DAIRY FARM BUSINESS SUMMARY

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NORTHERN NEW YORK REGION 1996

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Northern New York
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NORTHERN NEW YORK REGION*

INTRODUCTION

Dairy farm managers throughout New York State have been participating in Cornell Cooperative Extension's farm business summary and analysis program since the early 1950's. Managers of each participating farm business receive a comprehensive summary and analysis of the farm business. The information in this report represents an average of the data submitted from dairy farms in the Northern New York Region for 1996.

Program Objective

The primary objective of the dairy farm business summary, DFBS, is to help farm managers improve the business and financial management of their business through appropriate use of historical farm data and the application of modern farm business analysis techniques. This information can also be used to establish goals that will enable the business to better meet its objectives. In short, DFBS provides business and financial information needed in identifying and evaluating strengths and weaknesses of the farm business.

Format Features

This regional report follows the same general format as in the 1996 DFBS individual farm report received by all participating dairy farmers. The analysis tables have an open column or section labeled My Farm. It may be used by any dairy farm manager who wants to compare his or her business with the average data of this region. A DFBS Data Check-in Form can be used by non-DFBS participants to summarize their businesses.

This report features:

(1) an income statement including accrual adjustments for farm business expenses and receipts, as well as measures of profitability with and without appreciation,

(2) a complete balance sheet with analytical ratios;

(3) a statement of owner equity which shows the sources of the change in owner equity during the year;

(4) a cash flow statement and debt repayment ability analysis;

(5) an analysis of crop acreage, yields, and expenses;

(6) an analysis of dairy livestock numbers, production, and expenses; and

(7) a capital and labor efficiency analysis.

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*The Northern New York Region, with the number of participating farms in parentheses, is comprised of Clinton (4), Essex (6), Franklin (1), Jefferson (7), Lewis (10), and St. Lawrence (5) counties. This report was written by Robert A. Milligan, Professor, Agricultural Economics. Linda D. Putnam was in charge of data analysis. Melody A. Clark prepared the publication. Farm business data were collected by Cooperative Extension Educators Patty Beyer, Anita Deming, Trent Teegerstrom, Craig Trowbridge and George Yarnall.

SUMMARY AND ANALYSIS OF THE FARM BUSINESS

Business Characteristics

Planning the optimal management strategies is a crucial component 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 farms with each characteristic.

BUSINESS CHARACTERISTICS
33 Northern New York Region Dairy Farms, 1996

Type of Farm	Number
Dairy	33
Part-time dairy	0
Dairy cash-crop	0

Type of Ownership	Number
Owner	30
Renter	3

Type of Business	Number
Sole Proprietorship	21
Partnership	11
Corporation	1

Type of Barn	Number
Stanchion or Tie-Stall	18
Freestall	12
Combination	3

Milking Frequency	Number
2 times per day	30
3 times per day	2
Other	1

Milking System	Number
Bucket & carry	0
Dumping station	0
Pipeline	21
Herringbone parlor	8
Other parlor	4

Production Records	Number
DHIC	26
Owner-Sampler	2
Other	1
None	4

bST Usage	Number
Used on <25% of herd	2
Used on 25-75% of herd	9
Used on >75% of herd	2
Stopped using in 1996	1
Not used in 1996	19

Business Record System	Number
Account Book	13
Agrifax (mail-in only)	2
On-farm computer	16
Other	2

The averages used in this report were compiled using data from all the participating dairy farms in this region unless noted otherwise. There are full-time dairy farms, part-time farms, dairy cash-crop farms, farm renters, partnerships, and corporations included in the average. Average data for these specific types of farms are presented in the State Business Summary.

Income Statement

In order for an income statement to accurately measure farm income, it must include cash transactions and accrual adjustments (changes in accounts payable, accounts receivable, inventories, and prepaid expenses).

Cash paid is the actual cash outlay during the year and does not necessarily represent the cost of goods and services actually used in 1996.

Change in inventory: Increases in inventories of supplies and other purchased inputs are subtracted in computing accrual expenses because they represent purchased inputs not actually used during the year. Decreases in purchased inventories are added to expenses because they represent inputs purchased in a prior year and used this year.

CASH AND ACCRUAL FARM EXPENSES

33 Northern New York Region Dairy Farms, 1996

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
Hired Labor	$ 28,137		$ 11	<<	$ 9		$ 28,135
Feed							
Dairy grain & concentrate	82,041		2,475		-2,847		76,719
Dairy roughage	1,108		34		158		1,232
Nondairy	21		4		0		17
Machinery							
Machinery hire, rent & lease	6,023		0	<<	-81		5,942
Machinery repairs & farm vehicle exp.	16,672		61		-46		16,565
Fuel, oil & grease	6,163		72		-48		6,042
Livestock							
Replacement livestock	569		21	<<	-91		457
Breeding	3,233		38		18		3,212
Veterinary & medicine	7,448		21		-8		7,419
Milk marketing	9,364		0	<<	-6		9,359
Bedding	1,322		119		-48		1,154
Milking supplies	6,649		6		-17		6,626
Cattle lease & rent	0		0	<<	0		0
Custom boarding	3,595		0	<<	-340		3,255
Other livestock expense	7,175		-6		-15		7,167
Crops							
Fertilizer & lime	7,453		788		-77		6,588
Seeds & plants	6,759		580		-23		6,157
Spray, other crop expense	6,289		273		42		6,058
Real Estate							
Land, building & fence repair	6,061		-6		2		6,069
Taxes	6,434		224	<<	-109		6,101
Rent & lease	5,571		0	<<	0		5,571
Other							
Insurance	4,802		-119	<<	-23		4,899
Utilities (farm share)	7,557		0	<<	51		7,608
Interest paid	14,919		0	<<	-1		14,917
Miscellaneous	3,299		0		-74		3,226
Total Operating	$ 248,662		$ 4,595		$ -3,573		$ 240,494
Expansion livestock	$ 4,667		0	<<	0		4,667
Machinery depreciation							18,889
Building depreciation							8,434
TOTAL ACCRUAL EXPENSES							$ 272,484

Change in prepaid expenses (noted above by <<) is a net change in non-inventory expenses that have been paid in advance of their use. For example, prepaid lease expense on the beginning of year balance sheet represents last year's payment for use of the asset during this year. End of year prepaid expense represents payments made this year for next year's use of the asset. Adding payments made last year for this year's use of the asset, and subtracting payments made this year for next year's use of the asset is accomplished by subtracting the difference.

Change in accounts payable: An increase in accounts payable from beginning to end of year is added when calculating accrual expenses because these expenses were incurred (resources used) in 1996 but not paid for. A decrease is subtracted because it represents payment for resources used before 1996.

Accrual expenses are an estimate of the costs of inputs actually used in this year's production. They are the cash paid, less changes in inventory and prepaid expenses, plus accounts payable.

CASH AND ACCRUAL FARM RECEIPTS
33 Northern New York Region Dairy Farms, 1996

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	$ 287,860				$ -128		$ 287,732
Dairy cattle	10,424		$ 9,420		0		19,845
Dairy calves	1,677				0		1,677
Other livestock	1,325		42		0		1,367
Crops	4,644		-425		-201		4,018
Government receipts	3,232		0 *		0		3,232
Custom machine work	980				210		1,190
Gas tax refund	118				-5		113
Other	3,327				-39		3,288
Less nonfarm noncash capital**		(-)	0 **			(-)	0
Total Receipts	$ 313,587		$ 9,037		$ -162		$ 322,462

*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 of assets produced by the business 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/or quality are subtracted. Changes in inventories of crops grown are also included. An increase in advanced government receipts is subtracted from cash income because it represents income received in 1996 for the 1997 crop year in excess of funds earned for 1996. Likewise, a decrease is added to cash government receipts because it represents funds earned for 1996 but received in 1995.

