DAIRY FARM BUSINESS SUMMARY

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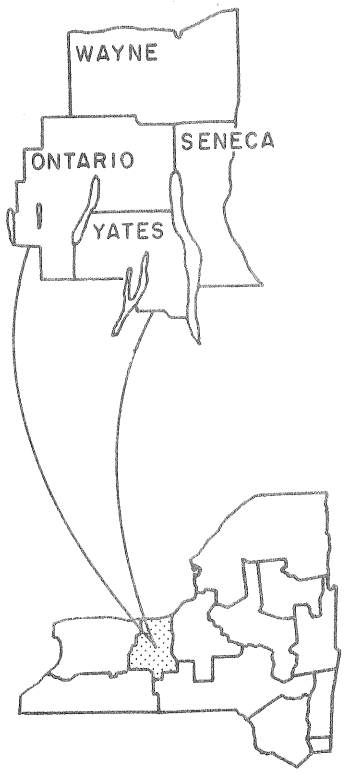

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INTRODUCTION

This report is part of your Cooperative Extension Farm Business Management Program. Each year dairy farmers throughout New York State submit business records for summarization and analysis. In addition to this publication, each participating farmer receives an individual farm summary and analysis report for his or her business. The information in this publication is compiled by combining and averaging data submitted by the participating farmers from the Northern New York Region.

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.

The need for a thorough dairy farm business examination and follow-up plan is greater than ever. The years immediately ahead will bring continued economic pressures on dairy farmers. We must continue to place emphasis on cost control and improvements in operating efficiency to maintain adequate farm incomes. Projecting cash flows, planning for future needs, and recognizing how those needs can be met will be required to survive the current dairy farm financial crisis.

New Developments

This year, several farm management agents and specialists are participating in a Dairy Farm Business Summary Pilot Program. Cooperative Extension Associations with appropriate microcomputers, have the capability to strengthen their dairy farm business analysis activities by calculating and printing the individual farm summary and analysis reports for immediate use by the agent and farmer, at any time. After the individual farm data is entered in the county office using the Micro DFBS computer program, it is sent to the Department of Agricultural Economics at Cornell University for additional review prior to transfer to a mainframe computer program for calculation of regional and state summaries.

Four dairy farmers participating in the milk diversion program are included in this report. Since this is a relatively small number, the data from these farms has not been summarized separately. A separate summary and analysis of milk diversion program farms will be included in the 1984 New York State Dairy Farm Business Summary.

This summary was prepared by Wayne A. Knoblauch and Linda D. Putnam, Department of Agricultural Economics, New York State College of Agriculture and Life Sciences, Cornell University, in cooperation with Cooperative Extension Specialist Larry N. Davis. The Central Plain Region is comprised of Ontario, Seneca, Wayne, and Yates Counties.

SUMMARY OF THE FARM BUSINESS

Business Characteristics

Finding the right combination of resources and management strategies is an important part of farming. 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
20 Central Plain Region Dairy Farms, 1984

Type of Business	Number	Business Records	Number	Dairy Records	Number
Proprietorship	14	CAMIS	6	D.H.I.C.	16
Partnership	6	Account Book	8	Owner Sampler	3
Corporation	0	Agrifax	4	Other	0
		Agway	1	None	1
Owner	20	Other	1		
Renter	0				

Barn Type	Number	Milking System	Number		Number
Stanchion	7	Bucket & Carry	0	Herringbone	9
Freestall	11	Dumping Station	2	Other Parlor	2
Other	2	Pipeline	7		

Labor Force	My Farm	Average	Land Use	My Farm	Average
Operator 1.	_____ mo.	11	Total acres owned	_____	390
2.	_____ mo.	3	Total acres rented	_____	183
3.	_____ mo.	2	Total tillable acres	_____	431
Family paid	_____ mo.	8	Tillable acres rented	_____	170
Family unpaid	_____ mo.	2			
Hired	_____ mo.	19	Number of Cows	My Farm	Average
Total	_____ mo.	45	Beginning of year (owned)	_____	99
Age of operator(s) 1.	_____ yrs.	44	End of year (owned)	_____	103
2.	_____ yrs.	41	Avg. for year (all)	_____	102
3.	_____ yrs.	30			

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
20 Central Plain Region Dairy Farms, 1984

	My Farm		Average	
Item	1/1/84	1/1/85	1/1/84	1/1/85
Livestock	$_____	$_____	$142,198	$142,439
Feed & supplies	_____	_____	52,474	61,338
Machinery & equipment	_____	_____	134,793	134,312
Land & buildings	_____	_____	342,672	359,790
TOTAL	$_____	$_____	$672,137	$697,879

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
20 Central Plain Region Dairy Farms, 1984

Item	My Farm		Average	
End of year market value	$_____		$142,439	
less end at beginning prices	-_____		-146,132	
Change due to price		$_____		$-3,693
End inventory at beginning prices	$_____		$146,132	
less beginning of year inventory	-_____		-142,198	
Change due to quality & quantity		$_____		$ 3,934

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
20 Central Plain Region Dairy Farms, 1984

Item	My Farm		Average	
End of year market value		(1)$_____		$134,312
Beginning market value	$_____		$134,793	
Plus machinery purchased	+_____		+15,907	
Less machinery sold	-_____		- 778	
Less depreciation	-_____		-24,213	
Net end investment		(2)$_____		$125,709
APPRECIATION (1 minus 2)		$_____		$ 8,603

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
20 Central Plain Region Dairy Farms, 1984

Item	My Farm		Average	
End of year market value		(1)$_____		$359,790
Beginning market value		$_____		$342,672
Cost of new real estate	$_____		$21,164	
Less lost capital	-_____		- 950	
Value of new added		+_____		+ 20,214
Less building depreciation		-_____		- 9,241
Less real estate sold		-_____		- 191
Net end investment		(2)$_____		$353,454
APPRECIATION (1 minus 2)		$_____		$ 6,336

