DAIRY FARM BUSINESS SUMMARY

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NORTHERN NEW YORK
1987

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NORTHERN NEW YORK REGION

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INTRODUCTION

Dairy farmers throughout the State have been participating in Cornell Cooperative Extension's farm business summary and analysis program since the early 1950's. Each participating farmer receives a complete business and production summary and analysis of his or her farm business. The information in this report represents an average of the complete and accurate data submitted from farms in the region described at the bottom of this page.

Program Objective

The primary objective of the dairy farm business summary, DFBS, is to help farmers improve their management skills through appropriate use of historical farm data and the application of modern farm business management decision-making techniques. In short, DFBS identifies the business and financial information farmers need and demonstrates how it should be used in identifying and evaluating the strengths and weaknesses of the farm business.

Format Features

This regional report follows the same general format as in the 1987 DFBS printout received by all participating dairy farmers. Worksheets have been included to give non-DFBS participants an opportunity to summarize their businesses. The analysis tables include an open column or section labeled My Farm. It may be used by any dairy farmer who wants to compare his or her business with the average data of this region.

This report features:

(1) an income statement including accrual accounting for farm business expenses and receipts, as well as measures of profitability with and without appreciation,
(2) a complete balance sheet including financial ratios,
(3) a cash flow summary including debt repayment ability,
(4) a cropping program analysis,
(5) a dairy program analysis, and
(6) capital and labor efficiency analysis.

Micro DFBS, a computer program which enables Cooperative Extension agents and specialists to calculate and print individual farm business reports in their offices, is now being used by the dairy farm management field staff for more than 70 percent of the farms cooperating. This innovative approach provides faster processing of farm record data and increased use of the DFBS in farm management programs.

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*Northern New York, with the number of participating farms in parentheses, is comprised of Essex (8), Franklin (20), Jefferson (15), Lewis (20), and St. Lawrence (7) Counties.

This report was written by Stuart F. Smith, Senior Extension Associate, Farm Management. Linda Putnam was in charge of data preparation. Cindy Farrell and Beverly Carcelli prepared the publication. Farm Business data was collected by Cooperative Extension agents Anita Deming, Russell Coombe, Bill Gallamore, Pat Beyer, and George Field.

SUMMARY AND ANALYSIS OF THE FARM BUSINESS

Business Characteristics

Finding the right management strategies is an important part of operating a successful farm. Various combinations of farm resources, enterprises, business arrangements, and management techniques are used by the dairy farmers in this region. The following table shows important farm business characteristics and the number of farmers reporting these characteristics.

BUSINESS CHARACTERISTICS
70 Northern New York Dairy Farms, 1987

Type of Farm	Number
Dairy	69
Part-time dairy	0
Dairy cash-crop	1
Part-time cash-crop dairy	0

Type of Business	Number
Single proprietorship	57
Partnership	12
Corporation	1

Type of Ownership	Number
Owner	67
Renter	3

Type of Barn	Number
Stanchion/Tie-Stall	43
Freestall	21
Combination	6

Milking System	Number
Bucket & carry	1
Dumping station	10
Pipeline	37
Herringbone parlor	20
Other parlor	2

Business Record System	Number
ELFAC	0
Account Book	50
Agrifax (mail-in only)	5
On-Farm Computer	11
Other	4

Production Records	Number
DHIC	43
Owner-Sampler	15
Other	7
None	5

The averages used in this report were compiled using data from all the participating dairy farms in this region unless noted otherwise. There may be regular dairy farms, part-time farms, dairy cash-crop farms, farm renters, partnerships, and corporations included in the average. Dairy Termination Program participants that sold their cows in 1987 are not included in the report. These specific classifications are used to separate farms in the State Business Summary.

A part-time farm has less than six months of labor from all operators and total labor is less than 12 months.

A dairy cash-crop farm has accrual receipts from crop sales that exceed 10 percent of accrual milk sales. These farms were summarized using 1986 data in Knoblauch, Wayne A. and Linda D. Putnam, Dairy Farm Business Summary, New York Dairy-Cash Crop Summary, 1986, Cornell University, Department of Agricultural Economics, A.E. Ext. 87-20, August 1987.

A farm renter does not own farm real estate at the end of the year or does not own tillable land. These farms were summarized using 1986 data in Putnam, Linda D. and Stuart F. Smith, Dairy Farm Business Summary, Eastern New York Renter Summary, 1986, Cornell University, Department of Agricultural Economics, A.E. Ext. 87-19, August 1987.

Income Statement

The accrual income statement begins with an accounting of all farm business expenses.

CASH AND ACCRUAL FARM EXPENSES
70 Northern New York Dairy Farms, 1987

Expense Item	Cash Paid +	Change in Inventory or Prepaid Expense* +	Change in Accounts Payable	= Accrual Expenses
Hired Labor	$ 14,668	$ -17	$ -17	$ 14,634
Feed				
Dairy grain & conc.	43,598	282	-388	43,492
Dairy roughage	1,187	-51	7	1,143
Other livestock	1,268	23	0	1,291
Machinery				
Mach. hire, rent/lease	1,022	0	0	1,022
Machinery repairs/parts	8,696	45	214	8,955
Auto exp. (farm share)	540	0	0	540
Fuel, oil & grease	3,850	396	-14	4,232
Livestock				
Replacement livestock	1,103	0	0	1,103
Breeding	2,576	-60	-39	2,477
Vet & medicine	3,371	12	-45	3,338
Milk marketing	7,193	0	1	7,194
Cattle lease/rent	168	0	0	168
Other livestock expense	7,330	16	-31	7,315
Crops				
Fertilizer & lime	5,378	-23	-15	5,340
Seeds & plants	2,041	30	1	2,072
Spray, other crop exp.	1,979	4	0	1,983
Real Estate				
Land/bldg./fence repair	2,373	-8	-29	2,336
Taxes	4,969	0	-299	4,670
Insurance	3,284	0	10	3,294
Rent & lease	2,714	0	-4	2,710
Other				
Telephone (farm share)	603	0	2	605
Electricity (farm share)	4,649	0	0	4,649
Interest paid	13,632	0	0	13,632
Miscellaneous	2,248	9	-35	2,222
Total Operating	$140,440	$ 658	$ -681	$140,417
Expansion livestock	300	0	0	300
Machinery depreciation				13,870
Building depreciation				5,190
TOTAL ACCRUAL EXPENSES				$159,777

Cash paid is the actual amount of money paid out during the year and does not necessarily represent the cost of goods and services actually used.

Change in inventory: An increase in inventory is subtracted in computing accrual expenses because it represents purchased inputs not actually used during the year. A decrease in inventory is added to expenses because it represents the cost of inputs purchased in a prior year and used this year.

Changes in prepaid expenses apply to non-inventory categories. Include any expenses that have been paid for in advance of their use, for example, 1988 rent paid in 1987. A positive change is the amount the prepayment account declined from beginning to end year, a negative change indicates an increase in the account.

Change in accounts payable: An increase in payables is added and a decrease is subtracted when calculating accrual expenses.

Accrual expenses are the costs of inputs actually used in this year's production.

Worksheets are provided to enable any dairy farmer to compute his or her accrual farm expenses and compare them with the averages on the previous page.

CASH AND ACCRUAL FARM EXPENSES WORKSHEET

Expense Item	Cash Paid +	Change in Inventory or Prepaid Expense +	Change in Accounts Payable =	Accrual Expenses
Hired Labor	$	$	$	$
Feed				
Dairy grain & conc.				
Dairy roughage				
Other livestock				
Machinery				
Mach. hire, rent/lease				
Machinery repairs/parts				
Auto exp. (farm share)				
Fuel, oil & grease				
Livestock				
Replacement livestock				
Breeding				
Vet & medicine				
Milk marketing				
Cattle lease/rent				
Other livestock expense				
Crops				
Fertilizer & lime				
Seeds & plants				
Spray, other crop exp.				
Real Estate				
Land/bldg./fence repair				
Taxes				
Insurance				
Rent & lease				
Other				
Telephone (farm share)				
Electricity (farm share)				
Interest paid				
Miscellaneous				
Total Operating	$	$	$	$
Expansion livestock				
Machinery depreciation				
Building depreciation				
TOTAL ACCRUAL EXPENSES				$

CASH AND ACCRUAL FARM RECEIPTS
70 Northern New York Dairy Farms, 1987

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	$162,567				$ 253		$162,820
Dairy cattle	11,684		$ 2,137		0		13,821
Dairy calves	2,661				0		2,661
Other livestock	285		159		0		444
Crops	845		2,336		0		3,181
Government receipts	3,656		0*		0		3,656
Custom machine work	246				0		246
Gas tax refund	207				1		208
Other	1,768				0		1,768
Less nonfarm noncash cap.**		(-)	156			(-)	156
Total Accrual Receipts	$183,918		$ 4,476		$ 254		$188,648

*Change in advanced government receipts.
**Gifts or inheritances of cattle or crops included in inventory.

Cash receipts include the gross value of milk checks received during the year plus all other payments received from the sale of farm products, services, and government programs. Nonfarm income is not included in calculating farm profitability.

Changes in inventory are calculated by subtracting beginning of year values from end of year values excluding appreciation. Increases in livestock inventory caused by herd growth and/or quality are added and decreases caused by herd reduction and for quality are subtracted. Changes in inventories of crops grown are also calculated. Changes in advanced government receipts are calculated by subtracting the end year balance from the beginning year balance (balances are listed with the current liabilities on the Balance Sheet).

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. The January milk check for this December's marketings compared with the previous January's check is included as a change in accounts receivable.

Accrual receipts represent the value of all farm commodities produced and services actually generated by the farmer during the year.

CASH AND ACCRUAL FARM RECEIPT WORKSHEET

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	$				$		$
Dairy cattle			$				
Dairy calves							
Other livestock							
Crops							
Government receipts							
Custom machine work							
Gas tax refund							
Other							
Less gifts of cattle & crops		(-)				(-)	
Total Accrual Receipts	$		$		$		$

Profitability Analysis

Farm owners/operators contribute labor, management, and capital to their businesses and the best combination of these resources maximizes income. Farm profitability can be measured as the return to all family resources or as the return to one or more individual resources such as labor and management.

Net farm income is the total combined return to the farm operators and other unpaid family members for their labor, management, and equity capital. It is the farm family's net annual return from working, managing, financing, and owning the farm business. This is not a measure of cash available from the year's business operation. Cash flow is evaluated later in this report.

Net farm income is computed both with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than FLB and PCA). Appreciation is a major factor contributing to changes in farm net worth and must be included for a complete profitability analysis.