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. Payments in January for milk produced in December 1996 compared to January 1996 payments for milk produced in 1995 are included as a change in accounts receivable.

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

Profitability Analysis

Farm operators* contribute labor, management, and equity capital to their businesses and the combination of these resources, and the other resources used in the business, determines profitability. 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.

These measures should be considered estimates as they include inventory values that are only estimates and they include an unknown degree of error stemming from cash flow imbalances.

* Operators are the individuals who are integrally involved in the operation and management of the farm business. They are not limited to those who are the owner of a sole proprietorship or are formally a member of the partnership or corporation.

Net farm income is the 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, and financing 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.

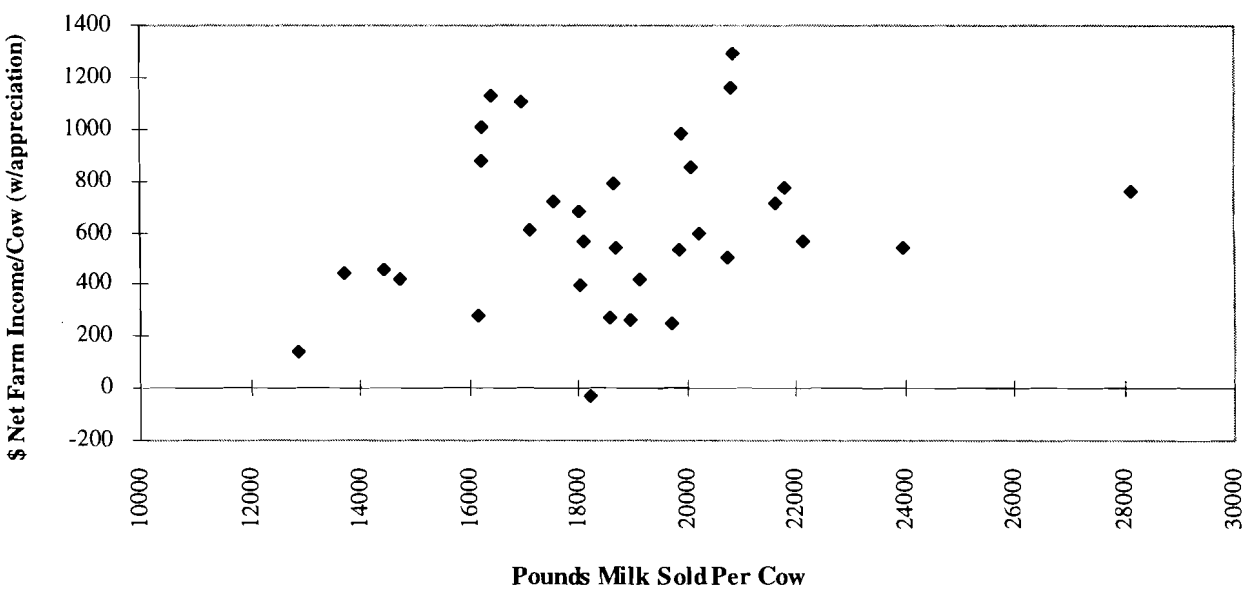
Net farm income is computed both with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than Farm Credit). Appreciation is a major factor contributing to changes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

NET FARM INCOME
33 Northern New York Region Dairy Farms, 1996

Item	Average Total	Average Per Cow	My Farm Total	My Farm Per Cow
Total accrual receipts	$ 322,462		$_____	
Appreciation: Livestock	696		_____	
Machinery	4,176		_____	
Real Estate	5,248		_____	
Other Stock & Certificates	8		_____	
Total Including Appreciation	$ 332,590		$_____	
Total accrual expenses	- 272,484		- _____	
Net Farm Income (with appreciation)	$ 60,106	$ 595	$_____	$ _____
Net Farm Income (without appreciation)	$ 49,978	$ 495	$_____	$ _____

The chart below shows the relationship between net farm income per cow (with appreciation) and pounds of milk sold per cow. Generally, farms with a higher production per cow have higher profitability per cow.

NET FARM INCOME/COW AND MILK/COW
33 Northern New York Dairy Farms, 1996



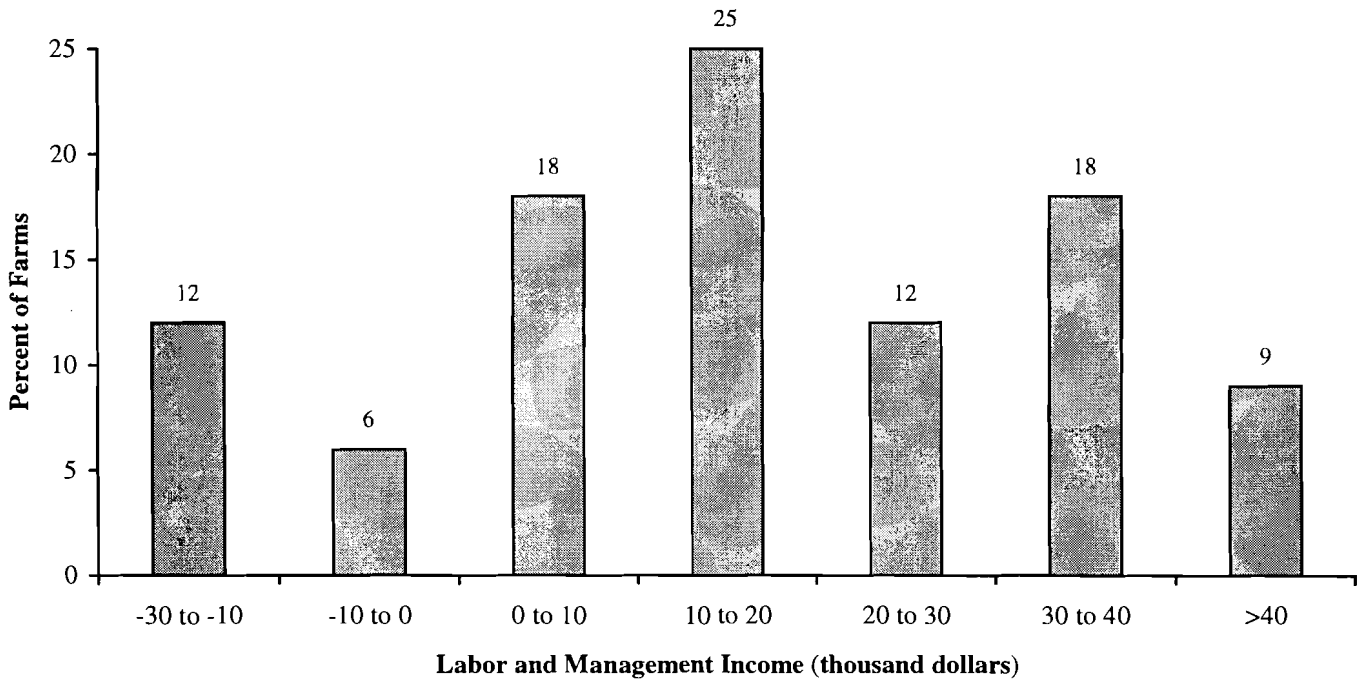
Labor and management income is the return which farm operators receive for their labor and management used in the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and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

LABOR AND MANAGEMENT INCOME
33 Northern New York Region Dairy Farms, 1996

Item	Average	My Farm
Net farm income without appreciation	$ 49,978	$ _____
Family labor unpaid @ $1,500 per month	- 5,100	- _____
Interest on $443,201 average equity capital @ 5% real rate	- 22,160	- _____
Labor & Management Income per farm (1.39 Operators/farm)	$ 22,718	$ _____
Labor & Management Income per Operator/Manager	$ 16,344	$ _____

Labor and management income per operator averaged $16,344 on these 33 farms in 1996. The range in labor and management income per operator was from about $-20,000 to more than $55,000. Returns to labor and management were negative on 18% of the farms. Labor and management income per operator was between $0 and $20,000 on 43% of the farms while 39% showed labor and management incomes of $20,000 or more per operator.