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
20 Central Plain Region Dairy Farms, 1984

Item	My Farm	Per Farm	Per Cow
CASH RECEIPTS			
Milk sales	$_____	$208,299	$2,042
Crop sales	_____	17,517	172
Dairy cattle sold	_____	13,278	130
Calves & other livestock sales	_____	6,533	64
Gas tax refunds	_____	398	4
Government payments	_____	5,892	58
Custom machine work	_____	715	7
Other	_____	4,911	48
Total Cash Receipts	$_____	$257,543	$2,525
NONCASH RECEIPTS			
Increase in livestock inventory[1]	_____	3,934	39
Increase in feed & supplies	_____	8,864	87
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION	$_____	$270,341	$2,651
Livestock appreciation[2]	_____	- 3,693	- 36
Machinery appreciation[3]	_____	8,603	84
Real estate appreciation[3]	_____	6,336	62
TOTAL FARM RECEIPTS		$281,587	$2,761

[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
Central Plain Region Dairy Farms, 1984 & 1983

Item	My Farm	20 Farms 1984	19 Farms 1983
Average price/cwt. milk sold	$_____	$13.38	$13.33
Milk and cattle sales per cow	_____	$2,236	$2,296
Total cash receipts/worker	_____	$68,678	$75,478

Expenses

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

FARM EXPENSES
20 Central Plain Region Dairy Farms, 1984

Item	My Farm	Per Farm	Per Cow
Hired Labor	$_____	$ 34,662	$ 340
Feed			
Dairy concentrate	_____	37,126	364
Hay and other	_____	8,625	85
Machinery			
Machine hire, rent and lease	_____	3,270	32
Machinery repairs	_____	13,862	136
Auto expense (farm share)	_____	338	3
Gas and oil	_____	9,558	94
Livestock			
Replacement livestock	_____	892	9
Breeding fees	_____	3,067	30
Veterinary and medicine	_____	4,279	42
Milk marketing	_____	15,177	149
Cattle lease	_____	81	<1
Other livestock expense	_____	8,876	87
Crops			
Fertilizer & lime	_____	10,873	107
Seeds and plants	_____	5,084	50
Spray, other crop expense	_____	6,355	62
Real Estate			
Land, building, fence repair	_____	4,278	42
Taxes	_____	4,748	46
Insurance	_____	3,282	32
Rent and lease	_____	5,475	54
Other			
Telephone (farm share)	_____	660	6
Electricity (farm share)	_____	5,237	51
Interest paid	_____	26,893	264
Miscellaneous	_____	2,823	28
Total Cash Expenses	$_____	$215,521	$2,113
Decrease in feed & supplies	_____	0	0
Expansion livestock	_____	0	0
Machinery depreciation	_____	24,213	237
Building depreciation	_____	9,241	91
Unpaid family labor @ $500/month	_____	1,175	12
TOTAL FARM EXPENSES EXCLUDING INTEREST ON EQUITY CAPITAL	$_____	$250,150	$2,453
Interest on equity capital @ 5%	_____	23,061	226
TOTAL FARM EXPENSES	$_____	$273,211	$2,679

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
Central Plain Region Dairy Farms, 1984 & 1983

Item	My Farm	20 Farms 1984	19 Farms 1983
Cash Farm Receipts	$_____	$257,543	$251,341
Cash Farm Expenses	_____	215,521	209,898
NET CASH FARM INCOME	$_____	$ 42,022	$ 41,443

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
Central Plain Region Dairy Farms, 1984 & 1983

Item	My Farm	20 Farms 1984	19 Farms 1983
Total farm receipts excluding appreciation	$_____	$270,341	$256,312
Total farm expenses	_____	273,211	260,195
LABOR & MANAGEMENT INCOME	$_____	$ -2,870	$ -3,883
Full-time operator-manager equivalents	_____	1.35	1.32
LABOR & MANAGEMENT INCOME PER OPERATOR-MANAGER	$_____	$ -2,126	$ -2,942

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
Central Plain Region Dairy Farms, 1984 & 1983

Item	My Farm	20 Farms 1984	19 Farms 1983
Total farm receipts	$_____	$281,587	$263,010
Total farm expenses excluding interest on equity capital	_____	250,150	240,497
LABOR, MANAGEMENT AND OWNERSHIP INCOME PER FARM	$_____	$ 31,437	$ 22,513
Full-time operator-manager equivalents	_____	1.35	1.32
LABOR, MANAGEMENT AND OWNERSHIP INCOME PER OPERATOR-MANAGER	$_____	$ 23,287	$ 17,055

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
Central Plain Region Dairy Farms, 1984 & 1983

Item	My Farm	20 Farms 1984	19 Farms 1983
Labor, management & ownership income per farm	$_____	$31,437	$22,513
Less value of operator's labor & management	_____	24,260	21,368
Return on equity capital	$_____	$ 7,177	$ 1,145
RATE OF RETURN INCLUDING APPRECIATION	_____%	1.6%	0.3%
RATE OF RETURN EXCLUDING APPRECIATION	_____%	-0.9%	-1.4%

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
20 Central Plain Region Dairy Farms, January 1, 1985

Item	My Farm	Average
Assets		
Livestock	$_____	$142,439
Feed and supplies	_____	61,338
Machinery and equipment	_____	136,487
(includes discounted lease payments)*	(2,175)	
Land and buildings	_____	361,541
(includes discounted lease payments)*	(1,751)	
Co-op investments	_____	22,211
Accounts receivable	_____	19,044
Cash and checking accounts	_____	2,736
Total Farm Assets	$_____	$745,796
Savings accounts	$_____	$ 1,841
Cash value life insurance	_____	7,252
Stocks and bonds	_____	4,651
Nonfarm real estate	_____	4,523
Auto (personal share)	_____	3,251
All Other	_____	8,559
TOTAL FARM & NONFARM ASSETS	$_____	$775,873
Liabilities		
Long term	$_____	$160,054
Intermediate	_____	99,889
Financial lease*	_____	3,926
Short term	_____	8,717
Other farm accounts	_____	11,997
Total Farm Liabilities	$_____	$284,583
Nonfarm Liabilities	_____	1,991
TOTAL LIABILITIES	$_____	$286,574
FARM NET WORTH (EQUITY CAPITAL)	$_____	$461,213
FAMILY NET WORTH	$_____	$489,299

*Future payments were discounted at an annual rate of 13 percent.