NET FARM INCOME
70 Northern New York Dairy Farms, 1987

Item	Average	My Farm
Total accrual receipts	$188,648	$_____
Appreciation: Livestock	6,423	_____
Machinery	5,115	_____
Real Estate	2,544	_____
Other Stock/Certificates	-409	_____
Total Including Appreciation	$202,321	$_____
Total accrual expenses	-159,777	-_____
Net Farm Income (with appreciation)	$ 42,544	$_____
Net Farm Income (without appreciation)	$ 28,871	$_____

Return to operators' labor, management, and equity capital measures the total business profits for the farm operator(s). It is calculated by deducting a charge for unpaid family labor from net farm income. Operators' labor is not included in unpaid family labor. Return to operators' labor, management, and equity capital has been calculated both with and without appreciation. Appreciation is considered an important part of the return to ownership of farm assets.

RETURN TO OPERATORS' LABOR, MANAGEMENT, AND EQUITY
70 Northern New York Dairy Farms, 1987

	Average		My Farm	
Item	With Apprec.	Without Apprec.	With Apprec.	Without Apprec.
Net farm income	$ 42,544	$ 28,871	$_____	$_____
Family labor unpaid @ $650 per month	- 1,792	- 1,792	-_____	-_____
Return to operators' labor, management, & equity	$ 40,752	$ 27,079	$_____	$_____

Labor and management income is the return which farm operators receive for their labor and management used in operating the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and management income is calculated by deducting the opportunity cost of using equity capital at a real interest rate of five percent, from the return to operators' labor, management, and equity capital excluding appreciation. The interest charge of five percent reflects the long-term average rate of return that a farmer might expect to earn in comparable risk investments in a low inflation economy.

LABOR AND MANAGEMENT INCOME
70 Northern New York Dairy Farms, 1987

Item	Average	My Farm
Return to operators' labor, management, & equity without appreciation	$ 27,079	$_____
Real interest @ 5% on $248,791 average equity capital	- 12,440	-_____
Labor & Management Income	$ 14,639	$_____
Labor & Management Income per 1.27 Operator/Manager	$ 11,527	$_____

Return on equity capital measures the net return remaining for the farmer's equity or owned capital after a charge has been made for the owner-operator's labor and management. The earnings or amount of net farm income allocated to labor and management is the opportunity cost of operators' labor and management estimated by the cooperators. Return on equity capital is calculated with and without appreciation. The rate of return on equity capital is determined by dividing the amount returned by the average farm net worth or equity capital. Return on total capital is calculated by adding interest paid to the return on equity capital and then dividing by average farm assets to calculate the rate of return on total capital.

RETURN ON EQUITY CAPITAL AND RETURN ON TOTAL CAPITAL
70 Northern New York Dairy Farms, 1987

Item	Average	My Farm
Return to operators' labor, management, & equity capital with appreciation	$ 40,752	$_____
Value of operators' labor & management	- 23,831	-_____
Return on equity capital with appreciation	$ 16,921	$_____
Interest paid	$ 13,632	$_____
Return on total capital with appreciation	$ 30,553	$_____
Return on equity capital without appreciation	$ 3,248	$_____
Return on total capital without appreciation	$ 16,880	$_____
Rate of return on average equity capital:		
with appreciation	6.8%	_____%
without appreciation	1.3%	_____%
Rate of return on average total capital:		
with appreciation	7.3%	_____%
without appreciation	4.0%	_____%

Farm and Family Financial Status

The first step in evaluating the financial status of the farm is to construct a balance sheet which identifies all the assets and liabilities of the business. The second step is to evaluate the relationship between assets, liabilities, and net worth and changes that occurred during the year.

1987 FARM BUSINESS & NONFARM BALANCE SHEET
70 Northern New York Dairy Farms, January 1, 1988

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 3,984	$ 4,332	Accounts payable	$ 2,432	$ 1,813
Accounts rec.	13,532	13,786	Operating debt	1,389	1,357
Prepaid exp.	0	17	Short-term	1,525	1,406
Feed & supplies	26,885	28,545	Advanced govt. rec.	0	0
Total	$ 44,401	$ 46,680	Total	$ 5,346	$ 4,575
Intermediate					
Dairy cows:			Intermediate		
owned	$ 68,106	$ 73,763	Structured debt		
leased	10	161	1-10 years	$ 55,169	$ 52,245
Heifers	28,164	31,021	Financial lease		
Bulls/other lvstk.	909	1,114	(cattle/mach.)	491	815
Mach./eq. owned	80,322	84,443	FLB/PCA stock	2,835	2,889
Mach./eq. leased	481	654			
FLB/PCA stock	2,835	2,889	Total	$ 58,495	$ 55,950
Other stock/cert.	2,665	2,298			
Total	$183,492	$196,343	Long Term		
Long-Term			Structured debt		
Land/buildings:			≥10 yrs	$109,292	$107,420
owned	$182,140	$185,603	Financial lease		
leased	1,227	1,042	(structures)	1,227	1,042
Total	$183,367	$186,645	Total	$110,518	$108,462
Total Farm Assets	$411,260	$429,668	Total Farm Liab.	$174,359	$168,986
			FARM NET WORTH	$236,900	$260,682

(Average for 40 farms reporting) Nonfarm Assets*	Jan. 1	Dec. 31	Nonfarm Liabilities* & Net Worth	Jan. 1	Dec. 31
Personal cash, chkg. & savings	$ 4,603	$ 5,136	Nonfarm Liab.	$ 269	$ 477
Cash value life ins.	3,713	4,109	NONFARM NET WORTH	$ 26,799	$ 25,743
Nonfarm real estate	3,850	3,275			
Auto (personal sh.)	3,181	3,406	FARM & NONFARM*	Jan. 1	Dec. 31
Stocks & bonds	1,209	647	Total Assets	$438,328	$455,888
Household furn.	9,080	9,165	Total Liabilities	174,629	169,463
All other	1,433	483			
Total Nonfarm	$ 27,068	$ 26,220	TOTAL FARM & NON-FARM NET WORTH	$263,699	$286,425

*Assumes that average nonfarm assets and liabilities for the nonreporting farms were the same as for those reporting.

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 by signing the lease. The present value is also listed as an asset, representing the future value the item has to the business.

Advanced government receipts are included as current liabilities. Government payments received in 1987 that are for participation in the 1988 program are the end year balance and payments received in 1986 for participation in the 1987 program are the beginning year balance.

Date _____

1987 FARM BUSINESS & NONFARM BALANCE SHEET

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings			Accounts payable		
Accounts rec.			Operating debt:		
Prepaid expense					
Feed & supplies					
Total			Short Term:		
Intermediate					
Dairy cows:			Adv. govt. rec.		
owned			Total		
leased			Intermediate		
Heifers					
Bulls/other lvstk.					
Mach./eq. owned					
Mach./eq. leased					
FLB/PCA stock					
Other stock/cert.			Financial lease (cattle/mach.)		
Total			FLB/PCA stock		
			Total		
			Long-Term		
Long-Term					
Land/buildings:					
owned					
leased					
			Financial lease		
Total			(structures)		
			Total		
Total Farm Assets			Total Farm Liab.		
			FARM NET WORTH		

Nonfarm Assets	Jan. 1	Dec. 31	Nonfarm Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, chkg. & savings			Nonfarm Liab.:		
Cash val. life ins.					
Nonfarm real est.					
Auto (pres. share)					
Stocks & bonds			Total Nonfarm		
Household furn.			Liabilities		
All other			Nonfarm		
Total Nonfarm			Net Worth		

TOTAL FARM & NONFARM	Jan. 1	Dec. 31
Total Farm & Nonfarm Assets		
Less Total Farm & Nonfarm Liabilities		
Farm & Nonfarm Net Worth		

Balance sheet analysis requires an examination of financial and debt ratios measuring levels of debt. Percent equity is calculated by dividing end of year net worth by end of year assets. The debt to asset ratio is compiled by dividing liabilities by assets. Low debt to asset ratios reflect strength in solvency and the potential capacity to borrow. Debt levels per unit of production include some old standards that are still useful if used with measures of cash flow and repayment ability. The change in farm net worth without appreciation is an excellent indicator of financial progress.

BALANCE SHEET ANALYSIS
70 Northern New York Dairy Farms, January 1, 1988

Item	Average	My Farm
Financial Ratios - Farm:		
Percent equity	61%	_____ %
Debt/asset ratio: total	0.39	_____
long-term	0.58	_____
intermediate/current	0.25	_____
Change in Net Worth:		
Without appreciation	$ 10,108	$_____
With appreciation	23,781	$_____
Farm Debt Analysis:		
Accounts payable as % of total debt	1%	_____ %
Long-term liabilities as a % of total debt	64%	_____ %
Current & inter. liab. as a % of total debt	36%	_____ %

Farm Debt Levels:	Per Cow	Per Tillable Acre Owned	Per Cow	Per Tillable Acre Owned
Total farm debt	$ 2,012	$ 904	$_____	$_____
Long-term debt	1,291	580	_____	_____
Intermediate & current debt	721	324	_____	_____

Farm inventory balance is an accounting of the value of assets used on the balance sheet and the changes that occur from the beginning to end of year. Changes in the livestock inventory are included in the dairy analysis. Net investment indicates whether the capital stock is being expanded (positive) or depleted (negative).

FARM INVENTORY BALANCE
70 Northern New York Dairy Farms, 1987

Item	Avg. of Regional Farms		My Farm	
	R.E.	Mach./Eq.	R.E.	Mach./Eq.
Value beg. of year	$182,140	$ 80,322	$_____	$_____
Purchases	$ 8,108*	$ 13,139	$_____	$_____
Gift/inheritance	+ 71	+ 0	+_____	+_____
Lost capital	- 1,864	--	-_____	
Sales	- 214	- 262	-_____	-_____
Depreciation	- 5,190	- 13,870	-_____	-_____
Net investment	= 911	= -993	=+_____	=+_____
Appreciation	+ 2,551	+ 5,115	+_____	+_____
Value end of year	$185,603	$ 84,443	$_____	$_____

*$ 1,955 land and $ 6,153 buildings and/or depreciable improvements.

Cash Flow Summary and Analysis

Completing an annual cash flow statement is an important step in understanding the sources and uses of funds for the business. Understanding last year's cash flow is the first step toward planning and managing cash flow for the current and future years.

The annual cash flow statement is structured to compare all the cash inflows with all the cash outflows for the year. A complete list of cash inflows and cash outflows are identified in the following table. By definition, total cash inflows must equal total cash outflows when beginning and ending balances are included. Any imbalance is, therefore, the error from incorrect accounting of cash inflows and cash outflows.