DISTRIBUTION OF LABOR & MANAGEMENT INCOMES PER OPERATOR
33 Northern New York Region Dairy Farms, 1996



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
33 Northern New York Region Dairy Farms, 1996

Item	Average	My Farm
Net farm income with appreciation	$ 60,106	$ _____
Family labor unpaid @$1,500 per month	- 5,100	- _____
Value of operators' labor & management	- 33,559	- _____
Return on equity capital with appreciation	$ 21,447	$ _____
Interest paid	+ 14,917	+ _____
Return on total capital with appreciation	$ 36,364	$ _____
Return on equity capital without appreciation	$ 11,319	$ _____
Return on total capital without appreciation	$ 26,236	$ _____
Rate of return on average equity capital:		
with appreciation	4.8%	_____ %
without appreciation	2.6%	_____ %
Rate of return on average total capital:		
with appreciation	5.6%	_____ %
without appreciation	4.1%	_____ %

Farm and Family Financial Status

The first step in evaluating the financial position of the farm is to construct a balance sheet which identifies and values 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.

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. For 1996, lease payments were discounted by 8.75 percent to obtain their present value.

Advanced government receipts are included as current liabilities. Government payments received in 1996 that are for participation in the 1997 program are the end year balance and payments received in 1995 for participation in the 1996 program are the beginning year balance.

Current Portion or principal due in the next year for intermediate and long term debt is included as a current liability.

1996 FARM BUSINESS & NONFARM BALANCE SHEET

33 Northern New York Region Dairy Farms, 1996

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 8,476	$ 8,577	Accounts payable	$ 8,820	$ 5,246
Accounts receivable	20,370	20,207	Operating debt	4,440	4,771
Prepaid expenses	172	309	Short Term	1,639	2,805
Feed & supplies	55,044	59,076	Advanced govt. receipts	0	0
			Current Portion:		
			Intermediate	17,235	18,822
			Long Term	4,418	5,687
Total Current	$ 84,062	$ 88,169	Total Current	$ 36,551	$ 37,330
Intermediate			Intermediate		
Dairy cows:			Structured debt		
owned	$ 106,036	$ 109,817	1-10 years	$ 79,856	$ 79,393
leased	0	0	Financial lease		
Heifers	48,844	55,183	(cattle/machinery)	7,564	7,041
Bulls & other livestock	685	723	Farm Credit stock	1,755	1,723
Mach. & equip. owned	135,194	147,018	Total Intermediate	$ 89,175	$ 88,157
Mach. & equip. leased	7,564	7,041			
Farm Credit stock	1,755	1,723			
Other stock/certificate	2,466	2,873			
Total Intermediate	$ 302,544	$ 324,378			
			Long Term		
Long Term			Structured debt		
Land & buildings:			>10 years	$ 76,871	$ 75,821
owned	$ 243,875	$ 247,278	Financial lease		
leased	1,352	1,251	(structures)	1,352	1,251
Total Long Term	$ 245,227	$ 248,529	Total Long Term	$ 78,223	$ 77,072
			Total Farm Liab.	$ 203,949	$ 202,559
Total Farm Assets	$ 631,833	$ 661,076	FARM NET WORTH	$ 427,884	$ 458,517

Nonfarm Assets, Liabilities & Net Worth (Average of 16 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	$ 6,970	$ 4,997	Nonfarm Liabilities	$ 866	$ 3,391
Cash value life insurance	6,639	7,363			
Nonfarm real estate	7,188	9,594			
Auto (personal share)	8,450	7,488			
Stocks & bonds	7,084	9,346			
Household furnishings	10,031	10,094			
All other nonfarm assets	8,395	9,480			
Total Nonfarm Assets	$ 54,757	$ 58,362	NONFARM NET WORTH	$ 53,891	$ 54,971

Farm & Nonfarm Assets, Liabilities, and Net Worth*	Jan. 1	Dec. 31
Total Assets	$ 686,590	$ 719,438
Total Liabilities	204,815	205,950
TOTAL FARM & NONFARM NET WORTH	$ 481,775	$ 513,488

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

The following condensed balance sheet, including deferred taxes, contains average data from only those farmers who elected to provide the additional information required to compute deferred taxes.

Deferred taxes represent an estimate of the taxes that would be paid if the farm were sold at year end fair market values on the date of the balance sheet. Accuracy is dependent on the accuracy of the market values and the tax basis data provided. Any tax liability for assets other than livestock, machinery, land, buildings and nonfarm assets is excluded. It is assumed that all gain on purchased livestock and machinery is ordinary gain and that listed market values are net of selling costs. The effects of investment tax credit carryover and recapture, carryover of operating losses, alternative minimum taxes and other than average exemptions and deductions are excluded because they have only minor influence on the taxes of most farms. The dramatic impact of including deferred taxes is clear. Total liabilities were increased 42 percent on these 11 farms by including deferred taxes.

CONDENSED BALANCE SHEET INCLUDING DEFERRED TAXES
December 31, 1995
11 New York Dairy Farms, 1995

Assets		Liabilities & Net Worth	
		Current debts & payables	$ 95,207
		Current deferred taxes	76,367
Total Current Assets	$ 128,267	Total Current Liabilities	$ 171,574
		Intermediate debts & leases	$ 132,835
		Intermediate deferred taxes	124,500
Total Inter. Assets	$ 470,523	Total Intermediate Liabilities	$ 257,335
		Long term debts & leases	$ 142,335
		Long term deferred taxes	68,412
Total Long Term Assets	$ 427,795	Total Long Term Liabilities	$ 210,804
TOTAL FARM ASSETS	$ 1,026,585	TOTAL FARM LIABILITIES	$ 639,713
		Farm Net Worth	$ 386,872
		Percent Equity (Farm)	38%
		Nonfarm debts	$ 55
		Nonfarm deferred taxes	12,287
Total Nonfarm Assets	$ 49,423	Total Nonfarm Liabilities	$ 12,842
TOTAL ASSETS	$ 1,076,008	TOTAL LIABILITIES	$ 652,555
		Total Net Worth	$ 423,453
		Percent Equity (Total)	39%

Balance sheet analysis involves examination of relative asset and debt levels for the business. Percent equity is calculated by dividing end of year net worth by end of year assets and multiplying by 100. The debt to asset ratio is compiled by dividing liabilities by assets. Low debt to asset ratios reflect business solvency and the potential capacity to borrow. Debt levels per productive unit represent old standards that are still useful if used with measures of cash flow and repayment ability.

BALANCE SHEET ANALYSIS
33 Northern New York Region Dairy Farms, 1996

Item		Average	My Farm
Financial Ratios - Farm:			
Percent equity		69%	_____ %
Debt/asset ratio:	total	0.31	_____
	long-term	0.31	_____
	intermediate/current	0.30	_____
Farm Debt Analysis:			
Accounts payable as % of total debt		3%	_____ %
Long-term liabilities as a % of total debt		38%	_____ %
Current & inter. liabilities as a % of total debt		62%	_____ %

Farm Debt Levels:	Per Cow	Per Tillable Acre Owned	Per Cow	Per Tillable Acre Owned
Total farm debt	$ 1,948	$ 1,039	$ _____	$ _____
Long-term debt	741	395	_____	_____
Intermediate & long term	1,589	847	_____	_____
Intermediate & current debt	1,207	644	_____	_____

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
33 Northern New York Region Dairy Farms, 1996

Item	Average of Region's Farms			
	Real Estate		Machinery & Equipment	
Value beginning of year		$ 243,875		$ 135,194
Purchases	$ 9,902*		$ 27,104	
Gift & inheritance	+ 0		+ 0	
Lost capital	- 3,313			
Sales	- 0		- 567	
Depreciation	- 8,434		- 18,889	
Net investment		= -1,845		= 7,648
Appreciation		+ 5,248		+ 4,176
Value end of year		$ 247,278		$ 147,018

*$3,047 and $6,855 buildings and/or depreciable improvements.