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 living expenses and to make payments on debts. Interest paid and income from off-farm work are added to net cash farm income because planned debt payments will include interest as well as principal. Estimate your family living expenses to calculate cash available for debt payments and capital purchases made in cash.

A cash flow coverage ratio of less than one indicates that planned cash outflows exceed cash availability determined from 1984 records.

FARM FAMILY DEBT REPAYMENT
20 Central Plain Region Dairy Farms, January 1, 1985

Item	My Farm	Average
Payment Ability		
Net cash farm income	$_____	$42,022
Plus interest paid	_____	26,893
Plus off-farm income	_____	1,763
CASH AVAILABLE FOR DEBT SERVICE AND LIVING	$_____	$70,678
Less family living expenses[1]	_____	25,016
CASH AVAILABLE FOR DEBT PAYMENTS AND CAPITAL PURCHASES	$_____	$45,662
Scheduled Annual Debt Payments		
Long term	$_____	$18,263
Intermediate	_____	28,102
Short term	_____	8,389
Other farm accounts	_____	5,350
TOTAL FARM DEBT PAYMENTS	$_____	$60,104
Nonfarm debt payments	_____	460
TOTAL PAYMENTS PLANNED 1985	$_____	$60,564
CASH FLOW COVERAGE RATIO[2]	_____	0.75
Commitment and Measures of Debt Equity Position		
Farm debt payments planned per cow	$_____	$584
Farm debt payments as % milk sales	_____%	29%
Farm debt/asset ratio-long term	_____	0.44
Farm debt/asset ratio-intermediate and short term	_____	0.29
Farm debt per cow	$_____	$2,763
Percent equity (total)	_____%	63%

[1]Estimated as $10,900 per family plus four percent of cash farm receipts.

[2]Cash available for debt payments and capital purchases divided by total payments planned.

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
Central Plain Region Dairy Farms, 1984 & 1983

Item	My Farm	20 Farms 1984	19 Farms 1983
Number of cows	_____	102	95
Number of heifers	_____	95	83
Pounds of milk sold	_____	1,556,600	1,496,400
Worker equivalent	_____	3.75	3.33
Total work units	_____	1,260	1,141
Total tillable acres	_____	431	382

In the table below, the 510 New York farms for 1983 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.

FARM SIZE AND FARM INCOME MEASURES
510 New York Dairy Farms, 1983

Number of Cows	Number of Farms	Worker Equivalent	Net Cash Farm Income	Labor, Management & Ownership Income Per Operator
Under 40	51	1.67	$12,955	$ 2,541
40 to 54	103	2.08	19,443	6,279
55 to 69	95	2.42	32,659	14,886
70 to 84	79	2.83	33,688	11,517
85 to 99	54	3.08	43,739	19,509
100 to 149	64	3.75	50,521	21,210
150 to 199	38	4.58	62,048	7,458
200 to 249	13	6.00	100,374	43,033
250 & over	13	8.42	180,903	99,327

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
20 Central Plain Region Dairy Farms, 1984

Crop	My Farm Acres	My Farm Yield	Average of Farms Reporting Farms	Acres	Yield/Acre
Dry hay	_____		20	(combined below)	
Hay crop silage	_____		15	(combined below)	
Total hay crops	_____	_____	20	136	3.1 tons D.M.
Corn silage	_____	_____	18	84	15.2 tons
Other forage	_____	_____	2	23	2.0 tons D.M.
Total forage crops	_____	_____	20	214	3.7 tons D.M.
Grain corn	_____	_____	19	140	82.5 bushels
Oats	_____	_____	11	34	64.8 bushels
Wheat	_____	_____	8	36	46.4 bushels
Other crops	_____	_____	8	60	
Tillable pasture	_____		7	18	
Idle tillable land	_____		10	39	
Milk sold per cow	_____			15,261 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
510 New York Dairy Farms, 1983

Pounds of Milk Sold Per Cow	Number of Farms	Number of Cows	Labor & Mgmt. Income/Oper.	Labor, Mgmt., & Ownership Income/Operator
Under 11,000	26	58	$-4,275	$ -903
11,000 to 11,999	35	62	-1,323	370
12,000 to 12,999	44	71	-3,493	5,074
13,000 to 13,999	56	79	-1,391	5,411
14,000 to 14,999	85	87	4,607	13,504
15,000 to 15,999	95	101	2,804	11,607
16,000 to 16,999	80	101	13,797	28,297
17,000 to 17,999	49	96	12,335	31,231
18,000 & over	40	101	18,716	36,819

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
Central Plain Region Dairy Farms, 1984 & 1983

Item	My Farm	20 Farms 1984	19 Farms 1983
Worker equivalent	_____	3.75	3.33
Cows per worker	_____	27	29
Lbs. milk sold per worker	_____	415,093	449,369
Work units per worker	_____	336	343

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
510 New York Dairy Farms, 1983