ANNUAL CASH FLOW STATEMENT
70 Northern New York Dairy Farms, 1987

Item	Average	My Farm
Cash Inflows		
Beginning farm cash, checking & savings	$ 3,984	$
Cash farm receipts	183,918	
Sale of assets: Machinery	262	
Real estate	207	
Other stock & certificate	0	
Money borrowed (intermediate & long-term)	27,826	
Money borrowed (short-term)	1,447	
Increase in operating debt	0	
Nonfarm income	3,359	
Cash from nonfarm capital used in the business	1,034	
Money borrowed - nonfarm	219	
Total	$222,256	$
Cash Outflows		
Cash farm expenses	$140,441	$
Capital purchases: Expansion livestock	300	
Machinery	13,139	
Real estate	8,108	
Other stock & certificate	42	
Principal payments (intermediate & long-term)	32,622	
Principal payments (short-term)	1,567	
Decrease in operating debt	32	
Nonfarm debt payments	111	
Personal withdrawals & family expenditures	16,088	
Ending farm cash, checking & savings	4,332	
Total	$216,781	$
Imbalance (error)	$ 5,475	$

Repayment Analysis

The second step in cash flow analysis is to compare the debt payments planned for the last year with the amount actually paid. The measures listed below provide a number of different perspectives on the repayment performance of the business. However, the critical question to many farmers and lenders is whether planned payments can be made in 1988. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 1988 debt payments shown below.

FARM DEBT PAYMENTS PLANNED
Same 50 Northern New York Dairy Farms, 1986 & 1987

	Average			My Farm		
	1987 Payments		Planned	1987 Payments		Planned
Debt Payments	Planned	Made	1988	Planned	Made	1988
Long-term	$ 13,739	$ 19,979	$ 14,382	$_____	$_____	$_____
Intermediate-term	12,435	23,178	12,339	_____	_____	_____
Short-term	1,006	1,513	434	_____	_____	_____
Operating (net reduction)	1,182	0	1,067	_____	_____	_____
Accounts payable (net reduction)	530	1,321	780	_____	_____	_____
Total	$ 28,892	$ 45,991	$ 29,002	$_____	$_____	$_____
Per cow	$ 388	$ 618		$_____	$_____	
Per cwt. 1987 milk	$ 2.43	$ 3.86		$_____	$_____	
Percent of total 1987 receipts	17%	27%		_____	_____	
Percent of 1987 milk receipts	19%	31%		_____	_____	

The cash flow coverage ratio measures the ability of the farm business to meet its planned debt payment schedule. The ratio shows the percentage of planned payments that could have been made with last year's available cash flow. Farmers that did not participate in DFBS last year will find in their report a cash flow coverage ratio based on planned debt payments for 1988.

CASH FLOW COVERAGE RATIO
Same 50 Northern New York Dairy Farms, 1986 & 1987

Item	Average	My Farm
Cash farm receipts	$167,001	$_____
- Cash farm expenses	126,997	_____
+ Interest paid	12,754	_____
- Net personal withdrawals from farm*	11,425	_____
(A) = Amount Available for Debt Service	$ 41,333	$_____
(B) = Debt Payments Planned for 1987 (as of December 31, 1986)	$ 28,892	$_____
(A + B) = Cash Flow Coverage Ratio for 1987	1.43	_____

*Personal withdrawals and family expenditures less nonfarm income and nonfarm money borrowed. If family withdrawals are excluded the cash flow coverage ratio will be incorrect.

ANNUAL CASH FLOW WORKSHEET

Item	Regional Average (per cow)	My Farm Total	My Farm Per Cow	Expected Change	1988 Projection
Average number of cows	81				
Accrual Oper. Receipts					
Milk	$ 2,002	$	$		$
Dairy cattle	170				
Dairy calves	33				
Other livestock	5				
Crops	39				
Misc. receipts	72				
Total	$ 2,321	$	$		$
Accrual Oper. Expenses					
Hired labor	$ 180	$	$		$
Dairy grain & conc.	535				
Dairy roughage	14				
Other lvstk. feed	16				
Mach. hire/rent/lease	13				
Mach. rpr./parts & auto	117				
Fuel, oil & grease	52				
Replacement lvstk.	14				
Breeding	30				
Vet & medicine	41				
Milk marketing	88				
Cattle lease	2				
Other lvstk. exp.	90				
Fertilizer & lime	66				
Seeds & plants	25				
Spray/other crop exp.	24				
Land, bldg.,fence repair	29				
Taxes	57				
Insurance	41				
Real est. rent/lease	33				
Utilities	65				
Miscellaneous	27				
Total Less Int. Paid	$ 1,559				$
Net Accrual Operating Income (without interest paid)	(total) $ 62,019	$			$
- Change in lvstk./crop inv.	4,476				
- Change in accts. rec.	254				
+ Change in feed/supply inv.	658				
+ Change in accts. payable*	-681				
NET CASH FLOW	$ 57,267	$			$
- Net personal withdrawals & family expenditures	12,510				
Available for Farm Debt Payments & Investments	$ 44,757	$			$
- Farm debt payments	48,254				
Available for Farm Investment	$ -3,498	$			$
- Capital purchases: cattle, machinery & improvements	$ 21,589				
Additional Capital Needed		$			$

*Excludes change in interest account payable.

Cropping Program Analysis

The cropping program is an important part of the dairy farm business and sometimes it is overlooked and neglected. A complete evaluation of available land resources, how they are being used, how well crops are producing and what it costs to produce them, is required to evaluate alternative cropping and feed purchasing choices.

LAND RESOURCES AND CROP PRODUCTION
70 Northern New York Dairy Farms, 1987

Item	Average			My Farm		
Land	Owned	Rented	Total	Owned	Rented	Total
Tillable	187	60	247			
Nontillable	57	13	70			
Other nontillable	99	6	105			
Total	343	79	422			

Crop Yields	Farms	Acres	Prod/Acre	Acres	Prod/Acre
Hay crop	69	159	2.47 tn DM		tn DM
Corn silage	61	60	16.07 tn		tn
			5.47 tn DM		tn DM
Other forage	9	21	1.50 tn DM		tn DM
Total forage	69	214	3.20 tn DM		tn DM
Corn grain	20	36	97.19 bu		bu
Oats	8	28	50.12 bu		bu
Wheat	1	7	0.00 bu		bu
Other crops	8	12			
Tillable pasture	24	36			
Idle	19	30			
Total Tillable Acres	69	247			

Average crop acres and yields compiled for the region are for the number of farms reporting each crop. Yields of forage crops have been converted to tons of dry matter using dry matter coefficients reported by the farmers. Grain production has been converted to bushels of dry grain equivalent based on dry matter information provided.

The following measures of crop management measure how efficiently the land resource is being used and how well total forage requirements are being met.

CROP MANAGEMENT FACTORS
70 Northern New York Dairy Farms, 1987

Item	Average	My Farm
Total tillable acres per cow	3.04	
Total forage acres per cow	2.60	
Harvested forage dry matter, tons per cow	8.31	

Cropping Program Analysis (continued)

A substantial number of cooperators have allocated crop expenses to hay crop, corn, and other crop production. Fertilizer and lime, seeds and plants, and spray and other crop expenses have been computed per acre and per production unit for hay and corn. Additional expense items such as fuels, labor, and machinery repairs are not included.

CROP RELATED ACCRUAL EXPENSES
Northern New York Farms Reporting, 1987

Item	Total Per Till. Acre	Hay Crop Per Acre	Hay Crop Per Ton DM	All Corn Per Acre	Corn Silage Per Ton DM	Corn Grain Per Dry Shell Bu.
Number of farms reporting	70	56		52		
Average number of acres	247	154		66		
Fertilizer & lime	$ 21.63	$ 12.47	$ 5.05	$ 32.87	$ 6.00	$ 0.34
Seeds & plants	8.39	3.94	1.59	14.54	2.66	0.15
Spray & other crop expense	8.03	2.08	0.84	16.98	3.10	0.17
Total	$ 38.06	$ 18.49	$ 7.49	$ 64.38	$ 11.76	$ 0.66
My Farm:						
Fertilizer & lime	$	$	$	$	$	$
Seeds & plants						
Spray & other crop expense						
Total	$	$	$	$	$	$

Most machinery costs are associated with crop production and should be analyzed with the crop enterprise. Total machinery expenses include the major fixed costs (interest and depreciation), as well as the accrual operating costs. Although machinery costs have not been allocated to individual crops, they are shown below per total tillable acre.

ACCRUAL MACHINERY EXPENSES
70 Northern New York Dairy Farms, 1987

Machinery Expense Item	Average Total Expenses	Average Per Til. Acre	My Farm Total Expenses	My Farm Per Til. Acre
Fuel, oil & grease	$ 4,232	$ 17.14	$	$
Machinery repairs & parts	8,955	36.28		
Machine hire, rent & lease	1,022	4.14		
Auto expense (farm share)	540	2.19		
Interest (5%)	4,119	16.69		
Depreciation	13,870	56.19		
Total	$ 32,738	$ 132.63	$	$

The cost of producing milk has been compiled using the whole farm method, and is featured in the following table. Accrual receipts from milk sales can be compared with the accrual costs of producing milk per cow and per hundredweight of milk. Using the whole farm method, operating costs of producing milk are estimated by deducting nonmilk accrual receipts from total accrual operating expenses. Total costs of producing milk include the operating costs plus expansion livestock purchased, depreciation on machinery and buildings, the value of operators' labor and management, and the interest charge for using equity capital. Note that the cost of labor, management, and equity capital has been excluded in the intermediate calculation.

ACCRUAL RECEIPTS FROM DAIRY AND COST OF PRODUCING MILK
70 Northern New York Dairy Farms, 1987

Item	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Accrual Costs of Producing Milk						
Operating costs	$114,589	$ 1,409	$ 8.85	$_____	$_____	$_____
Total costs w/o opers' labor, mgmt. & capital	$135,741	$ 1,669	$ 10.49	$_____	$_____	$_____
Total Costs	$172,012	$ 2,115	$ 13.29	$_____	$_____	$_____
Accrual Receipts From Milk	$162,820	$ 2,002	$ 12.58	$_____	$_____	$_____

The accrual operating expenses most commonly associated with the dairy enterprise are listed in the table below. Evaluating these costs per unit of production enables an evaluation of the dairy enterprise.

DAIRY RELATED ACCRUAL EXPENSES
70 Northern New York Dairy Farms, 1987

Item	Average		My Farm	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrates	$ 535	$ 3.36	$_____	$_____
Purchased dairy roughage	14	0.09	_____	_____
Total Purchased Dairy Feed	$ 549	$ 3.45	$_____	$_____
Purchased grain & conc. as % of milk receipts	27%		____%	
Purchased feed & crop exp.	$ 664	$ 4.17	$_____	$_____
Purchased feed & crop exp. as % of milk receipts	33%		____%	
Breeding	$ 30	$ 0.19	$_____	$_____
Veterinary & medicine	41	0.26	_____	_____
Milk marketing	88	0.56	_____	_____
Cattle lease	2	0.01	_____	_____
Other livestock expense	90	0.57	_____	_____

Dairy Program Analysis

Analysis of the dairy enterprise can tell a great deal about the strengths and weaknesses of the dairy farm business. Information on this page should be used in conjunction with DHI and other dairy production information. Changes in dairy herd size and market values that occur during the year are identified in the table below. The change in inventory value without appreciation is attributed to physical changes in herd size and quality. This increase in inventory is included as an accrual farm receipt when calculating profitability without appreciation impacts.

