DAIRY FARM BUSINESS SUMMARY

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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. Milk prices are expected to be down three to five percent while feed and other production costs will increase. Dairyfarmers must continue to place emphasis on operating efficiency and cost control in order to maintain adequate farm incomes.

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 operations.

Changes in Computation

The interest charge made for using equity capital in the farm business has been changed 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 to the farm balance sheet to reflect the farmer's committed liability as well as the eventual value of the asset.

This summary was prepared by Wayne A. Knoblauch, Department of Agricultural Economics, New York State College of Agriculture and Life Sciences, Cornell University, in cooperation with Cooperative Extension Specialist Larry N. Davis.

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
22 Central Plain Region Dairy Farms, 1982

Type of Business	Number
Proprietorship	15
Partnership	7
Corporation	0
Owner	22
Renter	0

Business Records	Number
CAMIS	6
Account Book	9
Agrifax	1
Farm Bureau	1
Agway	1
Other	4

Dairy Records	Number
D.H.I.C.	17
Owner Sampler	3
Other	1
None	1

Barn Type	Number
Stanchion	9
Freestall	11
Other	2

Milking System	Number
Bucket & Carry	0
Dumping Station	3
Pipeline	8

	Number
Herringbone	10
Other Parlor	1

Labor Force	My Farm	Average
Operator 1.	_____ mo.	11
2.	_____ mo.	4
3.	_____ mo.	1
Family paid	_____ mo.	5
Family unpaid	_____ mo.	1
Hired	_____ mo.	18
Total	_____ mo.	40
Age of operator(s) 1.	_____ yrs.	44
2.	_____ yrs.	36
3.	_____ yrs.	29

Land Use	My Farm	Average
Total acres owned	_____	359
Total acres rented	_____	181
Total tillable acres	_____	371
Tillable acres rented	_____	160

Number of Cows	My Farm	Average
Beginning of year	_____	89
End of year	_____	96
Average for year	_____	92

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
22 Central Plain Region Dairy Farms, 1982

Item	My Farm 1/1/82	My Farm 1/1/83	Average 1/1/82	Average 1/1/83
Livestock	$_____	$_____	$139,733	$144,113
Feed & supplies	_____	_____	46,712	47,922
Machinery & equipment	_____	_____	114,057	113,506
Land & buildings	_____	_____	327,494	342,474
TOTAL	$_____	$_____	$627,996	$648,015

Inventory Accounting

The value of the dairy herd is influenced by market prices, herd quality and quantity. Here the 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
22 Central Plain Region Dairy Farms, 1982

Item	My Farm		Average
End of year market value	$_____	$144,113	
less end at beginning prices	-_____	-149,666	
Change due to price		$_____	$-5,553
End inventory at beginning prices	$_____	$149,666	
less beginning of year inventory	-_____	-137,733	
Change due to quality & quantity		$_____	$ 9,933

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

MACHINERY AND EQUIPMENT INVENTORY
22 Central Plain Region Dairy Farms, 1982

Item	My Farm		Average
End of year market value	(1)$_____		$113,506
Beginning market value	$_____	$144,057	
Plus machinery purchased	+_____	+ 13,358	
Less machinery sold	-_____	- 1,703	
Less depreciation	-_____	- 18,169	
Net end investment	(2)$_____		$107,543
APPRECIATION (1 minus 2)	$_____		$ 5,963

The change in real estate value is also affected by lost capital which is the amount of a new building investment that does not increase the value of the farm.

REAL ESTATE INVENTORY CALCULATIONS
22 Central Plain Region Dairy Farms, 1982

Item	My Farm		Average
End of year market value	(1)$_____		$342,474
Beginning market value	$_____		$327,494
Cost of new real estate	$_____	$17,462	
Less lost capital	-_____	- 4,774	
Value of new added	+_____		+ 12,688
Less building depreciation	-_____		- 7,042
Less real estate sold	-_____		- 3,636
Net end investment	(2)$_____		$329,504
APPRECIATION (1 minus 2)	$_____		$ 12,970

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
22 Central Plain Region Dairy Farms, 1982

Item	My Farm	Per Farm	Per Cow
CASH RECEIPTS			
Milk sales	$_____	$180,419	$1,961
Crop sales	_____	25,141	273
Dairy cattle sold	_____	11,397	124
Calves & other livestock sales	_____	5,191	56
Gas tax refunds	_____	490	5
Government payments	_____	2,011	22
Custom machine work	_____	339	4
Other	_____	4,380	48
Total Cash Receipts	$_____	$229,368	$2,493
NONCASH RECEIPTS			
Increase in livestock inventory[1]	_____	9,933	108
Increase in feed & supplies	_____	1,210	13
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION	$_____	$240,511	$2,614
Livestock appreciation[2]	_____	- 5,553	- 60
Machinery appreciation[3]	_____	5,963	65
Real estate appreciation[3]	_____	12,970	141
TOTAL FARM RECEIPTS	$_____	$253,891	$2,760