Pounds of Milk Sold Per Worker	Number of Farms	Number of Cows	Pounds Milk Per Cow	Labor & Mgmt. Income Per Operator	Labor, Mgmt., & Ownership Income Per Operator
Under 250,000	46	44	11,386	$-2,734	$ 926
250,000 to 299,999	38	48	13,298	-1,281	4,804
300,000 to 349,999	56	64	14,128	860	5,896
350,000 to 399,999	70	75	14,793	993	9,853
400,000 to 449,000	95	77	15,319	6,463	17,787
450,000 to 499,999	68	89	15,293	3,590	13,037
500,000 to 599,999	81	104	15,710	5,968	19,317
600,000 & over	56	187	16,473	26,312	48,943

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
Central Plain Region Dairy Farms, 1984 & 1983

Item	My Farm	20 Farms 1984	19 Farms 1983
Farm capital per worker	$_____	$186,101	$199,018
Farm capital per cow	$_____	6,776	6,976
Machinery investment per cow	$_____	1,304	1,339
Machinery per tillable acre	$_____	312	333
Land & buildings per cow	$_____	3,493	3,585
Land & buildings/tillable acre owned	$_____	1,384	1,384
Capital turnover (years)	_____	2.5	2.5

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
510 New York Dairy Farms, 1983

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	14	126	$3,178	$105,385	$ 34,525
1.5 to 1.99	92	121	4,493	153,029	15,742
2.0 to 2.49	168	97	5,246	163,826	5,682
2.5 to 2.99	113	74	6,239	170,148	3,794
3.0 to 3.49	66	63	6,364	168,003	-2,369
3.5 & over	57	60	7,601	206,061	-8,415

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
Central Plain Region Dairy Farms, 1984 & 1983

Item	My Farm	20 Farms 1984	19 Farms 1983
Dairy concentrate purchased per cow	$_____	$364	$474
Dairy concentrate purchased per cwt. of milk sold	$_____	$2.39	$3.01
Percent dairy concentrate is of milk receipts	_____%	18%	23%
Crop expense per cow	$_____	$219	$257
Feed & crop expense/cwt. milk	$_____	$4.37	$5.01
Forage dry matter harv./cow (tons)	_____	7.9	7.4
Acres of forage per cow	_____	2.1	2.2
Total tillable acres per cow	_____	4.2	4.0
Fertilizer and lime/tillable acre	$_____	$25	$34
Heifers as % of cow numbers	_____%	93%	87%

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
Central Plain Region Dairy Farms, 1984 & 1983

Item		My Farm	20 Farms 1984	19 Farms 1983
Machinery:	Depreciation[1]	$_____	$24,213	$21,426
	Interest[2]	_____	6,728	6,260
	Operating expense[3]	_____	27,028	24,114
Total machinery		$_____	$57,969	$51,800
	Per cow	_____	$568	$545
Labor:	Value of operators[4]	$_____	$11,625	$11,092
	Unpaid family[5]	_____	1,175	1,053
	Hired	_____	34,662	27,330
Total labor		$_____	$47,462	$39,475
	Per cow	_____	$465	$416
	Per cwt. milk	_____	$3.05	$2.64
Labor & machinery costs per cow		_____	$1,033	$961
Labor & machinery costs/cwt. milk		$_____	$6.77	$6.10

[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
Central Plain Region Dairy Farms, 1984 & 1983

Item	My Farm	20 Farms 1984	19 Farms 1983
Livestock expense per cow	$_____	$309	$294
Real estate expense per cow	$_____	$174	$171
Total farm expense per cow	$_____	$2,679	$2,739

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.

Item	20 Central Plain Farms Avg. Per Cow	My Farm, _____ Cows Per Cow	Total	Goal
CASH RECEIPTS				
Milk sales	$2,042	$_____	$_____	$_____
Crop sales	172	_____	_____	_____
Dairy cattle	130	_____	_____	_____
Calves & other livestock	64	_____	_____	_____
Other	117	_____	_____	_____
Total Cash Receipts	$2,525	$_____	$_____	$_____
CASH EXPENSES				
Hired labor	$ 340	$_____	$_____	$_____
Dairy concentrate	364	_____	_____	_____
Hay and other	84	_____	_____	_____
Machine hire	32	_____	_____	_____
Machine repair & auto expense	139	_____	_____	_____
Gas & oil	94	_____	_____	_____
Replacement livestock	9	_____	_____	_____
Breeding fees	30	_____	_____	_____
Vet & medicine	42	_____	_____	_____
Milk marketing (ADA, Dues)	149	_____	_____	_____
Other livestock exp. (incl. <$1 lease)	88	_____	_____	_____
Fertilizer & lime	107	_____	_____	_____
Seeds & plants	50	_____	_____	_____
Spray & other	62	_____	_____	_____
Land, bldg. fence repair	42	_____	_____	_____
Taxes	46	_____	_____	_____
Insurance	32	_____	_____	_____
Rent	54	_____	_____	_____
Telephone & elec. (farm share)	57	_____	_____	_____
Miscellaneous	28	_____	_____	_____
Total Cash Expenses[1]	$1,849	$_____	$_____	$_____
Total Cash Receipts	$2,525	_____	_____	_____
Total Cash Expenses[1]	-1,849	- _____	- _____	- _____
Net Cash Flow	$ 676	$_____	$_____	$_____
Cash Family Living Expense[2]	- 245	- _____	- _____	- _____
Amount Left for Debt Service, Capital Investment & Retained Earnings	$ 431	$_____	$_____	$_____
Scheduled Farm Debt Service	- 584	-	-	-
Available for Capital Investment	$ (153)	$_____	$_____	$_____
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: $10,900 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. Data from 15 identical Central Plain dairy farms is included to provide a basis for comparison.