The Statement of Owner Equity has two purposes. It allows (1) verification that the accrual income statement and market value balance sheet are consistent (in accountants terms, they reconcile) and (2) identification of the causes of change in equity that occurred on the farm during the year. The Statement of Owner Equity allows you to determine to what degree the change in equity was caused by (1) earnings from the business, and nonfarm income, in excess of withdrawals being retained in the business (called retained earnings), (2) outside capital being invested in the business or farm capital being removed from the business (called contributed/withdrawn capital) , (3) increases or decreases in the value (price) of assets owned by the business (called change in valuation equity), and (4) the error in the business cash flow accounting.

Retained earnings is an excellent indicator of farm generated financial progress.

STATEMENT OF OWNER EQUITY (RECONCILIATION)
33 Northern New York Region Dairy Farms, 1996

Item	Average		My Farm	
Beginning of year farm net worth		$ 427,884		$ _____
Net farm income w/o appreciation	$ 49,978		$_____	
+Nonfarm cash income	+ 4,644		+_____	
-Personal withdrawals & family expenditures excluding nonfarm borrowings	- 31,918		- _____	
RETAINED EARNINGS		+ $ 22,704		+$ _____
Nonfarm noncash transfers to farm	$ 0		$_____	
+Cash used in business from nonfarm capital	+ 1,170		+_____	
-Note or mortgage from farm real estate sold (nonfarm)	- 0		- _____	
CONTRIBUTED/WITHDRAWN CAPITAL		+ $ 1,170		+$ _____
Appreciation	$ 10,128		$_____	
-Lost capital	- 3,313		- _____	
CHANGE IN VALUATION EQUITY		+ $ 6,815		+$ _____
IMBALANCE/ERROR		- 56		- $ _____
End of year net worth*		= $ 458,517		=$ _____
Change in net worth w/appreciation		$ 30,633		$ _____

Change in Net Worth

Without appreciation	$	20,505	$ _____
With appreciation	$	30,633	$ _____

*May not add due to rounding.

Cash Flow Statement

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 show net cash provided by operating activities, investing activities, financing activities and from reserves. All cash inflows and outflows, including beginning and end balances, are included. Therefore, the sum of net cash provided from all four activities should be zero. Any imbalance is the error from incorrect accounting of cash inflows/outflows. You should be aware that all profitability measures may be affected by this error.

ANNUAL CASH FLOW STATEMENT

33 Northern New York Region Dairy Farms, 1996

Item			Average		
Cash Flow from Operating Activities					
Cash farm receipts		$ 313,587			
- Cash farm expenses		248,662			
= Net cash farm income			$ 64,925		
Personal withdrawals & family expenses including nonfarm debt payments		$ 33,239			
- Nonfarm income		4,644			
- Net cash withdrawals from the farm			$ 28,595		
= Net Provided by Operating Activities				$	36,330
Cash Flow From Investing Activities					
Sale of assets:	machinery	$ 567			
	+ real estate	0			
	+ other stock & cert.	0			
= Total asset sales			$ 567		
Capital purchases:	expansion livestock	$ 4,667			
	+ machinery	27,104			
	+ real estate	9,902			
	+ other stock& cert.	399			
- Total invested in farm assets			$ 42,072		
= Net Provided by Investment Activities				$	-41,505
Cash Flow From Financing Activities					
Money borrowed (intermediate & long term)		$ 33,241			
+ Money borrowed (short term)		3,637			
+ Increase in operating debt		332			
+ Cash from nonfarm capital used in business		1,170			
+ Money borrowed - nonfarm		1,321			
= Cash inflow from financing			$ 39,701		
Principal payments (intermediate & long term)		$ 31,898			
+ Principal payments (short term)		2,472			
+ Decrease in operating debt		0			
- Cash outflow for financing			$ 34,370		
= Net Provided by Financing Activities				$	5,331
Cash Flow From Reserves					
Beginning farm cash, checking & savings			$ 8,476		
- Ending farm cash, checking & savings			8,577		
= Net Provided from Reserves				$	-101
Imbalance (error)				$	55

ANNUAL CASH FLOW STATEMENT

Item		My Farm	
Cash Flow from Operating Activities			
Cash farm receipts	$ _____		
- Cash farm expenses	_____		
= Net cash farm income		$ _____	
Personal withdrawals & family expenses including nonfarm debt payments	$ _____		
- Nonfarm income	_____		
- Net cash withdrawals from the farm		$ _____	
= Net Provided by Operating Activities			$ _____
Cash Flow From Investing Activities			
Sale of assets: machinery	$ _____		
+ real estate	_____		
+ other stock & cert.	_____		
= Total asset sales		$ _____	
Capital purchases: expansion livestock	$ _____		
+ machinery	_____		
+ real estate	_____		
+ other stock & cert.	_____		
- Total invested in farm assets		$ _____	
= Net Provided by Investment Activities			$ _____
Cash Flow From Financing Activities			
Money borrowed (intermediate & long term)	$ _____		
+ Money borrowed (short term)	_____		
+ Increase in operating debt	_____		
+ Cash from nonfarm capital used in business	_____		
+ Money borrowed - nonfarm	_____		
= Cash inflow from financing		$ _____	
Principal payments (intermediate & long term)	$ _____		
+ Principal payments (short term)	_____		
+ Decrease in operating debt	_____		
- Cash outflow for financing		$ _____	
= Net Provided by Financing Activities			$ _____
Cash Flow From Reserves			
Beginning farm cash, checking & savings		$ _____	
- Ending farm cash, checking & savings		_____	
= Net Provided from Reserves			$ _____
Imbalance (error)			$ _____

Repayment Analysis

A valuable use of 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 1996. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 1997 debt payments shown below.

FARM DEBT PAYMENTS PLANNED

Same 23 Northern New York Region Dairy Farms, 1995 & 1996

	Average			My Farm		
	1996 Payments		Planned	1996 Payments		Planned
Debt Payments	Planned	Made	1997	Planned	Made	1997
Long term	$ 5,643	$ 11,671	$ 6,085	$ _____	$ _____	$ _____
Intermediate term	14,229	39,259	12,834	_____	_____	_____
Short term	574	3,300	720	_____	_____	_____
Operating (net reduction)	0	342	2,596	_____	_____	_____
Accounts payable (net reduction)	0	4,009	398	_____	_____	_____
Total	$ 20,446	$ 58,581	$ 22,633	$ _____	$ _____	$ _____
Per cow	$ 184	$ 528		$ _____	$ _____	
Per cwt. 1996 milk	$ 0.94	$ 2.69		$ _____	$ _____	
Percent of total 1996 farm receipts	6%	16%		_____	_____	
Percent of 1996 milk receipts	6%	18%		_____	_____	

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 payments planned for 1996 (as of December 31, 1995) that could have been made with the amount available for debt service in 1996. Farmers who did not participate in DFBS in 1995 have their 1996 cash flow coverage ratio based on planned debt payments for 1997.