[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, 1982 & 1981

Item	My Farm	22 Farms 1982	21 Farms 1981
Average price/cwt. milk sold	$_____	$13.38	$13.48
Milk and cattle sales per cow	_____	$2,141	$2,182
Total cash receipts/worker	_____	$68,879	$66,728

Expenses

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

FARM EXPENSES
22 Central Plain Region Dairy Farms, 1982

Item	My Farm	Per Farm	Per Cow
Hired Labor	$_____	$ 29,072	$ 316
Feed			
Dairy concentrate	_____	37,918	412
Hay and other	_____	3,540	39
Machinery			
Machine hire, rent and lease	_____	1,910	21
Machinery repairs	_____	12,481	136
Auto expense (farm share)	_____	503	5
Gas and oil	_____	10,156	110
Livestock			
Replacement livestock	_____	970	11
Breeding fees	_____	2,264	25
Veterinary and medicine	_____	3,808	41
Milk marketing	_____	5,482	60
Cattle lease	_____	19	<1
Other livestock expense	_____	8,499	92
Crops			
Fertilizer & lime	_____	12,265	133
Seeds and plants	_____	4,667	51
Spray, other crop expense	_____	5,180	56
Real Estate			
Land, building, fence repair	_____	2,488	27
Taxes	_____	5,031	55
Insurance	_____	3,077	33
Rent and lease	_____	3,476	38
Other			
Telephone (farm share)	_____	858	9
Electricity (farm share)	_____	4,000	44
Interest paid	_____	27,504	299
Miscellaneous	_____	3,317	36
Total Cash Expenses	$_____	$188,485	$2,049
Expansion livestock	_____	984	11
Machinery depreciation	_____	18,169	197
Building depreciation	_____	7,042	77
Unpaid family labor @ $500/month	_____	727	8
TOTAL FARM EXPENSES EXCLUDING INTEREST ON EQUITY CAPITAL	$_____	$215,407	$2,342
Interest on equity capital @ 5%	_____	19,084	207
TOTAL FARM EXPENSES	$_____	$234,491	$2,549

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, 1982 & 1981

Item	My Farm	22 Farms 1982	21 Farms 1981
Cash Farm Receipts	$_____	$229,368	$216,867
Cash Farm Expenses	_____	188,485	179,358
NET CASH FARM INCOME	$_____	$ 40,883	$ 37,509

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, 1982 & 1981

Item	My Farm	22 Farms 1982	21 Farms 1981
Total farm receipts excluding appreciation	$_____	$240,511	$221,067
Total farm expenses	_____	234,491	226,379
LABOR & MANAGEMENT INCOME	$_____	$ 6,020	$ -5,312
Full-time operator-manager equivalents	s_____	1.41	1.25
LABOR & MANAGEMENT INCOME PER OPERATOR-MANAGER	$_____	$ 4,270	$ -4,250

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, 1982 & 1981

Item	My Farm	22 Farms 1982	21 Farms 1981
Total farm receipts	$_____	$253,891	$236,079
Total farm expenses excluding interest on equity capital	_____	215,407	206,379
LABOR, MANAGEMENT AND OWNERSHIP INCOME PER FARM	$_____	$ 38,484	$ 29,700
Full-time operator-manager equiv.	_____	1.41	1.25
LABOR, MANAGEMENT AND OWNERSHIP INCOME PER OPERATOR-MANAGER	$_____	$ 27,294	$ 22,846

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, 1982 & 1981

Item	My Farm	22 Farms 1982	21 Farms 1981
Labor, management & ownership income per farm	$_____	$38,484	$29,700
Less value of operator's labor & management	_____	22,136	18,524
Return on equity capital	$_____	$16,348	$11,176
RATE OF RETURN INCLUDING APPRECIATION	_____ %	4.3%	2.8%
RATE OF RETURN EXCLUDING APPRECIATION	_____ %	0.8%	-1.0%

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 FINANCIAL SITUATION
22 Central Plain Region Dairy Farms, January 1, 1983

Item	My Farm	Average
Assets		
Livestock	$_____	$144,113
(includes discounted lease pymts)		(0)
Feed and supplies	_____	47,922
Machinery and equipment	_____	114,274
(includes discounted lease pymts)		(768)
Land and buildings	_____	343,140
(includes discounted lease pymts)		(666)
Co-op investments	_____	16,448
Accounts receivable	_____	15,716
Cash and checking accounts	_____	6,530
Total Farm Assets	$_____	$688,143
Savings accounts	$_____	$ 2,773
Cash value life insurance	_____	6,886
Stocks and bonds	_____	7,495
Nonfarm real estate	_____	3,182
Auto (personal share)	_____	3,182
All Other	_____	7,795
TOTAL FARM & NONFARM ASSETS	$_____	$719,456
Liabilities		
Long term	$_____	$194,099
Intermediate	_____	87,742
Financial lease	_____	1,434
Short term	_____	15,329
Other farm accounts	_____	7,851
Total Farm Liabilities	$_____	$306,455
Nonfarm Liabilities	_____	725
TOTAL LIABILITIES	$_____	$307,180
FARM NET WORTH (EQUITY CAPITAL)	$_____	$381,688
FAMILY NET WORTH	$_____	$412,276