	Avg. of 15 Central Plain Identical* Farms		My Farm		
Item	1983	1984	1983	1984	Goal
Size of Business					
Number of cows	95	96			
Number of heifers	86	93			
Milk sold (cwt.)	15,036	14,480			
Worker equivalent	3.42	3.50			
Total tillable acres	396	415			
Rates of Production					
Pounds milk sold per cow	15,827	15,083			
Tons hay D.M. per acre	3.0	2.9			
Tons corn silage per acre	12.0	15.0			
Labor Efficiency					
Cows per worker	28	27			
Pounds milk sold/worker	439,649	413,714			
Cost Control					
Purch. feed as % milk sold	23%	21%	%	%	%
Feed & crop exp./cwt. milk	$5.11	$5.07	$	$	$
Labor & machinery cost/cow	$980	$1,011	$	$	$
Capital Efficiency					
Farm capital per cow	$6,882	$6,939	$	$	$
Capital turnover (years)	2.4	2.6			
Price					
Price per cwt. milk	$13.27	$13.33	$	$	$
Financial Summary					
Net cash farm income	$41,588	$35,581	$	$	$
Labor & mgmt. income/oper.	$-1,048	$-4,753	$	$	$
Farm net worth	$370,032	$384,784	$	$	$
Rate of return on equity	1.7%	-0.8%	%	%	%
Percent equity	55%	55%	%	%	%
Farm debt per cow	$3,400	$3,447	$	$	$

*"Identical" means that each of these farms were included in the data for both 1983 and 1984.

Farm Business Chart

The Farm Business Chart is a tool which can be used in analyzing a business by drawing a line through the figure in each column which represents the current level of management performance. The figure at the top of each column is the average of the top 10 percent of the 510 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
510 New York Dairy Farms, 1983

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop D.M./ Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
6.3	233	3,749,300	18,500	4.8	21	47	722,800
4.2	136	2,058,600	17,200	3.5	17	37	570,200
3.4	100	1,547,000	16,500	3.1	16	34	510,400
3.1	85	1,324,900	15,900	2.7	15	31	472,400
2.8	75	1,153,100	15,300	2.5	14	29	437,800
2.5	67	988,000	14,800	2.3	13	27	413,100
2.2	59	870,600	14,200	2.1	12	26	373,900
2.0	51	730,000	13,400	1.9	12	23	340,700
1.8	44	600,600	12,400	1.7	10	21	290,800
1.4	34	410,300	10,300	1.3	7	17	200,300

Feed Bought Per Cow	% Feed is of Milk Receipts	Machinery Costs Per Cow	Labor and Machinery Costs Per Cow	Feed and Crop Expenses Per Cwt. Milk
$224	12%	$215	$ 499	$2.82
329	17	281	598	3.55
389	20	324	641	4.00
448	23	354	678	4.29
505	26	384	723	4.57
552	28	418	767	4.83
596	29	458	816	5.04
646	31	501	875	5.30
698	34	557	952	5.67
830	40	684	1,141	6.63

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

Financial Analysis Chart

The farm financial analysis chart is designed just like the Farm Business Chart in Table 35 on page 28 and may be used to measure the financial health of the farm business. Most of the financial measures used are defined on pages 14 through 16 and 21 in this publication.

FINANCIAL ANALYSIS CHART
510 New York Dairy Farms, 1983

Liquidity (Repayment)				
Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio	Debt Payments as Percent of Milk Sales	Debt Per Cow
$ 56	$844	7.49	3	$ 152
191	625	2.02	10	735
290	543	1.36	15	1,193
368	471	1.07	19	1,620
429	418	.90	22	1,991
481	361	.78	24	2,289
547	308	.62	28	2,667
618	236	.48	32	3,054
710	147	.32	37	3,643
940	-69	-.88	52	4,751

Solvency				Efficiency & Profitability		
		Debt/Asset Ratio		Capital	Rate of Return on	
Leverage Ratio[1]	Percent Equity	Current & Intermediate	Long Term	Turnover (years)	Equity	Investment[2]
.01	97	.00	.00	1.17	15%	12%
.13	88	.05	.04	1.87	6	7
.25	79	.11	.16	2.13	4	5
.37	72	.17	.30	2.32	1	4
.51	66	.24	.41	2.53	- 1	3
.69	59	.30	.51	2.72	- 3	1
.90	52	.38	.62	2.92	- 6	- 0.4
1.23	44	.46	.74	3.25	-10	- 2
1.72	36	.54	.89	3.83	-19	- 5
5.19	16	.83	1.68	7.55	-59	-10