CASH FLOW COVERAGE RATIO

Same 23 Northern New York Region Dairy Farms, 1995 & 1996

Item	Average	My Farm
Cash farm receipts	$ 351,392	$ _____
- Cash farm expenses	275,455	_____
+ Interest paid	15,440	_____
- Net personal withdrawals from farm*	32,838	_____
(A) = Amount Available for Debt Service	$ 58,539	$ _____
(B) = Debt Payments Planned for 1996 (as of December 31, 1995)	$ 20,446	$ _____
(A/B) = Cash Flow Coverage Ratio for 1996	2.86	_____

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

ANNUAL CASH FLOW WORKSHEET

Item	Regional Average Per Cow	Regional Average Per Cwt.	My Farm Per Cow/ Per Cwt.	Expected Change	1997 Projection
Average no. of cows	101		_____	_____	_____
Total cwt. of milk sold		19,379	_____	_____	_____
Accrual Oper. Receipts					
Milk	$ 2,849	$ 14.85	$ _____	_____	$ _____
Dairy cattle	196	1.02	_____	_____	_____
Dairy calves	17	0.09	_____	_____	_____
Other livestock	14	0.07	_____	_____	_____
Crops	40	0.21	_____	_____	_____
Misc. Receipts	77	0.40	_____	_____	_____
Total	$ 3,193	$ 16.64	$ _____	_____	$ _____
Accrual Operating Expenses					
Hired labor	$ 279	$ 1.45	$ _____	_____	$ _____
Dairy grain & concentrate	760	3.96	_____	_____	_____
Dairy roughage	12	0.06	_____	_____	_____
Nondairy feed	0	0.00	_____	_____	_____
Mach. hire, rent & lease	59	0.31	_____	_____	_____
Mach. repair & vehicle exp.	164	0.85	_____	_____	_____
Fuel, oil & grease	60	0.31	_____	_____	_____
Replacement livestock	5	0.02	_____	_____	_____
Breeding	32	0.17	_____	_____	_____
Vet & medicine	73	0.38	_____	_____	_____
Milk marketing	93	0.48	_____	_____	_____
Bedding	11	0.06	_____	_____	_____
Milking supplies	66	0.34	_____	_____	_____
Cattle lease	0	0.00	_____	_____	_____
Custom boarding	32	0.17	_____	_____	_____
Other livestock exp.	71	0.37	_____	_____	_____
Fertilizer & lime	65	0.34	_____	_____	_____
Seeds & plants	61	0.32	_____	_____	_____
Spray & other crop exp.	60	0.31	_____	_____	_____
Land, bldg., fence repair	60	0.31	_____	_____	_____
Taxes	60	0.31	_____	_____	_____
Real estate rent & lease	55	0.29	_____	_____	_____
Insurance	49	0.25	_____	_____	_____
Utilities	75	0.39	_____	_____	_____
Miscellaneous	32	0.17	_____	_____	_____
Total Less Interest Paid	$ 2,233	$ 11.64	$ _____	_____	$ _____
Net Accrual Operating Income		Total			
(without interest paid)		$ 96,885	$ _____		$ _____
- Change in livestock & crop invent.*		9,037	_____	_____	_____
- Change in accounts receivable		-162	_____	_____	_____
- Change in feed & supply inventory**		4,595	_____	_____	_____
+ Change in accounts payable***		-3,572	_____	_____	_____
NET CASH FLOW		$ 79,843	$ _____		$ _____
- Net family withdrawals		$ 27,274	_____	_____	_____
Available for Farm		$ 52,569	$ _____		_____
- Farm debt payments		52,218	_____	_____	_____
Available for Farm Investment		$ 351	$ _____		$ _____
- Capital purchases		$ 42,072	_____	_____	_____
Additional Capital Needed			$ _____	_____	$ _____

*Includes change in advance government receipts. **Includes change in prepaid expenses. ***Excludes change in interest account payable.

Cropping Analysis

The cropping program is an important part of the dairy farm business and often represents opportunities for improved productivity and profitability. A complete evaluation of what the available land resources are, how they are being used, how well crops are producing, and what it costs to produce them is important to evaluating alternative cropping and feed purchasing alternatives.

LAND RESOURCES AND CROP PRODUCTION
33 Northern New York Region Dairy Farms, 1996

Item	Average			My Farm		
Land	Owned	Rented	Total	Owned	Rented	Total
Tillable	195	124	319	_____	_____	_____
Nontillable	43	22	65	_____	_____	_____
Other nontillable	120	10	129	_____	_____	_____
Total	358	156	514	_____	_____	_____

Crop Yields	Farms	Acres*	Prod/Acre	Acres	Prod/Acre
Hay crop	33	175	2.71 tn DM	_____	_____ tn DM
Corn silage	33	75	13.95 tn	_____	_____ tn
			4.69 tn DM		_____ tn DM
Other forage	6	20	2.60 tn DM	_____	_____ tn DM
Total forage	33	254	3.30 tn DM	_____	_____ tn DM
Corn grain	14	70	115 bu	_____	_____ bu
Oats	3	50	45 bu	_____	_____ bu
Wheat	1	27	45 bu	_____	_____ bu
Other crops	5	62		_____	
Tillable pasture	13	42		_____	
Idle	9	17		_____	
Total Tillable Acres	33	319		_____	

*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were hay crop 175, corn silage 75, corn grain 30, oats 5, tillable pasture 17, and idle 5.

Average crop acres and yields compiled for the region are for the 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 crop/dairy ratios indicate the relationship between forage production, forage production resources, and the dairy herd.

CROP/DAIRY RATIOS
33 Northern New York Region Dairy Farms, 1996

Item	Average	My Farm
Total tillable acres per cow	3.16	_____
Total forage acres per cow	2.51	_____
Harvested forage dry matter, tons per cow	8.29	_____

Cropping Analysis (continued)

A number of cooperators have allocated crop expenses among the hay crop, corn, and other crops produced. 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. Rotational grazing was used on 11 farms in the region.

CROP RELATED ACCRUAL EXPENSES
Northern New York Region Dairy Farms Reporting, 1996

Item	Total Per Till. Acre	All Corn Per Acre	Corn Silage Per Ton DM	Corn Grain Per Dry Sh. Bu.	Hay Crop Per Acre	Hay Crop Per Ton DM	Pasture Per Till Acre	Pasture Per Total Acre
No. of farms reporting	33	17			12		4	
Ave. number of acres	319	95			153		69	195
Fert. & lime	$ 20.65	$ 55.06	$ 12.69	$ 0.50	$ 8.90	$ 2.87	$ 19.35	$ 6.85
Seeds & plants	19.30	29.55	6.81	0.27	6.88	2.22	1.12	0.39
Spray & other crop exp.	18.99	38.79	8.94	0.35	3.05	0.99	0.00	0.00
TOTAL	$ 58.94	$ 123.40	$ 28.44	$ 1.12	$ 18.83	$ 6.08	$ 20.47	$ 7.24
My Farm								
Fert. & lime	$ _____	$ _____	$_____	$_____	$ _____	$ _____	$ _____	$_____
Seeds & plants	_____	_____	_____	_____	_____	_____	_____	_____
Spray & other crop exp.	_____	_____	_____	_____	_____	_____	_____	_____
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
33 Northern New York Region Dairy Farms, 1996

Machinery Expense	Average Total Expenses	Average Per Till. Acre	My Farm Total Expenses	My Farm Per Till. Acre
Fuel, oil & grease	$ 6,042	$ 18.94	$ _____	$ _____
Mach. repair & vehicle exp.	16,565	51.93	_____	_____
Machine hire, rent & lease	5,942	18.63	_____	_____
Interest (5%)	7,420	23.26	_____	_____
Depreciation	18,889	59.21	_____	_____
Total	$ 54,858	$ 171.79	$ _____	$ _____

Dairy Analysis

Analysis of the dairy enterprise can reveal 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. Any change in inventory is included as an accrual farm receipt when calculating all of the profitability measures on pages 6 and 7.