DAIRY HERD INVENTORY
70 Northern New York Dairy Farms, 1987

	Dairy Cows		Heifers					
			Bred		Open		Calves	
Item	No.	Value	No.	Value	No.	Value	No.	Value
Beg. year (owned)	82	$68,106	28	$16,534	21	$ 7,585	20	$ 4,044
+ Change w/o apprec.		1,731		-957		1,430		-67
+ Appreciation		3,926		1,197		767		488
End year (owned)	83	$ 73,763	24	$16,774	24	$ 9,782	21	$ 4,465
End incl. leased	84							
Average number	81		69 (all age groups)					
My Farm:								
Beg. of year (owned)	___	$____	___	$____	___	$____	___	$____
+ Change w/o apprec.		____		____		____		____
+ Appreciation		____		____		____		____
End of year (owned)	___	$____	___	$____	___	$____	___	$____
End including leased	___							
Average number	___		___ (all age groups)					

Total milk sold and milk sold per cow are extremely valuable measures of productivity on the dairy farm. These measures of milk output are based on pounds of milk marketed during the year. Farm managers on DHI should compare milk sold per cow with rolling herd average on the test date nearest December 31.

MILK PRODUCTION
70 Northern New York Dairy Farms, 1987

Item	Average	My Farm
Total milk sold, lbs.	1,294,507	_____
Milk sold per cow, lbs.	15,917	_____
Average milk plant test, percent butterfat	3.60	_____

Capital and Labor Efficiency Analysis

Capital efficiency factors measure how intensively the capital is being used in the farm business. Measures of labor efficiency are key indicators of management's success in generating products per unit of labor input.

CAPITAL EFFICIENCY
70 Northern New York Dairy Farms, 1987

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	$158,452	$ 5,170	$ 1,703	$ 2,248
Real estate		2,275		989
Machinery & equipment	31,260	1,020	336	
Capital turnover, years	2.08			
My Farm:				
Farm capital	$_____	$_____	$_____	$_____
Real estate	_____	_____	_____	_____
Machinery & equipment	_____	_____	_____	_____
Capital turnover, years	_____			

LABOR FORCE INVENTORY AND ANALYSIS
70 Northern New York Dairy Farms, 1987

Labor Force	Months	Age	Years of Educ.	Value of Labor & Mgmt.
Operator number 1	12	43	13	$ 18,961
Operator number 2	3	41	13	4,221
Operator number 3	1	26	14	649
Family paid	3			
Family unpaid	3			
Hired	11			
Total	32	÷ 12 =	2.65 Worker Equivalent	
			1.27 Operator/Manager Equiv.	
My Farm: Total	____	÷ 12 =	_____ Worker Equivalent	
Operator's	____	÷ 12 =	_____ Operator/Manager Equiv.	

Labor Efficiency	Average Total	Average Per Worker	My Farm Total	My Farm Per Worker
Cows, average number	81	31	_____	_____
Milk sold, pounds	1,294,507	487,836	_____	_____
Tillable acres	247	93	_____	_____
Work units	857	323	_____	_____

Labor Costs	Average Total	Average Per Cow	Average Per Til. Acre	My Farm Total	My Farm Per Cow	My Farm Per Til. Acre
Value of operator(s) labor ($900/mo.)	$ 13,757	$ 169	$55.73	$_____	$_____	$_____
Family unpd.($650/mo.)	1,792	22	7.26	_____	_____	_____
Hired	14,634	180	59.28	_____	_____	_____
Total Labor	$ 30,182	$ 371	$122.27	$_____	$_____	$_____
Machinery Cost	$ 32,738	$ 403	$132.63	$_____	$_____	$_____
Total Labor & Mach.	$ 62,920	$ 774	$254.90	$_____	$_____	$_____

COMPARATIVE ANALYSIS OF THE FARM BUSINESS

Progress of the Farm Business

Comparing your business with average data from regional DFBS cooperators that participated in both of the last two years is one part of a business checkup. It is equally important for you to determine the progress your business has made over the past two or three years and to set targets or goals for the future.

PROGRESS OF THE FARM BUSINESS
Same 50 Northern New York Dairy Farms, 1986 & 1987

	Average		My Farm		
Selected Factors	1986	1987	1986	1987	Goal
Size of Business					
Average number of cows	72	74			
Average number of heifers	62	61			
Milk sold, lbs.	1,129,819	1,191,269			
Worker equivalent	2.57	2.47			
Total tillable acres	208	214			
Rates of Production					
Milk sold per cow, lbs.	15,744	16,012			
Hay DM per acre, tons	2.53	2.38			
Corn silage per acre, tons	12	16			
Labor Efficiency					
Cows per worker	28	30			
Milk sold/worker, lbs.	439,049	482,947			
Cost Control					
Grain & conc. purchased as % of milk sales	26%	27%	%	%	%
Dairy feed & crop exp. per cwt. milk	$ 3.85	$ 4.18	$	$	$
Labor & mach. costs/cow	$ 728	$ 757	$	$	$
Capital Efficiency*					
Farm capital per cow	$ 5,076	$ 5,076	$	$	$
Mach. & equip. per cow	$ 1,071	$ 1,062	$	$	$
Capital turnover, years	2.30	2.06			
Profitability					
Net farm inc. w/o apprec.	$ 17,982	$ 29,149	$	$	$
Net farm inc. w/apprec.	$ 26,213	$ 40,320	$	$	$
Labor & mgmt. income	$ 4,971	$ 15,852	$	$	$
Rate of return on eq. capital w/apprec.	0.33%	6.52%	%	%	%
Rate of return on all capital w/apprec.	4.59%	7.31%	%	%	%
Financial Summary					
Farm net worth, end year	$216,130	$238,974	$	$	$
Debt to asset ratio	0.41	0.38			
Farm debt per cow	$ 1,996	$ 1,918	$	$	$

*Average for the year.

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 414 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.

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.

References to DFBS output page numbers for participating dairy farmers are provided in the table headings.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS
414 New York Dairy Farms, 1986

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(DFBS pg. 10)	(10)	(10)	(9)	(8)	(8)	(10)	(10)
7.4	286	5,067,341	19,686	4.6	21	48	767,478
4.2	137	2,199,034	18,065	3.7	18	38	614,002
3.5	106	1,711,440	17,165	3.3	17	34	545,894
3.1	88	1,394,330	16,585	3.0	15	32	499,543
2.8	77	1,214,123	15,981	2.7	15	29	462,369
2.5	68	1,053,490	15,498	2.5	14	27	432,308
2.3	59	896,427	15,025	2.3	13	26	402,824
2.0	52	779,541	14,393	2.1	12	24	358,752
1.9	45	671,587	13,423	1.8	10	21	304,576
1.4	34	468,617	11,150	1.4	6	16	230,949

Cost Control					
Grain Bought Per Cow	% Feed is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(9)	(9)	(10)	(10)	(9)	(9)
$188	10%	$197	$ 496	$352	$2.44
290	15	262	599	449	3.00
354	18	310	663	502	3.36
402	21	351	712	550	3.59
445	23	384	757	590	3.83
483	25	411	805	632	4.04
528	27	441	868	682	4.28
573	29	481	916	728	4.50
629	31	542	1,007	794	4.85
765	37	712	1,201	936	5.86

The next section of the Farm Business Chart provides for comparative analysis of the value of production as measured by milk receipts per cow and dairy receipts per hundredweight of milk sold and the costs of production. The final or profitability section shows the variation in farm income by decile and enables a dairy farmer to determine where he or she ranks by using several measures of farm profitability. Remember that each column is independently established and the farms making up the top decile in the first column will not necessarily be on the top of any other column. The dairy farmer who ranks at or near the top of most of these columns is in a very enviable position.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS
414 New York Dairy Farms, 1986

Milk Receipts Per Cow	Dairy Receipts Per Cwt.	Oper. Cost Milk Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cow	Total Cost Production Per Cwt.
(9)	(9)	(9)	(9)	(9)	(9)
$2,747	$15.65	$ 922	$ 6.41	$1,678	$11.39
2,518	14.69	1,149	7.69	1,920	12.48
2,401	14.30	1,274	8.29	2,026	13.19
2,293	14.01	1,368	8.80	2,124	13.69
2,189	13.82	1,445	9.26	2,218	14.04
2,115	13.57	1,533	9.59	2,308	14.54
2,026	13.36	1,599	10.12	2,415	15.23
1,932	13.11	1,693	10.64	2,522	15.97
1,812	12.80	1,798	11.20	2,671	16.98
1,517	12.10	2,039	13.18	3,026	20.35

Profitability

Net Farm Income		Return to Operator's Labor, Management, & Equity Capital		Labor & Management Income	
With Appreciation	Without Appreciation	With Appreciation	Without Appreciation	Per Farm	Per Operator
(3)	(3)	(3)	(3)	(3)	(3)
$157,944	$112,483	$157,154	$111,814	$72,075	$50,073
72,699	46,862	70,487	44,957	25,129	18,115
51,682	33,290	49,335	31,000	15,514	12,290
40,559	25,457	39,083	23,381	9,128	7,659
33,904	19,749	32,076	17,627	4,136	3,599
26,429	15,395	23,588	13,469	21	-24
19,844	10,520	18,127	8,427	-4,171	-3,475
14,690	4,432	12,898	2,090	-9,752	-8,829
6,680	-3,173	4,611	-5,189	-20,244	-16,770
-13,617	-23,915	-15,804	-25,722	-44,712	-39,924

Farm Business Charts for farms with freestall barns and 120 cows or less and more than 120 cows, and farms with conventional barns with 60 cows or less and more than 60 cows are discussed in the section on pages 23-28.

Financial Analysis Chart

The farm financial analysis chart is designed just like the Farm Business Chart and may be used to measure the financial health of the farm business. Most of the financial measures used in the chart are presented on pages 7, 10, 13, and 18 of this publication. References to DFBS output page numbers for participating dairy farmers are provided in the table headings.