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

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

FARM BUSINESS SUMMARY BY HERD SIZE
510 New York Dairy Farms, 1983

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	$ 41,228	$ 61,459	$ 85,887	$ 98,628
Feed & supplies	10,381	18,411	26,767	34,220
Machinery & equipment	39,680	58,452	76,189	88,047
Land & buildings	114,057	150,410	190,603	222,475
TOTAL INVESTMENT	$205,346	$288,732	$379,446	$443,370
Receipts				
Milk sales	$ 59,890	$ 94,045	$127,435	$156,255
Dairy cattle sold	3,615	5,780	7,799	10,293
Other livestock sales	1,545	1,445	1,656	2,097
Crop sales	220	673	1,661	1,698
Miscellaneous receipts	1,321	1,903	3,160	4,444
Total Cash Receipts	$ 66,591	$103,846	$141,711	$174,787
Increase in livestock	865	1,618	2,714	500
Increase in feed & supplies	900	2,433	2,726	2,775
Appreciation	(2,802)	(2,389)	(1,245)	312
TOTAL FARM RECEIPTS	$ 65,554	$105,508	$145,906	$178,374
TOTAL FARM REC. EXCL. APPREC.	$ 68,356	$107,897	$147,151	$178,062
Expenses				
Hired labor	$ 2,980	$ 5,421	$ 7,306	$ 12,401
Dairy grain & concentrate	17,146	25,553	32,132	40,676
Other feed	1,229	985	1,452	1,896
Machine hire	714	885	1,600	1,694
Machinery repair	2,486	4,235	5,858	7,778
Auto expense (farm share)	527	462	481	466
Gas & oil	2,044	3,256	4,611	5,664
Replacement animals	1,406	1,432	1,292	1,284
Breeding fees	895	1,372	1,890	2,381
Veterinary & medicine	996	1,967	2,431	3,174
Milk marketing	4,666	6,785	8,683	10,155
Cattle lease	0	80	32	440
Other livestock expense	2,061	3,864	5,203	5,687
Fertilizer & lime	1,730	4,013	5,441	7,393
Seeds & plants	595	1,289	1,901	2,513
Spray & other crop expense	518	1,075	1,352	1,956
Land, bldg., fence repair	1,020	1,286	1,506	2,676
Taxes & insurance	3,317	4,308	5,766	7,255
Electricity & phone (farm share)	2,048	2,823	3,863	4,501
Interest paid	6,002	10,569	12,769	15,946
Miscellaneous expenses	1,256	2,743	3,483	5,163
Total Cash Expenses	$ 53,636	$ 84,403	$109,052	$141,099
Expansion livestock	196	819	460	244
Machinery depreciation	5,504	7,716	10,016	13,621
Building depreciation	1,840	3,176	4,914	6,207
Unpaid family labor	1,735	1,859	1,963	1,886
Interest on equity @ 5%	7,110	9,155	13,065	14,243
TOTAL FARM EXPENSES	$ 70,021	$107,128	$139,470	$177,300
Financial Summary				
NET CASH FARM INCOME	$ 12,955	$ 19,443	$ 32,659	$ 33,688
Labor & Management Income	$ -1,665	$ 769	$ 7,681	$ 762
Number of Operators	1.04	1.20	1.31	1.33
LABOR & MGT. INCOME/OPER.	$ -1,601	$ 641	$ 5,863	$ 573
LABOR, MGT. & OWNSHP. INC./OPER.	$ 2,541	$ 6,279	$ 14,886	$ 11,517

FARM BUSINESS SUMMARY BY HERD SIZE
510 New York Dairy Farms, 1983

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	$125,294	$160,160	$215,402	$ $308,916	$ 497,937
Feed & supplies	42,139	53,070	70,909	94,822	175,581
Machinery & equipment	110,980	124,768	169,416	181,519	242,080
Land & buildings	254,998	317,401	386,900	506,269	880,006
TOTAL INVESTMENT	$533,411	$655,399	$842,627	$1,091,526	$1,795,604
Receipts					
Milk sales	$190,993	$247,849	$349,071	$467,567	$824,478
Dairy cattle sold	10,718	14,575	21,762	31,483	42,411
Other livestock sales	2,607	3,842	4,377	5,806	9,078
Crop sales	1,983	2,306	3,857	6,873	4,792
Miscellaneous receipts	4,830	5,743	9,982	18,207	12,250
Total Cash Receipts	$211,131	$274,315	$389,049	$529,936	$893,009
Increase in livestock	4,555	5,724	6,427	15,172	38,561
Increase in feed & supplies	5,158	4,630	4,639	(2,857)	21,929
Appreciation	(1,923)	277	(17,087)	3,307	4,649
TOTAL FARM RECEIPTS	$218,921	$284,946	$383,028	$545,558	$958,148
TOT. FARM REC. EXCL. APPREC.	$220,844	$284,669	$400,115	$542,251	$953,499
Expenses					
Hired labor	$ 15,684	$ 24,817	$ 38,523	$ 67,620	$109,208
Dairy feed & concentrate	47,017	59,535	85,473	117,279	207,775
Other feed	1,907	3,919	3,926	3,132	2,251
Machine hire	1,404	1,586	1,293	3,033	4,444
Machinery repair	10,162	12,342	17,337	26,385	35,838
Auto expense (farm share)	615	617	560	381	1,023
Gas & oil	7,216	9,871	13,358	14,604	25,295
Replacement animals	1,332	2,292	9,477	2,581	3,831
Breeding fees	2,484	3,159	4,990	7,320	10,807
Veterinary & medicine	3,654	4,738	7,219	11,416	21,224
Milk marketing	13,440	16,589	24,264	30,999	52,366
Cattle lease	0	261	424	0	259
Other livestock expense	7,446	9,139	13,376	20,365	30,827
Fertilizer & lime	9,701	12,280	18,126	19,367	33,696
Seeds & plants	3,173	4,395	5,592	5,486	11,555
Spray & other crop expense	2,673	3,514	5,951	7,783	12,986
Land, bldg., fence repair	2,595	3,234	4,060	7,705	8,837
Taxes & insurance	7,799	10,163	12,513	16,015	19,210
Elec. & phone (farm share)	5,151	6,402	7,874	10,544	14,898
Interest paid	17,309	25,135	40,718	43,956	80,607
Miscellaneous expenses	6,630	9,806	11,947	13,591	25,169
Total Cash Expenses	$167,392	$223,794	$327,001	$429,562	$712,106
Expansion livestock	579	1,016	1,905	3,219	6,532
Machinery depreciation	15,519	19,044	28,209	33,853	45,379
Building depreciation	6,888	9,440	12,849	18,539	25,884
Unpaid family labor	1,426	1,109	908	1,000	385
Interest on equity @ 5%	18,640	20,948	24,879	36,983	58,899
TOTAL FARM EXPENSES	$210,444	$275,351	$395,751	$523,156	$849,185
Financial Summary					
NET CASH FARM INCOME	$ 43,739	$ 50,521	$ 62,048	$100,374	$180,903
Labor & Management Income	$ 10,400	$ 9,318	$ 4,364	$ 19,095	$104,314
Number of Operators	1.39	1.44	1.63	1.38	1.69
LABOR & MGT. INCOME/OPER.	$ 7,482	$ 6,471	$ 2,677	$ 13,837	$ 61,724
LABOR, MGT. & OWNSHP. INC/OP.	$ 19,509	$ 21,210	$ 7,458	$ 43,033	$ 99,327