DAIRY HERD INVENTORY

33 Northern New York Region Dairy Farms, 1996

	Dairy Cows		Heifer					
			Bred		Open		Calves	
Item	No.	Value	No.	Value	No.	Value	No.	Value
Beg. year (owned)	101	$ 106,036	28	$ 26,502	30	$ 16,987	20	$ 5,355
+ Change w/o apprec.		3,190		2,175		3,387		669
+ Appreciation		591		-66		169		4
End year (owned)	104	$ 109,817	31	$ 28,611	36	$ 20,543	23	$ 6,028
End including leased	104							
Average number	101		82	(all age groups)				
My Farm:								
Beg. year (owned)	_____	$_____	_____	$ _____	_____	$_____	_____	$ _____
+ Change w/o apprec.		_____		_____		_____		_____
+ Appreciation		_____		_____		_____		_____
End year (owned)	_____	$_____	_____	$ _____	_____	$_____	_____	$ _____
End including leased	_____							
Average number	_____		_____	(all age groups)				

Total milk sold and milk sold per cow are extremely valuable measures of size and productivity, respectively, 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 their rolling herd average on the test date nearest December 31 to see how close the DHI estimate of milk produced is to actual milk sales.

MILK PRODUCTION

33 Northern New York Region Dairy Farms, 1996

Item	Average	My Farm
Total milk sold, lbs.	1,937,867	_____
Milk sold per cow, lbs.	19,175	_____
Average milk plant test, percent butterfat	3.71	_____

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 including expansion livestock purchased. Purchased inputs cost of producing milk are the operating costs plus depreciation. Total costs of producing milk include the operating costs of producing milk plus depreciation on machinery and buildings, the value of unpaid family labor, the value of operators' labor and management, and the interest charge for using equity capital.

ACCRUAL RECEIPTS FROM DAIRY, COSTS OF PRODUCING MILK, AND PROFITABILITY

33 Northern New York Region Dairy Farms, 1996

	Average			My Farm		
Item	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Accrual Cost of Producing Milk						
Operating costs	$ 210,431	$ 2,083	$ 10.86	$_____	$_____	$_____
Purchased inputs costs	$ 237,754	$ 2,354	$ 12.27	$_____	$_____	$_____
Total Costs	$ 298,573	$ 2,956	$ 15.41	$_____	$_____	$_____
Accrual Receipts From Milk	$ 287,732	$ 2,849	$ 14.85	$_____	$_____	$_____
Net Farm Income without Apprec.	$ 49,978	$ 495	$ 2.58	$_____	$_____	$_____
Net Farm Income with Apprec.	$ 60,106	$ 595	$ 3.10	$_____	$_____	$_____

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

33 Northern New York Region Dairy Farms, 1996

	Average		My Farm	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrate	$ 760	$ 3.96	$_____	$_____
Purchased dairy roughage	12	0.06	_____	_____
Total Purchased Dairy Feed	$ 772	$ 4.02	$_____	$_____
Purchased grain & conc. as % of milk receipts	27%		_____ %	
Purchased feed & crop exp.	$ 958	$ 4.99	$_____	$_____
Purchased feed & crop exp. as % of milk receipts	34%		_____ %	
Breeding	$ 32	$ 0.17	$_____	$_____
Veterinary & medicine	73	0.38	_____	_____
Milk marketing	93	0.48	_____	_____
Bedding	11	0.06	_____	_____
Milking supplies	66	0.34	_____	_____
Cattle lease	0	0.00	_____	_____
Custom boarding	32	0.17	_____	_____
Other livestock expense	71	0.37	_____	_____

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

33 Northern New York Region Dairy Farms, 1996

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	$ 211,952	$ 6,401	$ 2,027	$ 3,315
Real estate		2,444		1,266
Machinery & equipment	48,659	1,469	465	
Asset turnover ratio	0.51			
My Farm				
Farm capital	$ _____	$ _____	$ _____	$ _____
Real estate	_____	_____	_____	_____
Machinery & equipment	_____	_____	_____	_____
Asset turnover ratio	_____			

LABOR FORCE INVENTORY AND ANALYSIS

33 Northern New York Region Dairy Farms, 1996

Labor Force	Months	Age	Years of Educ.	Value of Labor & Mgmt.
Operator number 1	12.2	46	13	$ 23,993
Operator number 2	3.7	43	14	7,808
Operator number 3	1.0	47	15	1,758
Family paid	2.7			
Family unpaid	3.4			
Hired	13.5			
Total	36.6	/ 12 = 3.05 Worker Equivalent		
		1.39 Operator/Manager Equivalent		

My Farm: Total _____ / 12 = _____ Worker Equivalent

Operator's _____ / 12 = _____ Operator/Manager Equivalent

Labor Efficiency	Average Total	Average Per Worker	My Farm Total	My Farm Per Worker
Cows, average number	101	33	_____	_____
Milk sold, pounds	1,937,867	635,366	_____	_____
Tillable acres	319	105	_____	_____
Work units	1,069	350	_____	_____

Labor Costs	Average Total	Average Per Cow	Average Per Cwt.	My Farm Total	My Farm Per Cow	My Farm Per Cwt.
Value of operator(s) labor ($1,500/mo.)	$ 25,350	$ 251	$ 1.31	$_____	$ _____	$ _____
Family unpaid ($1,500/mo.)	5,100	50	0.26	_____	_____	_____
Hired	28,135	279	1.45	_____	_____	_____
Total Labor	$ 58,585	$ 580	$ 3.02	$_____	$ _____	$ _____
Machinery Cost	$ 54,858	$ 543	$ 2.83	$_____	$ _____	$ _____
Total Labor & Mach.	$ 113,443	$ 1,123	$ 5.85	$_____	$ _____	$ _____

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 can be helpful to establishing your goals for these parameters. It is equally important for you to determine the progress your business has made over the past two or three years, to compare this progress to your goals, and to set goals for the future.

PROGRESS OF THE FARM BUSINESS
Same 23 Northern New York Region Dairy Farms, 1995 & 1996

	Average of 23 Farms*		My Farm		
Selected Factors	1995	1996	1995	1996	Goal
Size of Business					
Average number of cows	106	111	_____	_____	_____
Average number of heifers	83	87	_____	_____	_____
Milk sold, lbs.	2,100,303	2,174,554	_____	_____	_____
Worker equivalent	3.11	3.23	_____	_____	_____
Total tillable acres	334	337	_____	_____	_____
Rates of Production					
Milk sold per cow, lbs.	19,814	19,637	_____	_____	_____
Hay DM per acre, tons	2.9	2.8	_____	_____	_____
Corn silage per acre, tons	15.6	14.1	_____	_____	_____
Labor Efficiency					
Cows per worker	34	34	_____	_____	_____
Milk sold/worker, lbs.	675,339	673,237	_____	_____	_____
Cost Control					
Grain & conc. purchased as % of milk sales	28%	26%	_____ %	_____ %	_____ %
Dairy feed & crop exp. per cwt. milk	$ 4.41	$ 4.93	$_____	$ _____	$ _____
Labor & mach. costs/cow	$ 1,013	$ 1,100	$_____	$ _____	$ _____
Operating cost of producing cwt. of milk	$ 9.62	$ 10.85	$_____	$ _____	$ _____
Capital Efficiency**					
Farm capital per cow	$ 6,162	$ 6,123	$_____	$ _____	$ _____
Mach. & equip. per cow	$ 1,372	$ 1,383	$_____	$ _____	$ _____
Asset turnover ratio	0.50	0.54	_____	_____	_____
Profitability					
Net farm income w/o apprec.	$ 42,459	$ 56,208	$_____	$ _____	$ _____
Net farm income w/apprec.	$ 53,551	$ 65,784	$_____	$ _____	$ _____
Labor & mgt. income per operator/manager	$ 11,119	$ 20,067	$_____	$ _____	$ _____
Rate of return on equity capital w/appreciation	2.9%	5.6%	_____ %	_____ %	_____ %
Rate of return on all capital w/appreciation	4.7%	6.0%	_____ %	_____ %	_____ %
Financial Summary					
Farm net worth, end year	$ 453,595	$ 470,954	$_____	$ _____	$ _____
Debt to asset ratio	0.32	0.32	_____	_____	_____
Farm debt per cow	$ 1,882	$ 1,978	$_____	$ _____	$ _____

*Farms participating both years.
**Average for the year.