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 FINANCIAL SITUATION
22 Central Plain Region Dairy Farms, January 1, 1983

Item	My Farm	Average
Payment Ability		
Net cash farm income	$_____	$40,883
Plus interest paid	_____	27,504
Plus off-farm income	_____	2,533
CASH AVAILABLE FOR DEBT SERVICE AND LIVING	$_____	$70,920
Less family living expenses*	_____	23,556
CASH AVAIL. FOR DEBT PAYMENT & CAPITAL PURCHASES	$_____	$47,364
Scheduled Annual Debt Payments		
Long term	$_____	$21,763
Intermediate	_____	22,070
Short term	_____	13,824
Other farm accounts	_____	2,019
TOTAL FARM DEBT PAYMENTS	$_____	$59,676
Nonfarm debt payments	_____	348
TOTAL PAYMENTS PLANNED 1983	$_____	$60,024
Commitment & Measures of Debt Equity Position		
Farm debt pymts. planned/cow	$_____	$622
Farm debt pymts. as % milk sales	_____ %	33%
Farm debt/asset ratio-long term	_____	0.57
Farm debt/asset ratio-intermediate & short term	_____	0.30
Farm debt per cow	$_____	$3,192
Percent equity (total)	_____ %	57%

*Estimated as $10,200 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
Central Plain Region Dairy Farms, 1982 & 1981

Item	My Farm	22 Farms 1982	21 Farms 1981
Number of cows	_____	92	89
Number of heifers	_____	76	70
Pounds of milk sold	_____	1,348,100	1,300,400
Worker equivalent	_____	3.33	3.25
Total work units	_____	1,102	1,066
Total tillable acres	_____	371	383

In the table below, the 553 New York farms for 1981 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
553 New York Dairy Farms, 1981

Number of Cows	Ave. Number of Cows	Number of Farms	Percent of Farms	Labor & Mgmt. Income Per Operator
Under 40	34	82	16	-$ 4,300
40 to 54	47	130	25	- 6,077
55 to 69	61	110	21	- 1,204
70 to 84	77	74	13	- 5,284
85 to 99	90	38	6	- 3,648
100 to 114	106	26	4	- 5,677
115 to 129	121	25	4	- 15,635
130 to 149	139	16	3	- 11,780
150 to 179	163	23	4	- 4,577
180 to 199	187	8	2	3,497
200 & over	267	21	2	11,178

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
22 Central Plain Region Dairy Farms, 1982

Crop	My Farm Acres	My Farm Yield	Average of Farms Reporting Farms	Acres	Yield/Acre
Dry hay			19	(combined below)	
Hay crop silage			18	(combined below)	
Total hay crops			22	121	2.9 tons D.M.
Corn silage			21	76	15.2 tons
Other forage			3	46	1.5 tons D.M.
Total forage crops			22	199	3.7 tons D.M.
Grain corn			19	114	97.0 bushels
Oats			13	36	87.5 bushels
Wheat			7	49	45.6 bushels
Other crops			5	50	
Tillable pasture			6	29	
Idle tillable land			9	33	
Milk sold per cow				14,653 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
553 New York Dairy Farms, 1981

Pounds of Milk Sold Per Cow	Number of Farms	Number of Cows	Labor & Mgmt. Income/Oper.	Labor, Mgmt., & Ownership Income/Operator
Under 11,000	50	50	-$ 8,642	$ 5,165
11,000 to 11,999	30	67	- 5,687	13,593
12,000 to 12,999	48	76	- 17,052	9,159
13,000 to 13,999	96	78	- 5,925	20,818
14,000 to 14,999	117	83	- 6,178	26,893
15,000 to 15,999	109	89	302	32,468
16,000 to 16,999	52	82	2,142	30,451
17,000 to 17,999	28	78	1,716	27,606
18,000 & over	23	89	1,861	45,290

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, 1982 & 1981

Item	My Farm	22 Farms 1982	21 Farms 1981
Worker equivalent	_____	3.33	3.25
Cows per worker	_____	28	27
Lbs. milk sold per worker	_____	404,835	400,123
Work units per worker	_____	331	328

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
553 New York Dairy Farms, 1981

Pounds of Milk Sold Per Worker	No. of Farms	No. of Cows	Lbs. Milk Per Cow	Labor & Mgmt. Income Per Operator	Labor, Mgmt., & Ownership Income Per Operator
Under 250,000	68	44	11,609	-$9,348	$ 5,325
250,000 to 299,999	58	53	13,185	- 7,361	12,436
300,000 to 349,999	77	62	14,060	- 6,337	19,102
350,000 to 399,999	91	67	14,178	- 3,738	19,365
400,000 to 449,000	81	77	14,849	- 1,350	24,137
450,000 to 499,999	60	93	14,799	- 5,635	30,006
500,000 to 599,999	79	108	15,500	1,741	39,315
600,000 & over	39	158	15,461	- 3,751	54,391

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, 1982 & 1981

Item	My Farm	22 Farms 1982	21 Farms 1981
Farm capital per worker	$_____	$194,599	$193,219
Farm capital per cow	$_____	6,750	6,901
Machinery investment per cow	$_____	1,182	1,279
Machinery per tillable acre	$_____	306	304
Land & buildings per cow	$_____	3,567	3,563
Land & buildings/tillable acre owned	$_____	1,381	1,318
Capital turnover	_____yrs.	2.6 yrs.	2.7 yrs.