SELECTED BUSINESS FACTORS BY HERD SIZE
510 New York Dairy Farms, 1983

Item	Farms with: Less than 40 cows	40 to 54 cows	55 to 69 cows	70 to 84 cows
Number of farms	51	103	95	79
Size of Business				
Number of cows	34	47	63	76
Number of heifers	26	38	50	63
Pounds of milk sold	440,800	695,800	938,300	1,152,000
Worker equivalent	1.67	2.08	2.42	2.83
Total work units	370	531	695	849
Total tillable acres	118	164	213	251
(Tillable acres rented)*	(28)	(48)	(70)	(81)
Rates of Production				
Milk sold per cow	12,965	14,804	14,894	15,158
Tons hay crop dry matter per acre	2.1	2.1	2.4	2.5
Tons corn silage per acre	12.6	12.8	13.3	12.7
Bushels of oats per acre	33.6	52.9	48.0	54.3
Labor Efficiency				
Cows per worker	20	23	26	27
Pounds milk sold per worker	263,952	334,519	387,727	407,067
Work units per worker	222	255	287	300
Feed Costs				
Feed purchased per cow	$504	$544	$510	$535
Crop expense per cow	$84	$136	$138	$156
Feed cost per cwt. milk	$3.89	$3.67	$3.42	$3.53
Feed & crop exp. per cwt. milk	$4.81	$4.73	$4.51	$4.73
% feed is of milk receipts	29%	27%	25%	26%
Tons forage dry matter per cow	6.8	7.6	7.5	7.7
Tillable acres per cow	3.5	3.5	3.4	3.3
Fertilizer & lime per crop acre	$15	$24	$26	$29
Machinery & Labor Costs				
Total machinery costs	$13,243	$19,463	$26,309	$33,550
Machinery cost per cow	$390	$414	$418	$441
Machinery cost per cwt. milk	$3.00	$2.08	$2.80	$2.91
Labor cost per cow	$415	$382	$330	$345
Labor cost per cwt. milk	$3.20	$2.58	$2.22	$2.28
Capital Efficiency				
Investment per worker	$122,962	$138,813	$156,796	$156,668
Investment per cow	$6,040	$5,892	$5,929	$5,758
Investment per cwt. milk	$47	$41	$40	$38
Land & buildings per cow	$3,355	$3,070	$2,978	$2,889
Machinery investment per cow	$1,167	$1,193	$1,190	$1,143
Capital turnover	3.1	2.7	2.6	2.5
Other				
Price per cwt. milk sold	$13.59	$13.52	$13.58	$13.56
Acres hay crops*	78	104	117	131
Acres corn silage*	16	29	40	57

*Average of all farms.

SELECTED BUSINESS FACTORS BY HERD SIZE
510 New York Dairy Farms, 1983

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	54	64	38	13	13
Size of Business					
Number of cows	91	121	168	219	355
Number of heifers	77	101	127	177	292
Pounds of milk sold	1,390,800	1,806,600	2,553,800	3,444,600	6,016,600
Worker equivalent	3.08	3.75	4.58	6.00	8.42
Total work units	1,014	1,345	1,836	2,356	3,755
Total tillable acres	294	378	503	543	731
(Tillable acres rented)*	(103)	(126)	(204)	(210)	(230)
Rates of Production					
Milk sold per cow	15,284	14,931	15,201	15,729	16,948
Tons hay crop dry matter/acre	2.7	2.6	2.7	2.8	3.3
Tons corn silage per acre	13.0	13.2	13.9	15.1	15.2
Bushels of oats per acre	50.8	51.3	53.0	56.0	80.0
Labor Efficiency					
Cows per worker	30	32	37	37	42
Pounds milk sold per worker	451,558	481,760	557,598	574,100	714,561
Work units per worker	329	359	401	393	446
Feed Costs					
Feed purchased per cow	$517	$492	$509	$536	$585
Crop expense per cow	$171	$167	$177	$149	$164
Feed cost per cwt. milk	$3.38	$3.30	$3.35	$3.40	$3.45
Feed & crop exp. per cwt. milk	$4.64	$4.63	$4.66	$4.44	$4.46
% feed is of milk receipts	25%	24%	24%	25%	25%
Tons forage dry matter per cow	7.6	7.8	7.5	7.0	7.2
Tillable acres per cow	3.2	3.1	3.0	2.5	2.1
Fertilizer & lime per crop acre	$33	$32	$36	$36	$46
Machinery & Labor Costs					
Total machinery costs	$40,311	$49,645	$69,160	$87,257	$123,695
Machinery cost per cow	$443	$410	$412	$398	$348
Machinery cost per cwt. milk	$2.90	$2.75	$2.71	$2.53	$2.06
Labor cost per cow	$325	$321	$322	$368	$352
Labor cost per cwt. milk	$2.13	$2.15	$2.12	$2.34	$2.07
Capital Efficiency					
Investment per worker	$173,185	$174,773	$183,980	$181,921	$213,255
Investment per cow	$5,798	$5,202	$4,957	$4,873	$4,827
Investment per cwt. milk	$38	$36	$33	$32	$30
Land & buildings per cow	$2,772	$2,519	$2,276	$2,260	$2,366
Machinery investment per cow	$1,206	$990	$997	$810	$651
Capital turnover	2.4	2.3	2.2	2.0	1.9
Other					
Price per cwt. milk sold	$13.73	$13.72	$13.67	$13.57	$13.70
Acres hay crops*	149	185	234	231	230
Acres corn silage*	64	98	133	179	341

*Average of all farms.