Regional Farm Business Chart

The Farm Business Chart is a tool which can be used in analyzing your business. Compare your business by drawing a line through or near the figure in each column which represents your current level of performance. The five figures in each column represent the average of each 20 percent or quintile of farms included in the regional summary. Use this information to identify business areas where more challenging goals are needed.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS
33 Northern New York Region Dairy Farms, 1996

Size of Business			Rate of Production			Labor Efficiency	
Worker Equiv-alent	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
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
5.56	203	4,058,701	23,093	4.5	20	54	1,003,407
3.40	115	2,300,744	20,277	3.2	17	37	727,521
2.82	84	1,585,581	18,848	2.7	15	32	597,613
2.31	73	1,279,423	17,463	2.3	13	27	499,830
1.59	47	819,702	14,909	1.5	8	21	377,212

Cost Control					
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(10)	(10)	(11)	(11)	(10)	(10)
$422	17%	$324	$806	$638	$3.71
663	24	441	970	825	4.47
749	27	533	1,137	907	4.92
829	31	634	1,292	1,034	5.41
1,085	36	821	1,616	1,287	6.42

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income w/Apprec.	Net Farm Inc. w/o Apprec.	Labor & Mgt. Inc. Per Oper.	Change in Net Worth w/Apprec.
(10)	(10)	(10)	(3)	(3)	(3)	(6)
$3,464	$8.61	$13.81	$117,959	$102,084	$43,047	$75,471
2,954	10.31	14.66	77,839	67,448	29,507	38,939
2,799	10.91	15.41	58,354	47,958	17,080	25,191
2,575	11.40	16.40	41,246	32,296	7,258	16,533
2,196	12.38	19.63	15,922	10,037	-12,746	4,622

*Page number of the participant's DFBS where the factor is located.

New York State Farm Business Charts

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 321 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.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS
321 New York Dairy Farms, 1995

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-alent	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
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
12.9	584	12,747,839	23,974	5.2	22	56	1,089,131
6.9	252	5,319,020	21,921	3.9	19	44	901,135
5.2	181	3,558,382	21,104	3.4	18	40	800,305
4.2	136	2,659,236	20,216	2.9	16	36	706,048
3.6	114	2,160,673	19,389	2.7	15	33	635,059
3.1	95	1,740,922	18,797	2.4	14	30	579,646
2.6	73	1,368,629	18,104	2.2	13	29	533,945
2.2	62	1,106,737	17,095	1.9	12	26	464,985
1.8	50	833,091	15,706	1.6	10	23	394,437
1.4	37	570,337	13,082	1.1	7	17	279,221

Cost Control					
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(10)	(10)	(11)	(11)	(10)	(10)
$362	16%	$215	$669	$497	$2.93
498	21	294	806	639	3.65
566	24	337	866	713	3.97
616	26	366	923	784	4.19
661	27	397	971	843	4.41
707	29	429	1,027	883	4.60
755	30	466	1,105	919	4.79
805	32	510	1,182	974	5.03
868	34	564	1,254	1,052	5.34
985	39	726	1,492	1,204	6.15

*Page number of the participant's DFBS where the factor is located.

FARM BUSINESS CHART FOR
FARM MANAGEMENT COOPERATORS
321 New York Dairy Farms, 1995

Milk Receipts Per Cow	Milk Receipts Per Cwt.	Oper. Cost Milk Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cow	Total Cost Production Per Cwt.
(10)	(10)	(10)	(10)	(10)	(10)
$3,161	$13.95	$1,156	$7.16	$2,062	$11.75
2,870	13.55	1,515	8.79	2,316	12.79
2,727	13.33	1,667	9.39	2,491	13.28
2,618	13.15	1,803	9.80	2,624	13.82
2,526	13.02	1,933	10.18	2,739	14.19
2,447	12.90	2,051	10.54	2,840	14.63
2,349	12.81	2,149	10.99	2,928	15.28
2,231	12.69	2,269	11.36	3,040	16.05
2,032	12.55	2,390	12.08	3,222	17.07
1,684	12.13	2,680	13.43	3,646	20.60

Profitability

Net Farm Income Without Appreciation			Net Farm Income With Appreciation		Labor & Management Income	
Total	Per Cow	As % of Total Accrual Receipts	Total	Per Cow	Per Farm	Per Operator
(3)	(10)	(3)	(3)	(10)	(3)	(3)
$241,346	$881	28.8%	$304,248	$992	$154,049	$104,666
95,284	601	20.9	106,273	663	53,202	31,707
63,686	488	16.9	71,128	551	30,669	20,493
45,922	403	14.4	51,234	459	18,768	12,917
34,731	346	11.9	38,124	385	9,393	6,876
24,327	263	10.0	30,424	318	1,424	875
15,103	183	6.8	20,465	226	-7,053	-5,443
8,344	94	3.6	12,249	137	-16,985	-12,785
-3,725	-45	-1.4	-225	-9	-28,613	-26,054
-25,068	-302	-14.0	-21,201	-284	-57,804	-52,230

Farm Business Charts for farms with freestall barns and 150 cows or less, 151-300 cows, and more than 300 cows; and farms with conventional barns with 60 cows or less and more than 60 cows are shown on pages 28-32.

Financial Analysis Chart

The farm financial analysis chart on page 25 is designed just like the Farm Business Chart and may be used to assess the financial health of the farm business. Most of the financial measures used in the chart are defined on pages 6, 10, 14 and 20 of this publication. References to DFBS output page numbers for participating dairy farmers are provided in the table headings.

FINANCIAL ANALYSIS CHART

321 New York Dairy Farms, 1995

Liquidity (repayment)				
Planned Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio	Debt Payments as Percent of Milk Sales	Debt Per Cow
(8)*	(12)	(8)	(8)	(5)
$49	$800	2.94	5%	$181
210	589	1.50	10	811
288	526	1.22	12	1,430
344	472	1.06	14	1,761
409	421	0.92	17	2,107
470	367	0.83	18	2,454
511	305	0.72	21	2,726
568	234	0.53	23	3,051
640	144	0.30	27	3,476
842	-124	-0.36	38	4,330

Solvency				Profitability	
		Debt/Asset Ratio		Percent Rate of Return with appreciation on:	
Leverage Ratio**	Percent Equity	Current & Intermediate	Long Term	Equity	Investment**
	(5)	(5)	(5)	(3)	(3)
0.03	97%	0.02	0.00	22%	13%
0.14	88	0.10	0.00	8	8
0.26	79	0.17	0.07	5	6
0.37	73	0.25	0.19	3	5
0.49	67	0.33	0.28	1	3
0.65	61	0.39	0.37	-1	2
0.82	54	0.45	0.43	-3	0
0.99	50	0.52	0.55	-6	-2
1.31	43	0.61	0.66	-11	-4
3.52	30	0.89	0.87	-35	-9

Efficiency (Capital)				
Asset Turnover (ratio)	Real Estate Investment Per Cow	Machinery Investment Per Cow	Total Farm Assets Per Cow	Change in Net Worth w/Appreciation
(11)	(11)	(11)	(11)	(6)
.71	$1,330	$503	$4,207	$194,829
.58	1,932	724	5,131	62,523
.54	2,197	865	5,548	36,676
.50	2,466	981	5,904	22,792
.45	2,749	1,098	6,350	12,932
.41	3,040	1,243	6,746	6,448
.38	3,455	1,393	7,239	356
.34	3,899	1,595	7,880	-7,042
.30	4,480	1,913	8,673	-18,529
.21	6,579	2,653	11,340	-52,292

*Page number of the participant's DFBS where the factor is located.