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
553 New York Dairy Farms, 1981

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	9	111	$3,369	$104,662	$ 22,725
1.5 to 1.99	87	114	4,565	151,288	8,817
2.0 to 2.49	183	82	5,406	167,094	-2,990
2.5 to 2.99	143	67	6,262	172,843	-6,860
3.0 to 3.49	73	69	7,014	190,300	-11,341
3.5 & over	58	52	7,344	182,757	-18,611

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, 1982 & 1981

Item	My Farm	22 Farms 1982	21 Farms 1981
Dairy concentrate purchased per cow	$_____	$412	$374
Dairy concentrate purchased per cwt. of milk sold	$_____	$2.81	$2.56
Percent dairy concentrate is of milk receipts	_____ %	21%	19%
Crop expense per cow	$_____	$240	$272
Feed & crop expense/cwt. milk	$_____	$4.72	$4.42
Forage dry matter harv./cow (tons)	_____	8.0	6.7
Acres of forage per cow	_____	2.2	2.0
Total tillable acres per cow	_____	4.0	4.3
Fertilizer and lime/tillable acre	$_____	$33	$36
Heifers as % of cow numbers	_____ %	83%	79%

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, 1982 & 1981

Item		My Farm	22 Farms 1982	21 Farms 1981
Machinery:	Depreciation[1]	$_____	$18,169	$18,157
	Interest[2]	_____	5,689	5,512
	Operating expense[3]	_____	25,050	23,441
Total machinery		$_____	$48,908	$47,110
	Per cow	_____	$532	$529
Labor:	Value of operators[4]	$_____	$12,000	$11,571
	Unpaid family[5]	_____	727	714
	Hired	_____	29,072	27,399
Total labor		$_____	$41,799	$39,684
	Per cow	_____	$454	$446
	Per cwt. milk	_____	$3.10	$3.05
Labor & machinery costs per cow		_____	$986	$975
Labor & machinery costs/cwt. milk		$_____	$6.73	$6.67

[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, 1982 & 1981

Item	My Farm	22 Farms 1982	21 Farms 1981
Livestock expense per cow	$_____	$218	$196
Real estate expense per cow	$_____	$153	$160
Total farm expense per cow	$_____	$2,549	$2,723

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 22 Central Plain Region farms.

Item	Average Per Cow	My Farm, Per Cow	My Farm, Total	Cows Goal
CASH RECEIPTS				
Milk sales	$1,961	$	$	$
Crop sales	273			
Dairy cattle	124			
Calves & other livestock	56			
Other	79			
Total Cash Receipts	$2,493	$	$	$
CASH EXPENSES				
Hired labor	$ 316	$	$	$
Dairy concentrate	412			
Hay and other	38			
Machine hire	21			
Machine repair & auto expense	141			
Gas & oil	110			
Replacement livestock	11			
Breeding fees	25			
Vet & medicine	41			
Milk marketing (ADA, Dues)	60			
Other livestock exp. (incl. $.21 lease)	93			
Fertilizer & lime	133			
Seeds & plants	51			
Spray & other	56			
Land, bldg. fence repair	27			
Taxes	55			
Insurance	33			
Rent	38			
Telephone & elec. (farm share)	53			
Miscellaneous	36			
Total Cash Expenses[1]	$1,750	$	$	$
Total Cash Receipts	$2,493			
Total Cash Expenses[1]	-1,750	-	-	-
Net Cash Flow	$ 743	$	$	$
Cash Family Living Expense[2]	- 256	-	-	-
Amount Left for Debt Service, Capital Investment & Retained Earnings	$ 487	$	$	$
Scheduled Debt Service	- 622	-	-	-
Available for Capital Investment	$ (135)	$	$	$
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: $10,200 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	1980	1981	1982	1983 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 553 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
553 New York Dairy Farms, 1981

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	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
5.8	204	3,081,100	18,100	4.6	21	45	662,000
3.9	121	1,795,500	16,400	3.6	19	36	538,000
3.3	91	1,364,500	15,700	3.1	17	33	482,000
3.0	77	1,111,800	15,200	2.8	16	30	442,000
2.6	67	960,800	14,600	2.6	15	28	408,000
2.3	58	850,000	14,200	2.3	15	26	377,000
2.0	52	747,000	13,700	2.1	13	24	346,000
1.9	47	641,000	13,100	1.9	12	22	310,000
1.6	40	530,000	12,100	1.7	11	20	267,000
1.3	32	381,000	9,800	1.2	7	16	194,000