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
510 New York Dairy Farms, January 1, 1984

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	51	103	95	79	54
Assets					
Livestock (includes discounted	$ 41,228	$ 61,540	$ 85,929	$ 98,674	$125,294
lease payments)	(0)	(81)	(42)	(46)	(0)
Feed & supplies	10,381	18,411	26,767	34,220	42,139
Machinery & equipment (includes	40,785	59,115	77,201	89,233	111,861
discounted lease payments)	(1,105)	(663)	(1,112)	(1,186)	(881)
Land & buildings (includes	114,500	152,831	193,038	224,054	256,322
discounted lease payments)	(443)	(2,421)	(2,435)	(1,579)	(1,324)
Co-op investment	1,529	2,642	5,006	6,123	7,916
Accounts receivable	4,567	7,630	10,557	13,143	16,950
Cash & checking accounts	949	885	2,300	3,350	2,221
Total Farm Assets	$213,939	$303,054	$400,798	$468,797	$562,703
Savings accounts	3,067	2,032	4,289	3,106	4,344
Cash value life insurance	2,366	2,498	2,854	2,052	2,454
Stocks & bonds	899	1,605	2,541	4,369	4,856
Nonfarm real estate	3,843	3,684	10,491	1,744	5,784
Auto (personal share)	1,110	1,532	1,710	1,425	1,946
All other	7,694	7,975	6,536	6,215	7,282
Total Nonfarm Assets	$ 18,979	$ 19,326	$ 28,421	$ 18,911	$ 26,666
TOTAL ASSETS	$232,918	$322,380	$429,219	$487,708	$589,369
Liabilities					
Long term	$ 45,225	$ 70,854	$ 83,044	$115,843	$109,048
Intermediate	21,775	41,239	45,676	56,631	64,655
Financial lease	1,548	3,165	3,489	2,811	2,205
Short-term	1,170	1,263	3,011	3,242	7,094
Other farm accounts	2,023	3,443	4,279	5,418	6,910
Total Farm Liabilities	$ 71,741	$119,964	$139,499	$183,945	$189,912
Total Nonfarm Liabilities	338	926	1,310	189	641
TOTAL LIABILITIES	$ 72,079	$120,890	$140,809	$184,134	$190,553
Farm Net Worth (Eq. Cap.)	$142,198	$183,090	$261,299	$284,852	$372,791
FAMILY NET WORTH	$160,839	$201,490	$288,410	$303,574	$398,816
Financial Measures					
Percent equity	69%	63%	67%	62%	68%
Farm debt per cow	$2,110	$2,448	$2,180	$2,389	$2,064
Available for debt service & living	$21,523	$32,196	$46,794	$51,210	$62,252
Scheduled annual debt payment	$13,513	$23,122	$30,289	$37,532	$42,918
Scheduled debt payments/cow	$393	$468	$471	$486	$464
Payment as % of milk check	22%	24%	24%	24%	22%
Debt/Asset ratio - long term	0.39	0.46	0.43	0.52	0.43
Debt/Asset ratio - intermediate & short-term	0.25	0.30	0.25	0.26	0.24
Cash flow coverage ratio	0.59	0.67	0.90	0.81	0.91

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
510 New York Dairy Farms, January 1, 1984

Item	100 to 149 cows	150 to 199 cows	200 to 249 cows	250 or more cows
Number of farms	64	38	13	13
Assets				
Livestock (includes discounted	$160,160	$216,151	$ 308,916	$ 497,937
lease payments)	(0)	(749)	(0)	(0)
Feed & supplies	53,070	70,909	94,822	175,581
Machinery & equipment (includes	125,491	169,416	186,283	242,080
discounted lease payments)	(723)	(0)	(4,764)	(0)
Land & buildings (includes	322,858	389,980	507,695	883,526
discounted lease payments)	(5,457)	(3,080)	(1,426)	(3,520)
Co-op investment	11,794	24,462	32,374	30,627
Accounts receivable	20,230	27,582	41,128	77,943
Cash & checking accounts	2,417	3,430	4,270	10,072
Total Farm Assets	$696,020	$901,930	$1,175,488	$1,917,766
Savings accounts	3,391	5,178	132	3,115
Cash value life insurance	2,951	6,111	1,808	4,821
Stocks & bonds	2,770	6,629	13,102	2,308
Nonfarm real estate	5,508	20,423	399	3,846
Auto (personal share)	1,695	2,650	1,173	962
All other	5,170	8,079	6,392	5,231
Total Nonfarm Assets	$ 21,485	$ 49,070	$ 23,006	$ 20,283
TOTAL ASSETS	$717,505	$951,000	$1,198,494	$1,938,049
Liabilities				
Long term	$145,700	$214,453	$222,344	$370,108
Intermediate	113,125	170,191	192,872	328,702
Financial lease	6,180	3,829	6,190	3,520
Short-term	4,972	5,471	1,957	12,491
Other farm accounts	7,078	10,406	12,459	24,959
Total Farm Liabilities	$277,055	$404,350	$ 435,822	$ 739,780
Total Nonfarm Liabilities	3,589	5,870	7,385	0
TOTAL LIABILITIES	$280,644	$410,220	$ 443,207	$ 739,780
Farm Net Worth (Equity Cap.)	$418,965	$497,580	$ 739,666	$1,177,986
FAMILY NET WORTH	$436,861	$540,780	$ 755,287	$1,198,269
Financial Measures				
Percent equity	61%	57%	63%	62%
Farm debt per cow	$2,199	$2,379	$1,946	$1,989
Available for debt service & living	$77,036	$105,000	$144,344	$261,536
Scheduled annual debt payment	$57,984	$86,400	$94,063	$137,159
Scheduled debt payments/cow	$459	$507	$416	$369
Payment as % of milk check	23%	25%	20%	17%
Debt/Asset ratio - long term	0.45	0.55	0.44	0.42
Debt/Asset ratio - intermediate & short-term	0.33	0.35	0.30	0.33
Cash flow coverage ratio	0.88	0.84	1.16	1.52

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 1984 and have you set new goals for 1985?