FINANCIAL ANALYSIS CHART
414 New York Dairy Farms, 1986

Liquidity (repayment)				
Debt Payments Made Per Cow (DFBS pg. 7)	Debt Payments as Percent of Milk Receipts (7)	Cash Flow Coverage Ratio (7)	Available for Debt Service Per Cow (11)	Debt Per Cow (5)
$ 48	2%	4.68	$984	$ 136
204	10	1.99	726	705
291	15	1.56	635	1,249
367	19	1.31	571	1,670
426	22	1.16	522	2,036
488	25	1.02	461	2,402
578	29	0.89	400	2,751
670	35	0.76	336	3,053
804	42	0.53	244	3,567
1,525	78	0.02	76	4,482

Solvency			Efficiency & Profitability		
	Debt/Asset Ratio				
Percent Equity (DFBS pg. 5)	Current & Intermediate (5)	Long Term (5)	Total Farm Cap. Per Cow (10)	Capital Turnover (years) (10)	Rate of Return on Equity Cap. (3)
98%	0.01	0.00	$3,753	1.52	38%
88	0.07	0.02	4,529	1.88	12
79	0.14	0.15	4,963	2.06	8
73	0.20	0.30	5,276	2.20	5
65	0.26	0.38	5,620	2.34	3
58	0.32	0.48	5,901	2.50	1
52	0.39	0.60	6,322	2.68	-1
46	0.47	0.71	6,945	2.90	-4
37	0.56	0.86	7,751	3.19	-9
15	0.88	1.33	9,489	4.39	-45

Summarize Your Business Performance

The Farm Business and Financial Analysis Charts can be used to help identify strengths and weaknesses of your farm business. Identify three major strengths and three areas of your farm business that need improvement.

Strengths: _____ Need Improvement: _____

_____ _____

_____ _____

Comparisons by Type of Barn and Herd Size

When analyzing a dairy farm business by comparing it to a group of farms, it is important that the group of farms used have as many of the same physical characteristics as possible as the farm being analyzed. To assist in this endeavor, dairy farms in the 1986 State Summary[1] have been divided into those with freestall and those with conventional housing. Within each group is a further classification by size of the dairy herd.

The table on page 24 shows the average values for the resulting four groups of dairy farms. Within each housing type, the larger herd size has the highest crop yields and pounds of milk sold per cow. The cost of producing milk was lower on the larger farms and labor efficiency greater. Profitability was also greater on the larger farms within each housing type.

Farm business charts have been computed for each of the four housing and herd size categories. From these charts on pages 25-28 the range in size of business rates of production, labor efficiency, value and cost of producing milk, and profitability can be observed. The range in every category of business performance is tremendous.

By comparing the farm's performance on the most appropriate business chart, a farm manager will be better able to evaluate his or her business performance. Farm managers should remember, however, that their competition is not limited to the other farms in their own barn type and herd size category. They should observe how their management performance compares with farms in other categories as well.

Herd Size Comparisons

A detailed comparison of profitability, financial situation, and business analysis factors across herd sizes is contained on pages 29-36. As herd size increases, the average profitability also increases (pages 29-30). Net farm income without appreciation was $123,246 per farm for the 250 or more herd size group and $6,845 per farm for those with less than 40 cows. This relationship holds for all measures of profitability including rate of return on equity capital.

As herd sizes increase above 55 cows, percent equity decreases (pages 31-34). However, farm net worth increases substantially as herd size increases. The average net worth for all size farms increased during 1986.

Crop yields increased as herd size increased, but fertilizer and lime expenses and machinery cost per tillable acre also increased (pages 35-36). Milk sold per cow also increased as herd size increased, ranging from 14,525 pounds on the farms with less than 40 cows to 18,593 pounds on farms with 250 or more cows. Farm capital per worker increased as herd size increased, while farm capital per cow decreased as herd size increased. Cows per worker increased dramatically as herd size increased, ranging from 20 at the lowest herd size category up to 41 at the largest size category.

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[1]Smith, Stuart F., Wayne A. Knoblauch, and Linda D. Putnam, Dairy Farm Management Business Summary, New York, 1986, Department of Agricultural Economics, Cornell University, A.E. Res. 87-20, July 1987.

SELECTED BUSINESS FACTORS BY TYPE OF BARN
AND HERD SIZE
414 New York Dairy Farms, 1986

Farms with:	Conventional		Freestall	
Item	≤60 Cows	>60 Cows	≤120 Cows	>120 Cows
Number of farms	146	124	71	73
Cropping Program Analysis				
Total Tillable acres	157	274	273	588
Tillable acres rented*	51	97	99	205
Hay crop acres*	96	155	139	243
Corn silage acres*	27	48	62	181
Hay crop, tons DM/acre	2.3	2.7	2.8	3.2
Corn silage, tons/acre	12.3	13.7	14.0	15.2
Oats, bushels/acre	56.1	70.4	68.7	56.5
Forage DM per cow, tons	7.2	7.9	7.8	7.8
Tillable acres/cow	3.4	3.4	3.1	2.7
Fert. & lime exp./til. acre	$19.90	$22.75	$28.70	$31.11
Total machinery costs	$17,584	$33,257	$41,281	$83,046
Machinery cost/tillable acre	$112	$121	$151	$141
Dairy Analysis				
Number of cows	46	81	88	222
Number of heifers	35	68	73	182
Milk sold, lbs.	698,200	1,286,440	1,388,642	3,787,019
Milk sold/cow, lbs.	15,171	15,802	15,866	17,093
Operating cost of prod. milk/cwt.	$9.51	$9.33	$9.36	$9.60
Total cost of prod. milk/cwt.	$15.38	$14.37	$14.22	$12.96
Price/cwt. milk sold	$12.47	$12.53	$12.84	$12.72
Purchased dairy feed/cow	$499	$459	$459	$548
Purchased dairy feed/cwt. milk	$3.29	$2.91	$2.89	$3.21
Purc. grain & conc. as % milk rec.	25%	23%	22%	24%
Purc. feed & crop exp./cwt. milk	$4.05	$3.79	$3.94	$4.12
Capital Efficiency				
Farm capital/worker	$137,144	$173,780	$183,971	$204,899
Farm capital/cow	6,020	6,233	5,970	5,355
Farm capital/til. acre owned	2,614	2,867	2,986	3,098
Real estate/cow	3,109	3,066	2,749	2,424
Machinery investment/cow	1,147	1,223	1,214	869
Capital turnover, years	2.57	2.52	2.37	2.05
Labor Efficiency				
Worker equivalent	2.02	2.92	2.84	5.79
Operator/manager equivalent	1.15	1.33	1.41	1.47
Milk sold/worker, lbs.	345,644	440,562	488,958	654,062
Cows/worker	23	28	31	38
Work units/worker	240	299	328	399
Labor cost/cow	$417	$381	$361	$385
Labor cost/tillable acre	$122	$113	$116	$145
Profitability & Balance Sheet Analysis				
Net farm income (w/o apprec.)	$9,341	$19,138	$24,475	$60,243
Labor & mgmt. income/operator	$-999	$455	$4,275	$16,090
Farm debt/cow	$2,428	$2,090	$2,050	$2,145
Percent equity	59%	66%	65%	60%

*Average of all farms, not only those reporting data.

FARM BUSINESS CHART FOR SMALL CONVENTIONAL STALL DAIRY FARMS
146 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 1986

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent (DFBS pg. 10)	No. of Cows (10)	Pounds Milk Sold (10)	Pounds Milk Sold Per Cow (9)	Tons Hay Crop DM/Acre (8)	Tons Corn Silage Per Acre (8)	Cows Per Worker (10)	Pounds Milk Sold Per Worker (10)
3.1	58	1,007,751	18,878	4.1	20	34	544,485
2.6	55	873,140	17,368	3.3	17	30	459,871
2.3	54	832,613	16,639	2.9	16	27	428,718
2.2	51	787,319	16,037	2.6	15	26	404,025
2.0	49	740,807	15,438	2.4	14	25	375,361
2.0	47	700,379	15,034	2.2	13	23	343,283
1.9	44	653,090	14,416	2.1	12	21	316,418
1.7	41	580,976	13,938	1.9	10	20	286,500
1.5	36	501,065	12,992	1.6	8	18	255,798
1.2	28	352,058	10,736	1.1	5	14	192,273

Cost Control

Grain Bought Per Cow (9)	% Feed is of Milk Receipts (9)	Machinery Costs Per Cow (10)	Labor & Machinery Costs Per Cow (10)	Feed & Crop Expenses Per Cow (9)	Feed & Crop Expenses Per Cwt. Milk (9)
$189	11%	$177	$520	$338	$2.51
320	17	249	611	455	3.15
386	22	285	666	503	3.44
422	24	323	734	535	3.70
459	25	365	785	580	3.86
488	27	397	827	611	4.05
532	29	429	884	661	4.28
580	30	464	916	721	4.59
631	32	522	1,000	783	4.97
765	38	648	1,176	954	6.06

Value and Cost of Production			Profitability			
			Net Farm Income			
Milk Receipts Per Cow (9)	Oper. Cost Milk Per Cwt. (9)	Total Cost Production Per Cwt. (9)	With Apprec. (3)	Without Apprec. (3)	Labor & Mgmt. Income Per Farm (3)	Per Oper. (3)
$2,709	$ 6.23	$11.98	$60,893	$35,087	$22,396	$17,562
2,425	7.49	13.42	35,933	24,247	12,646	10,953
2,294	8.11	13.84	29,970	18,994	7,722	6,887
2,188	8.67	14.32	25,464	14,971	4,609	4,089
2,101	9.26	15.16	20,230	11,729	1,702	1,658
2,000	9.87	15.63	16,582	8,614	-1,464	-1,401
1,937	10.47	16.12	12,687	5,490	-5,240	-4,394
1,853	10.92	17.10	7,202	814	-8,463	-8,524
1,740	11.50	18.57	-257	-3,988	-15,131	-14,528
1,403	13.36	21.95	-12,299	-18,796	-28,918	-26,431

FARM BUSINESS CHART FOR LARGE CONVENTIONAL STALL DAIRY FARMS
124 Conventional Stall Dairy Farms with More Than 60 Cows, New York, 1986

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent (DFBS pg. 10)	No. of Cows (10)	Pounds Milk Sold (10)	Pounds Milk Sold Per Cow (9)	Tons Hay Crop DM/Acre (8)	Tons Corn Silage Per Acre (8)	Cows Per Worker (10)	Pounds Milk Sold Per Worker (10)
4.7	124	2,093,475	19,571	4.8	22	44	652,718
3.7	99	1,649,764	18,016	3.6	19	37	571,684
3.4	90	1,441,447	17,121	3.3	17	34	530,017
3.1	85	1,317,509	16,694	3.0	16	31	496,060
3.0	79	1,251,151	16,141	2.8	15	29	471,986
2.8	76	1,206,039	15,667	2.6	14	28	446,181
2.5	72	1,147,970	15,233	2.4	13	26	425,808
2.4	68	1,074,750	14,662	2.2	12	25	396,893
2.1	65	967,717	13,618	2.0	10	22	346,946
1.8	62	810,022	11,546	1.5	6	18	256,917