Feed Bought Per Cow	% Feed is of Milk Receipts	Machinery Cost Per Cow	Labor & Machinery Cost Per Cow	Feed and Crop Expense Per Cwt. Milk
$197	11%	$251	$ 520	$2.66
313	17	334	632	3.54
387	20	373	688	3.94
440	23	408	739	4.24
485	25	437	775	4.50
533	28	469	815	4.79
583	30	513	859	5.06
635	33	552	924	5.35
699	35	611	1,002	5.75
834	40	762	1,199	6.59

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
553 New York Dairy Farms, 1981

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
$ 36	$859	11.81	02	$ 109
191	680	2.56	10	736
279	594	1.60	14	1,167
352	526	1.21	19	1,572
416	458	.98	23	1,989
447	388	.82	26	2,344
542	327	.66	30	2,724
627	273	.53	35	3,190
757	185	.36	42	3,763
1,039	- 34	- .10	59	4,876

Solvency				Profitability	
		Debt/Asset Ratio		Percentage Rate of Return on	
Leverage Ratio[3]	Percent Equity	Current & Intermediate[4]	Long Term[5]	Equity[6]	Investment[7]
.02	98	.00	.00	35	22
.14	88	.04	.07	21	16
.26	79	.09	.18	17	14
.38	72	.16	.33	14	12
.54	65	.22	.43	12	11
.70	59	.29	.51	09	09
.87	53	.35	.60	07	08
1.10	47	.43	.70	04	06
1.57	39	.53	.83	01	04
3.67	24	.78	1.15	-14	-03

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

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

FARM BUSINESS SUMMARY BY HERD SIZE
553 New York Dairy Farms, 1981

Item	Farms with: Less than 40 cows	40 to 54 cows	55 to 69 cows	70 to 84 cows
Capital Investment (end of year)				
Livestock	$ 52,371	$ 75,220	$ 95,724	$118,244
Feed & supplies	9,261	16,472	24,160	32,895
Machinery & equipment	42,623	59,911	76,336	90,171
Land & buildings	114,121	151,096	170,733	226,394
TOTAL INVESTMENT	$218,376	$302,799	$366,953	$467,704
Receipts				
Milk sales	$ 62,378	$ 88,345	$121,644	$151,338
Dairy cattle sold	4,310	6,317	7,904	10,766
Other livestock sales	1,413	1,735	1,970	1,958
Crop sales	340	738	1,105	1,451
Miscellaneous receipts	791	1,312	2,248	2,041
Total Cash Receipts	$ 69,232	$ 98,447	$134,871	$167,554
Increase in livestock	2,226	2,540	4,226	4,527
Increase in feed & supplies	(35)	155	1,079	33
Appreciation	1,240	5,927	7,093	7,477
TOTAL FARM RECEIPTS	$ 72,663	$107,069	$147,309	$179,591
TOTAL FARM REC. EXCL. APPREC.	$ 71,423	$101,142	$140,216	$172,114
Expenses				
Hired labor	$ 2,262	$ 4,242	$ 7,009	$ 11,709
Dairy feed	18,560	24,419	30,201	37,227
Other feed	742	647	774	1,009
Machine hire	468	827	1,359	1,310
Machinery repair	2,459	4,013	5,913	8,180
Auto expense (farm share)	442	355	478	432
Gas & oil	2,660	4,045	5,453	6,706
Replacement animals	1,397	1,793	2,859	1,722
Breeding fees	918	1,108	1,740	1,919
Veterinary & medicine	1,194	1,797	2,421	2,821
Milk marketing	1,753	2,628	3,329	4,858
Other livestock expense	2,167	3,242	4,780	5,356
Fertilizer & lime	2,273	3,916	6,286	8,475
Seeds & plants	721	1,330	2,023	2,449
Spray & other crop expense	550	1,000	1,607	2,079
Land, bldg., fence repair	964	1,425	1,996	2,576
Taxes & insurance	3,005	4,165	4,847	7,004
Electricity & phone (farm share)	2,171	2,367	2,946	3,874
Interest paid	6,728	9,740	12,460	15,991
Miscellaneous expenses	1,465	3,096	3,728	4,920
Total Cash Expenses	$ 52,899	$ 76,160	$102,209	$130,617
Expansion livestock	891	713	1,723	1,234
Machinery depreciation	5,965	8,147	10,268	12,494
Building depreciation	1,534	2,861	4,048	5,375
Unpaid family labor	1,610	2,115	2,073	1,264
Interest on equity @ 9%	13,125	18,195	21,364	27,841
TOTAL FARM EXPENSES	$ 76,024	$108,191	$141,685	$178,825
Financial Summary				
NET CASH FARM INCOME	$ 16,333	$ 22,287	$ 32,662	$ 36,937
LABOR & MGT. INCOME/OPER.	$ -4,300	$ -6,077	$ -1,204	$ -5,284
LABOR, MGT. & OWNSHP. INC./OPER.	$ 9,125	$ 14,718	$ 22,121	$ 22,525

