nonfarm real estate	2,243	1,871	8,140	4,901	4,077
Auto (personal share)	1,130	1,273	1,745	1,596	1,503
All other	8,064	5,834	5,140	7,652	5,947
Total Nonfarm Assets	$ 17,190	$ 14,254	$ 22,277	$ 20,712	$ 22,680
TOTAL ASSETS	$237,462	$325,108	$425,544	$504,600	$562,994
Liabilities					
Long term	$ 48,724	$ 76,905	$ 85,899	$111,280	$119,743
Intermediate	25,868	39,341	52,120	62,618	86,166
Financial lease	1,564	3,084	1,260	3,589	2,173
Short-term	1,548	1,941	3,204	4,211	3,035
Other farm accounts	2,486	3,665	3,927	4,426	7,246
Total Farm Liabilities	$ 80,190	$124,936	$146,410	$186,124	$218,363
Total Nonfarm Liabilities	542	384	743	30	129
TOTAL LIABILITIES	$ 80,732	$125,320	$147,153	$186,154	$218,492
Farm Net Worth (Eq. Cap.)	$140,082	$185,918	$256,857	$297,764	$321,951
FAMILY NET WORTH	$156,730	$199,788	$278,391	$318,446	$344,502
Financial Measures					
Percent equity	66%	61%	65%	63%	61%
Farm debt per cow	$2,291	$2,550	$2,288	$2,356	$2,374
Available for debt service & living	$23,188	$31,689	$44,556	$52,660	$62,205
Scheduled annual debt payment	$17,192	$24,924	$30,696	$40,160	$46,649
Scheduled debt payments/cow	$487	$504	$477	$496	$506
Payment as % of milk check	29%	28%	25%	26%	26%
Debt/Asset ratio - long term	0.43	0.50	0.46	0.50	0.49
Debt/Asset ratio - intermediate & short-term	0.27	0.28	0.26	0.27	0.31
Cash flow coverage ratio	0.55	0.64	0.84	0.81	0.84

[illegible] BY HERD SIZE

572 New York Dairy Farms, January 1, 1983

Item	100 to 149 cows	150 to 199 cows	200 to 249 cows	250 or more cows
Number of farms	69	33	15	10
Assets				
Livestock (includes discounted	$174,890	$240,172	$ 353,216	$ 548,827
lease payments)	(0)	(885)	(0)	(0)
Feed & supplies	48,670	69,777	102,643	165,130
Machinery & equipment (includes	129,350	171,650	178,901	266,207
discounted lease payments)	(584)	(786)	(0)	(1,941)
Land & buildings (includes	306,021	412,803	596,034	956,913
discounted lease payments)	(3,573)	(2,456)	(3,386)	(0)
Co-op investment	9,503	19,241	23,975	40,200
Accounts receivable	20,977	28,611	44,462	75,160
Cash & checking accounts	3,466	3,109	1,818	8,184
Total Farm Assets	$692,877	$945,363	$1,301,049	$2,060,621
Savings accounts	2,609	6,233	768	1,193
Cash value life insurance	3,699	4,917	2,344	2,566
Stocks & bonds	3,750	7,606	4,970	4,574
Nonfarm real estate	10,648	13,030	3,592	0
Auto (personal share)	1,896	2,852	1,983	985
All other	7,029	7,788	1,534	5,476
Total Nonfarm Assets	$ 29,631	$ 42,426	$ 15,191	$ 14,794
TOTAL ASSETS	$722,508	$987,789	$1,316,240	$2,075,415
Liabilities				
Long term	$150,060	$155,699	$295,671	$490,215
Intermediate	105,394	149,339	193,044	352,098
Financial lease	4,157	4,127	3,386	1,941
Short-term	6,621	4,664	10,120	94,030
Other farm accounts	7,554	10,672	11,545	15,505
Total Farm Liabilities	$273,786	$324,501	$513,766	$953,789
Total Nonfarm Liabilities	301	2,986	0	0
TOTAL LIABILITIES	$274,087	$327,487	$513,766	$953,789
Farm Net Worth (Equity Cap.)	$419,091	$620,862	$787,283	$1,106,832
FAMILY NET WORTH	$448,421	$660,302	$802,474	$1,121,626
Financial Measures				
Percent equity	62%	67%	61%	54%
Farm debt per cow	$2,156	$1,844	$2,123	$2,503
Available for debt service & living	$79,512	$106,142	$155,997	$258,528
Scheduled annual debt payment	$57,850	$71,442	$109,206	$185,677
Scheduled debt payments/cow	$454	$404	$451	$487
Payment as % of milk check	24%	21%	23%	23%
Debt/Asset ratio - long term	0.49	0.38	0.50	0.51
Debt/Asset ratio - intermediate & short-term	0.30	0.30	0.29	0.41
Cash flow coverage ratio	0.95	1.04	1.09	1.11

MEASURE YOUR PERFORMANCE

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

The Farm Business Chart on the page 18 and the Financial Analysis Chart on page 19 can be used to identify strengths and weaknesses by comparing your business with a large number of New York dairy farms summarized for the previous year. It is recommended that you use more than one standard for comparison when analyzing the farm business.

STRONG POINTS:

_____

_____

_____

_____

AVERAGE:

_____

_____

_____

_____

NEED IMPROVEMENT:

_____

_____

_____

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

Another way to measure your management performance is to compare your current business factors with those from previous years. Page 17 is provided for this purpose. Answering the following questions may also help evaluate your farm business progress.

1) Do livestock numbers, labor force, and crop acres make up a well balanced unit of resources?
2) Have rates of production shown a steady increase?
3) When will milk output per worker reach 600,000 pounds?
4) Have increases in costs been limited to the effects of inflation?
5) Is growth in net worth keeping up with increased capital investment?
6) Is net cash farm income increasing fast enough to meet your needs?
7) Have you reached the business goals set for 1982 and have you set new goals for 1983?