Cost Control					
Grain Bought Per Cow (9)	% Feed is of Milk Receipts (9)	Machinery Costs Per Cow (10)	Labor & Machinery Costs Per Cow (10)	Feed & Crop Expenses Per Cow (9)	Feed & Crop Expenses Per Cwt. Milk (9)
$186	10%	$191	$476	$342	$2.32
269	14	259	554	428	2.91
333	17	317	625	487	3.29
380	21	353	704	528	3.43
429	22	381	750	579	3.65
473	24	409	800	624	3.95
512	26	456	877	671	4.21
557	27	504	950	713	4.41
624	30	556	1,050	773	4.65
761	37	713	1,219	897	5.52

Value and Cost of Production			Profitability			
			Net Farm Income			
Milk Receipts Per Cow (9)	Oper. Cost Milk Per Cwt. (9)	Total Cost Production Per Cwt. (9)	With Apprec. (3)	Without Apprec. (3)	Labor & Mgmt. Income Per Farm (3)	Per Oper. (3)
$2,661	$6.53	$11.61	$137,617	$61,175	$40,774	$27,242
2,517	7.83	12.60	60,290	39,547	21,148	16,925
2,406	8.31	13.14	49,563	32,130	14,942	11,965
2,311	8.68	13.67	42,248	27,056	9,103	7,194
2,201	9.14	14.11	37,685	21,315	3,905	3,225
2,124	9.46	14.43	31,717	18,215	283	175
2,041	9.86	14.81	23,127	14,332	-4,262	-3,498
1,936	10.41	15.66	17,079	7,417	-12,508	-9.625
1,835	10.87	16.56	12,251	-2,565	-20,966	-16,753
1,594	13.21	19.48	-8,813	-20,714	-44,612	-42,011

FARM BUSINESS CHART FOR SMALL FREESTALL DAIRY FARMS
71 Freestall Barn Dairy Farms with 120 or Less Cows, New York, 1986

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent (DFBS pg. 10)	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
	(10)	(10)	(9)	(8)	(8)	(10)	(10)
4.3	117	1,964,379	19,630	4.5	21	52	746,199
3.5	110	1,842,322	18,599	3.9	19	40	621,768
3.3	105	1,711,514	17,868	3.5	17	36	565,788
3.0	97	1,588,855	16,927	3.0	16	33	530,646
2.8	91	1,453,928	16,098	2.7	15	31	506,808
2.7	86	1,350,208	15,704	2.5	14	29	484,530
2.6	82	1,277,728	15,246	2.4	14	29	454,169
2.3	74	1,094,868	14,733	2.3	13	27	422,903
2.1	67	975,911	13,879	1.9	11	25	394,665
1.7	52	721,949	10,706	1.4	7	21	304,171

Cost Control					
Grain Bought Per Cow	% Feed is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(9)	(9)	(10)	(10)	(9)	(9)
$183	9%	$239	$546	$383	$2.40
291	14	309	653	449	2.85
321	17	354	682	509	3.35
377	19	393	712	577	3.69
423	22	422	759	607	3.90
489	24	453	822	652	4.06
534	26	488	885	693	4.33
551	28	532	940	719	4.53
597	30	648	1,084	797	5.09
735	35	891	1,323	935	6.15

Value and Cost of Production			Profitability			
			Net Farm Income			
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	With Apprec.	Without Apprec.	Labor & Mgmt. Income Per Farm	Per Oper.
(9)	(9)	(9)	(3)	(3)	(3)	(3)
$2,763	$ 6.52	$11.16	$119,436	$85,723	$56,843	$31,786
2,517	7.84	12.33	75,141	51,430	29,843	19,619
2,456	8.22	13.18	58,064	39,357	19,804	14,086
2,349	8.83	13.70	45,183	34,141	14,167	9,502
2,247	9.26	14.00	40,801	25,936	7,804	6,962
2,179	9.55	14.48	34,830	20,431	2,896	2,591
2,113	10.11	14.97	27,277	14,804	-1,786	-1,478
2,041	10.62	15.79	19,458	8,785	-5,399	-4,633
1,932	11.55	16.77	11,308	-531	-16,982	-13,373
1,494	13.08	19.53	-6,377	-27,829	-46,468	-39,164

FARM BUSINESS CHART FOR LARGE FREESTALL DAIRY FARMS
73 Freestall Barn Dairy Farms with More Than 120 Cows, New York, 1986

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent (DFBS pg. 10)	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
	(10)	(10)	(9)	(8)	(8)	(10)	(10)
13.3	540	10,200,698	20,554	5.1	20	59	926,835
7.6	311	5,862,327	19,208	4.0	18	46	821,108
6.7	254	4,456,278	17,921	3.7	17	43	728,084
6.0	226	3,713,183	17,284	3.4	16	40	678,995
5.3	194	3,138,231	16,825	3.3	16	39	644,490
4.9	173	2,616,444	16,360	3.1	15	37	611,932
4.4	156	2,458,443	15,867	3.0	15	35	565,128
4.0	145	2,327,342	15,350	2.7	13	33	541,569
3.6	132	2,099,647	14,395	2.4	12	31	476,755
3.0	122	1,739,656	12,476	1.9	9	27	415,285

Cost Control					
Grain Bought Per Cow	% Feed is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(9)	(9)	(10)	(10)	(9)	(9)
$216	12%	$229	$500	$401	$2.71
322	16	284	627	505	3.15
389	19	338	683	564	3.47
425	20	380	715	609	3.73
463	23	397	747	658	4.04
522	25	411	775	690	4.24
578	27	429	830	741	4.40
622	29	446	887	797	4.61
680	31	491	929	848	4.91
776	35	590	1,033	955	5.67

Value and Cost of Production			Profitability			
			Net Farm Income			
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	With Apprec.	Without Apprec.	Labor & Mgmt. Income Per Farm	Per Oper.
(9)	(9)	(9)	(3)	(3)	(3)	(3)
$2,900	$ 6.73	$10.94	$277,840	$227,537	$163,935	$122,334
2,631	8.21	11.91	144,680	122,770	71,851	48,890
2,554	9.03	12.38	111,557	89,415	47,475	35,630
2,424	9.30	12.81	94,081	67,102	36,270	23,042
2,350	9.47	13.21	79,443	55,090	21,997	16,870
2,257	9.79	13.53	70,133	44,237	13,125	10,248
2,169	10.13	13.78	54,017	27,750	122	-210
2,104	10.55	14.18	40,369	20,173	-11,512	-8,932
1,977	11.16	15.16	26,284	5,277	-30,939	-20,499
1,756	12.73	16.90	-15,577	-30,415	-60,131	-57,094

FARM BUSINESS SUMMARY BY HERD SIZE
414 New York Dairy Farms, 1986

Item — Farm Size:	Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows	85 to 99 Cows
Number of farms	32	87	76	60	46
ACCRUAL EXPENSES					
Hired labor	$ 2,783	$ 5,555	$ 9,003	$ 14,979	$ 16,565
Dairy grain & concentrate	14,087	23,314	28,109	34,369	38,303
Dairy roughage	948	1,261	1,229	1,062	1,191
Other livestock feed	863	271	548	603	1,326
Machine hire/rent/lease	739	948	1,326	1,419	2,711
Machine repairs/parts	2,846	3,908	5,511	7,365	10,511
Auto expense (farm share)	641	456	449	477	771
Fuel, oil & grease	1,496	2,355	3,319	4,251	5,833
Replacement livestock	1,061	1,279	1,143	812	1,946
Breeding	1,077	1,372	2,053	2,303	2,303
Veterinary & medicine	974	1,702	2,840	2,826	3,997
Milk marketing	4,828	6,606	7,792	10,424	11,482
Cattle lease/rent	48	16	43	2	10
Other livestock expense	2,119	3,969	4,968	6,070	6,814
Fertilizer & lime	1,456	3,135	4,782	6,506	7,355
Seeds & plants	873	1,171	1,865	2,889	3,272
Spray & other crop expense	533	898	1,710	2,448	2,683
Land/building/fence repair	1,113	1,154	1,509	1,683	2,523
Taxes & insurance	3,743	4,807	6,408	7,257	9,077
Telephone & electricity	2,543	3,414	4,225	5,328	6,122
Interest paid	6,487	10,078	10,104	13,570	17,334
Misc. (including rent)	1,589	2,374	4,287	5,267	6,998
Total Operating Expenses	$52,847	$80,043	$103,223	$131,910	$159,127
Expansion livestock	456	283	664	474	985
Machinery depreciation	4,657	7,458	10,906	13,388	16,449
Building depreciation	2,570	3,740	5,019	6,469	8,182
Total Accrual Expenses	$60,530	$91,524	$119,812	$152,241	$184,743
ACCRUAL RECEIPTS					
Milk sales	$58,125	$89,125	$121,096	$149,343	$180,096
Dairy cattle	5,294	6,411	9,025	10,559	14,433
Dairy calves	971	1,295	1,674	1,837	2,357
Other livestock	454	200	317	235	156
Crops	1,144	197	86	1,724	1,582
Misc. receipts	1,387	1,940	3,778	4,143	5,480
Total Accrual Receipts	$67,375	$99,168	$135,976	$167,841	$204,104
PROFITABILITY ANALYSIS					
Net farm income (w/o apprec.)	$6,845	$7,644	$16,164	$15,600	$19,361
Net farm income (w/apprec.)	$14,484	$17,774	$25,724	$31,524	$40,888
Labor & mgmt. income	$-2,533	$-2,450	$1,797	$-1,674	$518
Number of operators	1.00	1.13	1.32	1.22	1.37
Labor & mgmt. inc./oper.	$-2,533	$-2,168	$1,361	$-1,372	$378
Rate of return on equity capital (w/o apprec.)	-8.8%	-8.6%	-3.7%	-2.8%	-2.1%
Rate of return on equity capital (w/apprec.)	-3.2%	-2.1%	0.1%	2.5%	4.2%