FARM BUSINESS SUMMARY BY HERD SIZE
553 New York Dairy Farms, 1981

Item	Farms with: 85 to 99 cows	100 to 114 cows	115 to 129 cows	130 to 149 cows	150 or more cows
Capital Investment (end of year)					
Livestock	$146,783	$165,777	$170,424	$215,066	$ 312,810
Feed & supplies	38,786	41,971	55,663	66,107	98,764
Machinery & equipment	105,131	112,620	121,925	150,640	183,404
Land & buildings	257,713	269,882	302,713	341,352	504,471
TOTAL INVESTMENT	$548,413	$590,250	$650,725	$773,565	$1,099,449
Receipts					
Milk sales	$182,249	$217,517	$232,247	$284,274	$426,469
Dairy cattle sold	14,671	14,782	14,947	18,841	31,336
Other livestock sales	3,944	5,842	4,900	3,864	6,455
Crop sales	2,858	3,640	3,612	3,319	5,938
Miscellaneous receipts	3,262	2,897	5,757	4,253	6,259
Total Cash Receipts	$206,984	$244,678	$261,463	$314,551	$476,457
Increase in livestock	3,455	3,600	7,395	(4,378)	20,746
Increase in feed & supplies	2,936	(2,978)	(1,166)	(450)	11,319
Appreciation	11,775	8,938	13,937	22,536	20,869
TOTAL FARM RECEIPTS	$225,150	$254,238	$281,629	$332,259	$529,391
TOT. FARM REC. EXCL. APPREC.	$213,375	$245,300	$267,692	$337,087	$508,522
Expenses					
Hired labor	$ 15,450	$ 18,923	$ 29,576	$ 34,543	$ 53,791
Dairy feed	46,227	57,012	60,101	74,456	105,499
Other feed	1,155	2,820	2,410	1,207	3,079
Machine hire	1,324	1,690	1,649	1,710	4,031
Machinery repair	9,950	9,545	13,826	16,272	21,866
Auto expense (farm share)	715	371	472	339	482
Gas & oil	9,187	10,169	12,324	12,216	18,436
Replacement animals	1,455	7,070	3,599	1,931	5,739
Breeding fees	2,406	3,006	2,882	3,323	5,592
Veterinary & medicine	3,576	4,223	4,965	5,563	10,124
Milk marketing	5,024	6,339	8,431	7,124	12,178
Other livestock expense	6,777	6,293	8,996	7,977	14,833
Fertilizer & lime	11,110	11,761	13,292	15,077	23,925
Seeds & plants	3,384	3,163	4,370	6,633	7,407
Spray & other crop expense	2,639	4,030	4,534	6,450	7,053
Land, bldg., fence repair	3,136	2,714	3,790	4,007	6,515
Taxes & insurance	8,248	8,630	10,222	9,794	15,986
Elec. & phone (farm share)	4,604	4,553	5,528	5,426	8,048
Interest paid	17,768	23,224	25,594	30,506	43,001
Miscellaneous expenses	5,553	9,472	6,595	5,178	14,860
Total Cash Expenses	$159,688	$195,008	$223,157	$249,732	$382,445
Expansion livestock	2,232	1,056	1,673	1,666	10,357
Machinery depreciation	14,583	15,239	17,254	19,083	31,290
Building depreciation	6,779	6,442	9,105	10,893	14,892
Unpaid family labor	1,934	962	660	313	760
Interest on equity @ 9%	33,521	34,788	34,761	44,763	65,653
TOTAL FARM EXPENSES	$218,737	$253,475	$286,610	$326,450	$505,397
Financial Summary					
NET CASH FARM INCOME	$ 47,296	$ 49,670	$ 38,306	$ 64,819	$ 94,012
LABOR & MGT. INCOME/OPER.					
LABOR, MGT. & OWNSHP. INC./OP.	$ 27,166	$ 24,688	$ 24,612	$ 35,614	$ 58,212

SELECTED BUSINESS FACTORS BY HERD SIZE
553 New York Dairy Farms, 1981

Item	Farms with: Less than 40 cows	40 to 54 cows	55 to 69 cows	70 to 84 cows
Number of farms	82	130	110	74
Size of Business				
Number of cows	34	47	61	77
Number of heifers	26	35	43	59
Pounds of milk sold	459,600	654,500	890,800	1,107,800
Worker equivalent	1.58	2.08	2.33	2.75
Total work units	375	528	669	858
Total tillable acres	121	177	206	264
(Tillable acres rented)	(31)	(46)	(66)	(86)
Rates of Production				
Milk sold per cow	13,518	13,926	14,603	14,387
Tons hay crop per acre	1.8	2.2	2.5	2.7
Tons corn silage per acre	13.2	13.6	14.3	14.1
Bushels of oats per acre	33.8	51.9	48.5	48.9
Labor Efficiency				
Cows per worker	22	23	26	28
Pounds milk sold per worker	290,886	314,663	382,318	402,836
Work units per worker	237	254	287	312
Feed Costs				
Feed purchased per cow	$546	$520	$495	$483
Crop expense per cow	$104	$133	$163	$169
Feed cost per cwt. milk	$4.04	$3.73	$3.39	$3.36
Feed & crop exp. per cwt. milk	$4.81	$4.69	$4.50	$4.53
% feed is of milk receipts	30%	28%	25%	25%
Hay equivalent per cow	6.7	7.9	7.7	8.0
Tillable acres per cow	3.6	3.8	3.4	3.4
Fertilizer & lime per crop acre	$19	$22	$31	$32
Machinery & Labor Costs				
Total machinery costs	$15,686	$22,504	$29,974	$36,870
Machinery cost per cow	$461	$479	$491	$479
Machinery cost per cwt. milk	$3.41	$3.44	$3.36	$3.33
Labor cost per cow	$397	$357	$328	$317
Labor cost per cwt. milk	$2.94	$2.56	$2.25	$2.20
Capital Efficiency				
Investment per worker	$138,213	$145,576	$157,491	$170,074
Investment per cow	$6,066	$6,443	$5,825	$5,920
Investment per cwt. milk	$48	$46	$41	$42
Land & buildings per cow	$3,170	$3,084	$2,710	$2,866
Machinery investment per cow	$1,254	$1,223	$1,212	$1,141
Capital turnover	3.0	2.8	2.5	2.6
Other				
Price per cwt. milk sold	$13.57	$13.50	$13.66	$13.66
Acres hay crops	80	107	108	137
Acres corn silage	17	28	40	51

SELECTED BUSINESS FACTORS BY HERD SIZE
553 New York Dairy Farms, 1981

Item	Farms with: 85 to 99 cows	100 to 114 cows	115 to 129 cows	130 to 149 cows	150 or more cows
Number of farms	38	26	25	16	52
Size of Business					
Number of cows	90	106	121	139	208
Number of heifers	70	78	94	105	158
Pounds of milk sold	1,313,900	1,580,200	1,688,400	2,106,600	3,113,000
Worker equivalent	3.25	3.42	3.92	4.17	5.58
Total work units	1,013	1,150	1,358	1,524	2,256
Total tillable acres	309	312	384	440	585
(Tillable acres rented)	(85)	(125)	(147)	(146)	(210)
Rates of Production					
Milk sold per cow	14,599	14,908	13,954	15,155	14,966
Tons hay crop per acre	2.7	2.7	2.7	2.9	2.9
Tons corn silage per acre	15.3	15.0	14.9	16.1	16.1
Bushels of oats per acre	52.1	69.0	50.1	62.1	58.7
Labor Efficiency					
Cows per worker	28	31	31	33	37
Pounds milk sold per worker	404,277	462,047	430,714	505,180	557,885
Work units per worker	312	336	346	365	404
Feed Costs					
Feed purchased per cow	$514	$538	$497	$536	$507
Crop expense per cow	$190	$179	$183	$203	$185
Feed cost per cwt. milk	$3.52	$3.61	$3.56	$3.53	$3.39
Feed & crop exp. per cwt. milk	$4.82	$4.81	$4.87	$4.87	$4.62
% feed is of milk receipts	25%	26%	26%	26%	25%
Tons forage dry matter per cow	8.4	7.5	8.3	7.9	7.8
Tillable acres per cow	3.4	2.9	3.2	3.2	2.8
Fertilizer & lime per crop acre	$36	$38	$35	$34	$41
Machinery & Labor Costs					
Total machinery costs	$44,644	$46,714	$55,791	$62,594	$91,622
Machinery cost per cow	$496	$441	$461	$450	$440
Machinery cost per cwt. milk	$3.40	$2.96	$3.30	$2.97	$2.94
Labor cost per cow	$340	$310	$340	$343	$329
Labor cost per cwt. milk	$2.33	$2.08	$2.44	$2.26	$2.20
Capital Efficiency					
Investment per worker	$168,742	$172,588	$166,001	$185,507	$197,034
Investment per cow	$5,961	$5,366	$5,164	$5,298	$5,211
Investment per cwt. milk	$42	$35	$39	$37	$35
Land & buildings per cow	$2,801	$2,453	$2,402	$2,341	$2,391
Machinery investment per cow	$1,143	$1,024	$968	$1,032	$869
Capital turnover	2.4	2.3	2.3	2.3	2.1
Other					
Price per cwt. milk sold	$13.87	$13.77	$13.76	$13.49	$13.70
Acres hay crops	157	153	173	195	248
Acres corn silage	58	69	103	97	164

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
553 New York Dairy Farms, January 1, 1982