FARM BUSINESS SUMMARY BY HERD SIZE
414 New York Dairy Farms, 1986

Item — Farm Size:	100 to 149 Cows	150 to 199 Cows	200 to 249 Cows	250 or More Cows
Number of farms	62	22	10	19
ACCRUAL EXPENSES				
Hired labor	$ 23,213	$ 46,159	$ 68,294	$ 145,034
Dairy grain & concentrate	53,781	77,088	122,806	224,158
Dairy roughage	1,576	1,573	5,901	11,045
Other livestock feed	1,066	1,162	1,900	754
Machine hire/rent/lease	2,622	2,627	4,523	4,140
Machine repairs/parts	13,261	15,449	27,760	41,273
Auto expense (farm share)	558	550	262	1,383
Fuel, oil & grease	6,944	11,345	12,368	18,665
Replacement livestock	1,996	7,347	7,535	4,336
Breeding	3,629	4,076	7,832	12,224
Veterinary & medicine	4,985	6,909	12,373	23,522
Milk marketing	16,715	22,704	28,678	56,326
Cattle lease/rent	65	598	0	499
Other livestock expense	10,053	13,968	18,995	37,792
Fertilizer & lime	10,159	13,391	20,410	30,533
Seeds & plants	4,438	6,510	7,633	13,922
Spray & other crop expense	4,358	5,755	8,207	14,950
Land/building/fence repair	2,954	2,912	5,095	12,813
Taxes & insurance	10,320	14,487	20,465	25,083
Telephone & electricity	7,271	9,442	12,178	20,281
Interest paid	21,682	34,929	42,595	78,770
Misc. (including rent)	6,999	10,459	22,781	29,228
Total Operating Expenses	$208,645	$309,440	$458,591	$ 806,731
Expansion livestock	582	2,139	2,297	12,572
Machinery depreciation	20,893	26,190	37,063	52,995
Building depreciation	9,226	15,992	20,451	36,105
Total Accrual Expenses	$239,346	$353,761	$518,402	$ 908,403
ACCRUAL RECEIPTS				
Milk sales	$245,627	$334,063	$474,437	$ 902,482
Dairy cattle	18,626	28,784	42,300	77,186
Dairy calves	3,038	3,468	4,742	9,618
Other livestock	345	1,275	9,333	877
Crops	3,668	5,490	4,850	16,858
Misc. receipts	7,122	14,311	25,621	24,628
Total Accrual Receipts	$278,426	$387,391	$561,283	$1,031,649
PROFITABILITY ANALYSIS				
Net farm income (w/o apprec.)	$39,080	$33,630	$42,881	$123,246
Net farm income (w/apprec.)	$65,839	$58,481	$65,595	$163,623
Labor & mgmt. income	$14,011	$5,359	$7,205	$65,171
Number of operators	1.56	1.45	1.50	1.54
Labor & mgmt. inc./oper.	$8,981	$3,696	$4,803	$42,319
Rate of return on equity capital (w/o apprec.)	1.5%	0.7%	1.8%	7.1%
Rate of return on equity capital (w/apprec.)	7.3%	5.3%	5.1%	10.6%

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
414 New York Dairy Farms, 1986

Farms with:	Less than 40 Cows		40 to 54 Cows		55 to 69 Cows	
Item	Jan. 1	Dec. 31	Jan. 1	Dec. 31	Jan. 1	Dec. 31
ASSETS						
Farm cash/chkg./sav.	$ 1,986	$ 2,198	$ 1,938	$ 2,701	$ 2,526	$ 3,408
Accounts receivable	4,661	4,646	7,038	7,400	10,126	10,700
Feed & supplies	10,565	11,503	16,819	16,887	25,547	25,019
Livestock*	35,537	37,823	50,999	54,104	72,821	74,528
Machinery & equipment*	40,675	41,786	54,251	54,042	76,061	76,061
FLB & PCA stock	893	874	1,522	1,645	1,584	1,560
Coop stocks & cert.	1,697	1,905	1,637	1,879	2,951	2,984
Land & buildings*	116,480	119,878	147,042	150,445	180,616	187,073
Total Farm Assets	$212,494	$220,613	$281,246	$289,103	$372,232	$381,333
Pers. cash/chkg./sav.	$ 7,733	$ 7,940	$ 5,478	$ 5,390	$ 4,292	$ 4,848
Cash value of life ins.	2,634	2,007	2,977	3,252	3,476	3,842
Nonfarm real estate	15,208	19,250	1,956	1,964	18,045	17,580
Auto (personal share)	1,866	1,923	2,398	2,906	2,870	3,669
Stocks & bonds	866	773	2,262	3,430	17,622	19,198
Household furnishings	8,083	8,167	8,936	9,139	6,732	7,755
All other	894	752	3,105	2,782	1,889	2,015
Total Nonfarm Assets**	$ 37,285	$ 40,812	$ 27,113	$ 28,865	$ 54,925	$ 58,908
Total Farm & Nonfarm Assets	$249,779	$261,425	$308,359	$317,968	$427,157	$440,241
LIABILITIES						
Accounts payable	$ 2,287	$ 2,224	$ 3,367	$ 4,389	$ 3,650	$ 4,504
Operating debt	597	811	1,315	963	1,468	1,366
Short term	1,638	1,406	1,106	1,704	1,420	1,738
Intermediate***	20,880	20,413	43,165	43,747	44,828	43,302
Long term*	56,147	53,569	80,763	78,938	77,843	77,741
Total Farm Liab.	$ 81,550	$ 78,423	$129,716	$129,741	$129,208	$128,651
Tot. Nonfarm Liab.**	1,354	981	1,046	1,083	1,917	2,034
Total Farm & Nonfarm Liabilities	$ 82,904	$ 79,404	$130,762	$130,824	$131,125	$130,685
Farm Net Worth (Equity Capital)	$130,944	$142,190	$151,530	$159,362	$243,024	$252,682
Farm & Nonfarm Net Worth	$166,875	$182,021	$177,597	$187,144	$296,032	$309,556

FINANCIAL MEASURES	Less than 40 Cows	40 to 54 Cows	55 to 69 Cows
Percent equity	64%	55%	66%
Debt/asset ratio-long term	0.45	0.52	0.42
Debt/asset ratio-inter. & current	0.25	0.37	0.26
Change in net worth with apprec.	$11,246	$7,832	$9,658
Total farm debt per cow	$2,376	$2,703	$2,075
Debt payments made per cow	$600	$526	$446
Debt payments as % of milk sales	33%	28%	22%
Amount avail. for debt service	$15,290	$22,426	$32,964
Cash flow coverage ratio for 1986	1.25	1.04	1.33

*Includes discounted lease payments.
**Average of farms reporting nonfarm assets and liabilities for 1986.
***Includes FLB/PCA stock and discounted lease payments for cattle and machinery.

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
414 New York Dairy Farms, 1986

Farms with:	70 to 84 Cows		85 to 99 Cows	
Item	Jan. 1	Dec. 31	Jan. 1	Dec. 31
ASSETS				
Farm cash/chkg./savings	$ 3,624	$ 4,311	$ 4,152	$ 4,674
Accounts receivable	13,182	13,731	15,052	16,928
Feed & supplies	32,473	33,003	41,277	41,802
Livestock*	86,471	91,004	104,001	109,208
Machinery & equipment*	92,371	93,896	116,081	117,533
FLB & PCA stock	3,140	3,362	3,246	2,959
Coop stocks & cert.	3,587	4,016	4,055	5,362
Land & buildings*	226,185	232,659	244,511	257,618
Total Farm Assets	$461,034	$475,981	$532,375	$556,084
Pers. cash/chkg./savings	$ 11,952	$ 12,071	$ 5,906	$ 6,958
Cash value of life ins.	4,330	4,257	3,120	3,430
Nonfarm real estate	8,671	8,474	3,577	3,423
Auto (personal share)	3,198	3,312	2,175	2,536
Stocks & bonds	4,062	4,383	3,912	4,181
Household furnishings	9,168	9,259	7,281	7,788
All other	4,362	3,032	4,423	5,554
Total Nonfarm Assets**	$ 45,745	$ 44,789	$ 30,394	$ 33,869
Total Farm & Nonfarm Assets	$506,779	$520,770	$562,769	$589,953
LIABILITIES				
Accounts payable	$ 5,836	$ 6,211	$ 5,443	$ 5,899
Operating debt	1,932	1,840	3,774	3,883
Short term	1,955	2,047	827	1,540
Intermediate***	55,996	57,039	78,119	80,681
Long term*	98,649	94,722	113,871	111,042
Total Farm Liab.	$164,368	$161,859	$202,034	$203,045
Total Nonfarm Liab.**	1,213	800	115	77
Total Farm & Nonfarm Liabilities	$165,581	$162,659	$202,149	$203,122
Farm Net Worth (Equity Capital)	$296,666	$314,122	$330,342	$353,039
Farm & Nonfarm Net Worth	$341,198	$358,111	$360,620	$386,831

FINANCIAL MEASURES	70 to 84 Cows	85 to 99 Cows
Percent equity	66%	63%
Debt/asset ratio-long term	0.41	0.43
Debt/asset ratio-inter. & current	0.28	0.31
Change in net worth with apprec.	$17,456	$22,698
Total farm debt per cow	$2,102	$2,207
Debt payments made per cow	$484	$465
Debt payments as % of milk sales	24%	23%
Amount avail. for debt service	$34,979	$42,858
Cash flow coverage ratio for 1986	1.12	1.18

*Includes discounted lease payments.
**Average of farms reporting nonfarm assets and liabilities for 1986.
***Includes FLB/PCA stock and discounted lease payments for cattle and machinery.

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
414 New York Dairy Farms, 1986

Farms with:	100 to 149 Cows		150 to 199 Cows	
Item	Jan. 1	Dec. 31	Jan. 1	Dec. 31
ASSETS				
Farm cash/chkg./savings	$ 5,440	$ 6,624	$ 3,576	$ 4,521
Accounts receivable	20,835	22,677	27,738	33,021
Feed & supplies	58,288	60,473	73,223	74,490
Livestock*	142,725	147,952	188,540	199,263
Machinery & equipment*	128,625	127,761	167,695	172,506
FLB & PCA stock	5,968	6,358	11,845	11,879
Coop stocks & cert.	9,312	9,610	9,224	10,601
Land & buildings*	322,502	343,761	417,368	427,326
Total Farm Assets	$693,695	$725,216	$899,209	$933,607
Pers. cash/chkg./savings	$ 4,272	$ 4,744	$ 7,433	$ 7,561
Cash value of life ins.	4,278	4,382	6,743	8,120
Nonfarm real estate	9,270	11,871	26,500	26,000
Auto (personal share)	2,762	3,248	4,370	4,780
Stocks & bonds	6,834	7,596	12,388	12,524
Household furnishings	8,716	8,689	14,790	14,850
All other	3,265	3,429	5,050	17,770
Total Nonfarm Assets**	$ 39,398	$ 43,960	$ 77,274	$ 91,605
Total Farm & Nonfarm Assets	$733,093	$769,176	$976,483	$1,025,212
LIABILITIES				
Accounts payable	$ 5,090	$ 5,192	$ 13,306	$ 15,005
Operating debt	4,056	3,204	9,115	8,569
Short term	3,768	4,257	3,209	6,496
Intermediate***	99,966	96,334	181,693	179,730
Long term*	137,951	132,876	161,152	168,331
Total Farm Liab.	$250,831	$241,863	$368,475	$ 378,130
Total Nonfarm Liab.**	1,546	2,545	11,759	10,833
Total Farm & Nonfarm Liabilities	$252,377	$244,408	$380,234	$ 388,963
Farm Net Worth (Equity Capital)	$442,864	$483,354	$530,734	$ 555,477
Farm & Nonfarm Net Worth	$480,716	$524,768	$596,249	$ 636,249

FINANCIAL MEASURES	100 to 149 Cows	150 to 199 Cows
Percent equity	67%	59%
Debt/asset ratio-long term	0.39	0.39
Debt/asset ratio-inter. & current	0.29	0.41
Change in net worth with apprec.	$40,489	$24,743
Total farm debt per cow	$1,982	$2,136
Debt payments made per cow	$532	$536
Debt payments as % of milk sales	26%	28%
Amount avail. for debt service	$62,953	$81,720
Cash flow coverage ratio for 1986	1.20	1.04

*Includes discounted lease payments.
**Average of farms reporting nonfarm assets and liabilities for 1986.
***Includes FLB/PCA stock and discounted lease payments for cattle and machinery.