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	82	130	110	74	38
Assets					
Livestock	$ 52,371	$ 75,220	$ 95,724	$118,244	$146,783
Feed & supplies	9,261	16,572	24,160	32,895	38,786
Machinery & equipment	42,623	59,911	76,336	90,171	105,131
Land & buildings	114,121	151,096	170,733	226,394	257,713
Co-op investment	1,321	3,838	3,375	6,380	5,264
Accounts receivable	4,876	6,810	11,045	12,316	15,753
Cash & checking accounts	1,164	2,046	2,220	3,132	2,890
Total Farm Assets	$225,737	$315,493	$383,593	$489,532	$572,320
Savings accounts	3,255	2,374	2,578	4,223	3,567
Cash value life insurance	1,894	2,306	2,464	2,326	2,243
Stocks & bonds	1,440	1,377	1,755	3,655	1,121
Nonfarm real state	2,177	2,444	8,011	3,670	5,592
Auto (personal share)	1,221	1,282	1,641	1,654	2,157
All other	6,178	5,068	4,604	5,745	7,290
Total Nonfarm Assets	$ 16,165	$ 14,851	$ 21,053	$ 21,273	$ 21,970
TOTAL ASSETS	$241,902	$330,344	$404,646	$510,805	$594,290
Liabilities					
Real estate mortgage	$ 45,107	$ 60,018	$ 80,703	$105,055	$113,429
Liens on cattle & equipment	23,393	32,022	47,212	49,371	64,972
Installment contracts	2,432	3,779	5,395	8,459	4,979
Other loans over 10 years	2,518	10,297	2,425	4,160	2,605
Other loans 1 to 10 years	2,158	2,366	4,477	6,319	6,611
Other loans less than 1 year	1,680	1,423	2,228	1,464	2,074
Feed store & other accounts	2,614	3,423	3,776	5,358	5,190
Total Farm Liabilities	$ 79,902	$113,328	$146,219	$180,186	$199,860
Total Nonfarm Liabilities	676	365	390	264	1,342
TOTAL LIABILITIES	$ 80,578	$113,693	$146,219	$180,450	$201,202
Farm Net Worth (Eq. Cap.)	$145,835	$202,165	$237,374	$309,346	$372,460
FAMILY NET WORTH	$161,324	$216,651	$258,037	$330,355	$393,088
Financial Measures					
Percent equity	67%	66%	64%	65%	66%
Farm debt per cow	$2,220	$2,313	$2,321	$2,281	$2,172
Available for debt service & living	$24,730	$33,275	$46,030	$54,038	$65,197
Scheduled annual debt payment	$16,167	$23,951	$31,547	$37,419	$40,826
Scheduled debt payments/cow	$434	$479	$496	$472	$434
Payment as % of milk check	25%	27%	26%	25%	22%
Debt/Asset ratio - long term	0.42	0.47	0.49	0.48	0.45
Debt/Asset ratio - intermediate	0.28	0.25	0.29	0.26	0.25
Cash flow coverage ratio	0.72	0.76	0.92	0.94	1.05

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
553 New York Dairy Farms, January 1, 1982

Item	Farms with: 100 to 114 cows	115 to 129 cows	130 to 149 cows	150 or more cows
Number of farms	26	25	16	52
Assets				
Livestock	$165,777	$170,424	$215,066	$ 312,810
Feed & supplies	41,971	55,663	66,107	98,764
Machinery & equipment	112,620	121,925	150,640	183,404
Land & buildings	269,882	302,713	341,752	504,471
Co-op investment	7,353	10,893	12,207	17,021
Accounts receivable	19,073	19,110	25,115	37,577
Cash & checking accounts	2,190	1,833	2,474	3,803
Total Farm Assets	$618,866	$682,561	$813,361	$1,157,850
Savings accounts	6,020	5,710	7,242	2,550
Cash value life insurance	3,117	6,255	6,592	4,923
Stocks & bonds	4,241	6,827	3,388	6,634
Nonfarm real state	2,692	9,866	19,813	8,184
Auto (personal share)	656	1,638	2,181	1,987
All other	3,439	7,350	8,000	5,709
Total Nonfarm Assets	$ 20,165	$ 37,546	$ 47,216	$ 29,987
TOTAL ASSETS	$639,031	$720,107	$860,577	$1,187,837
Liabilities				
Real estate mortgage	$119,203	$169,160	$159,605	$200,187
Liens on cattle & equipment	77,937	92,350	80,407	161,000
Installment contracts	20,229	15,710	15,709	8,454
Other loans over 10 years	642	4,635	34,847	26,495
Other loans 1 to 10 years	5,429	5,268	11,044	7,683
Other loans less than 1 year	4,212	3,610	3,241	15,727
Feed store & other accounts	4,682	7,591	11,145	8,827
Total Farm Liabilities	$232,334	$296,324	$315,998	$428,373
Total Nonfarm Liabilities	44	42	5,438	3,445
TOTAL LIABILITIES	$232,378	$296,366	$321,436	$431,818
Farm Net Worth (Equity Cap.)	$386,532	$386,237	$497,363	$729,477
FAMILY NET WORTH	$406,653	$423,741	$539,141	$756,019
Financial Measures				
Percent equity	64%	59%	63%	64%
Farm debt per cow	$2,112	$2,352	$2,164	$2,030
Available for debt service & living	$73,017	$65,960	$96,750	$139,223
Scheduled annual debt payment	$54,285	$61,515	$65,379	$98,993
Scheduled debt payments/cow	$493	$488	$445	$466
Payment as % of milk check	25%	26%	23%	23%
Debt/Asset ratio - long term	0.44	0.57	0.57	0.45
Debt/Asset ratio - intermediate	0.31	0.31	0.25	0.30
Cash flow coverage ratio	0.91	0.71	1.08	1.06

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?