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
414 New York Dairy Farms, 1986

Farms with:	200 to 249 Cows		More than 250 Cows	
Item	Jan. 1	Dec. 31	Jan. 1	Dec. 31
ASSETS				
Farm cash/chkg./savings	$ 5,182	$ 5,285	$ 3,098	$ 5,509
Accounts receivable	47,222	48,353	77,139	88,644
Feed & supplies	110,301	112,044	197,236	207,932
Livestock*	272,218	280,550	442,895	466,645
Machinery & equipment*	203,740	207,527	265,465	274,285
FLB & PCA stock	14,501	14,456	15,298	14,356
Coop stocks & cert.	21,898	29,283	32,024	53,851
Land & buildings*	486,214	495,339	882,690	934,130
Total Farm Assets	$1,161,276	$1,192,837	$1,915,845	$2,045,352
Pers. cash/chkg./savings	$ 7,629	$ 8,086	$ 1,741	$ 3,824
Cash value of life ins.	17,877	6,118	4,170	4,166
Nonfarm real estate	17,429	17,429	5,889	5,889
Auto (personal share)	5,429	7,357	1,046	1,889
Stocks & bonds	3,643	5,286	7,208	8,332
Household furnishings	6,714	7,714	4,000	4,000
All other	10,493	17,023	14,377	12,205
Total Nonfarm Assets**	$ 69,213	$ 69,012	$ 38,430	$ 40,305
Total Farm & Nonfarm Assets	$1,230,489	$1,261,849	$1,954,275	$2,085,657
LIABILITIES				
Accounts payable	$ 15,676	$ 9,132	$ 15,482	$ 23,393
Operating debt	6,258	5,947	27,204	50,242
Short term	2,925	7,172	12,870	13,488
Intermediate***	215,166	243,542	364,772	349,232
Long term*	232,444	215,211	380,025	428,144
Total Farm Liab.	$ 472,468	$ 481,004	$ 800,354	$ 864,499
Total Nonfarm Liab.**	0	2,217	0	0
Total Farm & Nonfarm Liabilities	$ 472,468	$ 483,221	$ 800,354	$ 864,499
Farm Net Worth (Equity Capital)	$ 688,808	$ 711,833	$1,115,491	$1,180,853
Farm & Nonfarm Net Worth	$ 758,021	$ 778,628	$1,153,921	$1,221,158

FINANCIAL MEASURES	200 to 249 Cows	More than 250 Cows
Percent equity	60%	58%
Debt/asset ratio-long term	0.43	0.46
Debt/asset ratio-inter. & current	0.38	0.39
Change in net worth with apprec.	$23,026	$65,361
Total farm debt per cow	$2,073	$2,194
Debt payments made per cow	$638	$769
Debt payments as % of milk sales	30%	33%
Amount avail. for debt service	$96,415	$206,413
Cash flow coverage ratio for 1986	0.98	1.25

*Includes discounted lease payments.
**Average of farms reporting nonfarm assets and liabilities for 1986.
***Includes FLB/PCA stock and discounted lease payments for cattle and machinery.

SELECTED BUSINESS FACTORS BY HERD SIZE
414 New York Dairy Farms, 1986

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	32	87	76	60	46
Cropping Program Analysis					
Total Tillable acres	117	162	198	266	301
Tillable acres rented*	28	58	62	91	114
Hay crop acres*	76	100	110	148	168
Corn silage acres*	14	30	38	48	56
Hay crop, tons DM/acre	2.1	2.2	2.6	2.6	2.7
Corn silage, tons/acre	11.8	12.3	13.1	13.6	13.7
Oats, bushels/acre	43.3	60.5	67.1	70.1	64.4
Forage DM per cow, tons	6.9	7.4	7.6	8.0	8.0
Tillable acres/cow	3.6	3.4	3.3	3.5	3.3
Fert. & lime exp./til. acre	$12.43	$19.38	$24.13	$24.42	$24.42
Total machinery costs	$12,414	$17,793	$25,291	$31,515	$42,081
Machinery cost/tillable acre	$106	$110	$128	$118	$140
Dairy Analysis					
Number of cows	32	47	61	76	90
Number of heifers	25	36	50	62	73
Milk sold, lbs.	470,234	716,437	966,374	1,185,995	1,430,399
Milk sold/cow, lbs.	14,525	15,180	15,825	15,605	15,840
Operating cost of prod. milk/cwt.	$9.27	$9.77	$9.14	$9.56	$9.45
Total cost of prod. milk/cwt.	$16.34	$15.40	$14.75	$14.57	$14.29
Price/cwt. milk sold	$12.36	$12.44	$12.53	$12.59	$12.59
Purchased dairy feed/cow	$464	$521	$480	$466	$437
Purchased dairy feed/cwt. milk	$3.20	$3.43	$3.04	$2.99	$2.76
Purchased grain & conc. as % of milk receipts	24%	26%	23%	23%	21%
Purchased feed & crop expense/cwt. milk	$3.81	$4.16	$3.90	$3.99	$3.69
Capital Efficiency					
Farm capital/worker	$128,138	$141,878	$155,055	$163,243	$184,485
Farm capital/cow	6,689	6,042	6,170	6,165	6,027
Farm capital/til. acre owned	2,433	2,742	2,750	2,677	2,910
Real estate/cow	3,650	3,152	3,011	3,019	2,780
Machinery investment/cow	1,274	1,147	1,246	1,225	1,293
Capital turnover, years	2.89	2.61	2.59	2.55	2.41
Labor Efficiency					
Worker equivalent	1.69	2.01	2.43	2.87	2.95
Operator/manager equivalent	1.00	1.13	1.32	1.22	1.37
Milk sold/worker, lbs.	278,245	356,436	397,685	413,239	484,881
Cows/worker	20	23	25	26	31
Work units/worker	204	247	266	287	327
Labor cost/cow	$480	$411	$400	$388	$357
Labor cost/tillable acre	$133	$120	$123	$111	$107

*Average of all farms, not only those reporting data.

SELECTED BUSINESS FACTORS BY HERD SIZE
414 New York Dairy Farms, 1986

Item — Farms with:	100 to 149 Cows	150 to 199 Cows	200 to 249 Cows	250 or More Cows
Number of farms	62	22	10	19
Cropping Program Analysis				
Total tillable acres	364	506	678	839
Tillable acres rented*	126	202	277	267
Hay crop acres*	180	228	268	310
Corn silage acres*	81	129	158	351
Hay crop, tons DM/acre	3.0	2.9	3.1	3.5
Corn silage, tons/acre	14.5	13.8	15.5	16.1
Oats, bushels/acre	67.4	55.4	50.0	57.5
Forage DM per cow, tons	7.9	7.6	7.4	7.8
Tillable acres/cow	3.1	3.0	3.0	2.2
Fert. & lime exp./til. acre	$27.87	$26.45	$30.13	$36.38
Total machinery costs	$50,654	$64,609	$92,196	$131,927
Machinery cost/tillable acre	$139	$128	$136	$157
Dairy Analysis				
Number of cows	119	172	226	382
Number of heifers	102	139	176	314
Milk sold, lbs.	1,917,759	2,608,778	3,744,053	7,104,584
Milk sold/cow, lbs.	16,055	15,199	16,552	18,593
Operating cost of prod. milk/cwt.	$9.17	$9.82	$9.93	$9.54
Total cost of prod. milk/cwt.	$13.65	$13.71	$13.26	$12.37
Price/cwt. milk sold	$12.81	$12.81	$12.67	$12.70
Purchased dairy feed/cow	$463	$458	$569	$616
Purchased dairy feed/cwt. milk	$2.89	$3.02	$3.44	$3.31
Purchased grain & conc. as % of milk receipts	22%	23%	26%	25%
Purchased feed & crop expense/cwt. milk	$3.87	$4.00	$4.41	$4.15
Capital Efficiency				
Farm capital/worker	$198,727	$196,654	$201,206	$211,602
Farm capital/cow	5,939	5,339	5,204	5,183
Farm capital/til. acre owned	2,968	3,014	2,943	3,463
Real estate/cow	2,789	2,461	2,170	2,377
Machinery investment/cow	1,073	991	909	706
Capital turnover, years	2.32	2.22	2.02	1.85
Labor Efficiency				
Worker equivalent	3.57	4.66	5.85	9.36
Operator/manager equivalent	1.56	1.45	1.50	1.54
Milk sold/worker, lbs.	537,187	559,824	640,009	759,037
Cows/worker	33	37	39	41
Work units/worker	355	385	407	422
Labor cost/cow	$343	$362	$372	$423
Labor cost/tillable acre	$113	$123	$124	$192

*Average of all farms, not only those reporting data.

IDENTIFY AND SET GOALS

If businesses are to be successful, they must have direction. Written goals help provide businesses with an identifiable direction over both the long and the short term. Goal setting is as important on a dairy farm as it is in other businesses. Written goals are a tool which farm operators can use to ensure that the business continues to move in the proper direction.

1. Goals should be specific.

2. Goals should be realistic and achievable.

3. The achievement of the goal should be verifiable.

4. You should designate a time when each goal will be achieved.

Goal setting on a dairy farm does not have to be a complex process. In many cases it provides a process for writing down and agreeing on goals that you have already given some thought to. It is also important to remember that once you write out your goals they are not cast in concrete. If a change takes place which has a major impact on the farm business, the goals should be reworked to accommodate that change. Refer to your goals as often as necessary to keep the farm business progressing.

It is important to identify both long and short range goals when looking at the future of your farm business.

A suggested format for writing out your goals is as follows:

a. Begin with a general philosophy statement which incorporates both business and family goals.

b. Identify 4-6 long range goals.

c. Identify specific short range goals for a given time period (i.e., one year).

Worksheet for Setting Goals

I. General Philosophy and Objectives

_____

_____

_____

_____

_____

_____

_____

_____

_____

Worksheet for Setting Goals (continued)

II. Long Range Goals (require two or more years to achieve)

III. Short Range Goals (possible to achieve in one or two years).

What	How	When

NOTE: Once long and short range goals have been identified, it is helpful to rank them in order of priority.

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