**Dollars of debt per dollar of equity, computed by dividing total liabilities by total equity.

Comparison 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 have used as many of the same physical characteristics as possible as the farm being analyzed. To assist in this endeavor, dairy farms in the summary have been divided into those with freestall and those with conventional housing. Conventional housing includes stanchion and tiestall barns. Within each group, is a further classification by size of the dairy herd.

The table on page 27 includes the average values for the resulting five groups of dairy farms. The average size of farms in the five groups ranges from 45 cows on the small conventional farms to 573 cows on the largest freestall farms.

The largest freestall farms averaged the highest milk output per cow and per worker, the lowest total cost of production and investment per cow, and the greatest returns to labor, management and capital. The smaller freestall farms showed average profits somewhat higher than the large conventional farm businesses.

Farm business charts have been computed for each of the five housing and herd size categories and are on pages 28-32. 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.

Herd Size Comparisons

A detailed comparison of profitability, financial situation and business analysis factors across herd sizes is contained on pages 42-51 of the 1995 State Summary*. As herd size increases, the average profitability generally increases (pages 44-45)*. Net farm income without appreciation averaged $7,400 per farm for the less than 40 cow farms and $202,491 per farm for those with 300 cows and over. This relationship generally holds for all measures of profitability including rate of return on capital.

Farm net worth increases rapidly as herd size increases (pages 46-49)*, even though percent equity was higher on the smaller farms. The group with more than 300 cows demonstrated the strongest ability to make debt payments.

Crop yields showed little relationship to herd size, but fertilizer and lime expenses, and machinery cost per tillable acre generally increased as herd size increased (pages 50-51)*. The farms with 300 and more cows per farm averaged 36 percent more milk sold per cow than the smallest farms. All of the groups with 70 or more cows averaged above 18,000 pounds of milk sold per cow while the farms smaller than 70 cows averaged 16,800 pounds of milk sold per cow. Farm capital per worker increased, and farm capital per cow decreased as herd size increased. Milk sold per worker increased dramatically as herd size increased, ranging from 328,467 pounds at the lowest herd size category up to 984,168 pounds at the largest size category.

*Smith, Stuart F., Wayne A. Knoblauch, and Linda D. Putnam, Dairy Farm Managment Business Summary, New York, 1995, Department of Agricultural, Resource, and Managerial Economics, Cornell University, R.B. 96-11, August 1996.

SELECTED BUSINESS FACTORS BY TYPE OF BARN AND HERD SIZE

294 New York Dairy Farms, 1995

		Conventional		Freestall		
Item	Farms with:	<= 60 Cows	>60 Cows	<=150 Cows	151-300 Cows	≥300 Cows
Number of farms		67	68	69	56	34
Cropping Program Analysis						
Total Tillable acres		149	275	328	525	1,110
Tillable acres rented*		56	100	136	243	473
Hay crop acres*		97	163	171	242	453
Corn silage acres*		24	55	77	164	444
Hay crop, tons DM/acre		1.9	2.5	2.7	3.0	3.4
Corn silage, tons/acre		12.9	13.3	14.4	14.8	17.3
Oats, bushels/acre		48	66	58	44	54
Forage DM per cow, tons		6.5	7.8	7.9	7.1	7.3
Tillable acres/cow		3.3	3.3	3.0	2.4	1.9
Fert. & lime exp./tillable acre		$16.62	$21.13	$25.44	$26.72	$29.61
Total machinery costs		$19,975	$37,128	$48,984	$90,300	$201,266
Machinery cost/tillable acre		$134	$135	$151	$172	$181
Dairy Analysis						
Number of cows		45	84	107	216	573
Number of heifers		34	69	82	164	423
Milk sold, lbs.		760,125	1,563,428	2,027,572	4,438,075	12,493,862
Milk sold/cow, lbs.		16,731	18,518	18,970	20,589	21,796
Operating cost of prod. milk/cwt.		$10.20	$10.23	$10.54	$10.76	$10.25
Total cost of prod. milk/cwt.		$16.84	$14.86	$14.74	$13.67	$12.64
Price/cwt. milk sold		$12.91	$13.01	$13.13	$13.12	$12.99
Purchased dairy feed/cow		$652	$660	$700	$807	$775
Purchased dairy feed/cwt. milk		$3.89	$3.56	$3.69	$3.92	$3.55
Purchased grain & conc. as % milk rec.		29%	27%	27%	29%	27%
Purchased feed & crop exp./cwt. milk		$4.56	$4.34	$4.59	$4.60	$4.19
Capital Efficiency						
Farm capital/worker		$181,342	$204,518	$233,993	$230,331	$258,006
Farm capital/cow		$7,733	$7,190	$7,016	$5,920	$5,657
Farm capital/tillable acre owned		$3,775	$3,468	$3,906	$4,526	$5,083
Real estate/cow		$4,063	$3,317	$3,158	$2,503	$2,436
Machinery investment/cow		$1,466	$1,450	$1,419	$986	$853
Asset turnover ratio		0.32	0.38	0.41	0.53	0.59
Labor Efficiency						
Worker equivalent		1.94	2.97	3.21	5.54	12.57
Operator/manager equivalent		1.17	1.33	1.56	1.73	2.17
Milk sold/worker, lbs.		392,608	526,924	632,592	800,951	994,087
Cows/worker		23	28	33	39	46
Labor cost/cow		$707	$584	$553	$520	$580
Labor cost/tillable acre		$215	$179	$182	$214	$299
Profitability & Balance Sheet Analysis						
Net farm income (without appreciation)		$10,662	$27,053	$29,071	$62,427	$206,228
Labor & management income/operator		$-6,342	$43	$860	$13,170	$54,041
Rate Return on all capital with appreciation		-2.3%	1.3%	2.4%	5.2%	9.4%
Farm debt/cow		$2,138	$1,853	$2,405	$2,407	$2,518
Percent equity		71%	73%	65%	58%	54%

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

FARM BUSINESS CHART FOR SMALL CONVENTIONAL STALL DAIRY FARMS

67 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 1995

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-alent	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
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
3.20	58	1,116,570	21,502	3.5	21	39	670,470
2.57	55	982,835	19,540	2.9	18	32	563,955
2.11	52	889,183	18,817	2.5	16	30	508,822
2.00	50	818,832	18,148	2.3	14	28	454,017
1.87	46	762,063	17,422	2.0	13	25	419,654
1.72	44	720,796	16,469	1.8	12	22	373,175
1.57	42	669,529	15,382	1.7	11	21	346,465
1.50	39	597,559	14,539	1.3	10	19	312,103
1.37	36	535,110	13,368	1.2	8	17	262,792
1.20	28	402,284	10,304	0.9	5	14	189,393

Cost Control					
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(10)	(10)	(11)	(11)	(10)	(10)
$278	15%	$201	$755	$358	$2.57
416	20	293	881	514	3.29
487	23	325	962	588	3.79
520	26	366	1,024	640	4.05
566	28	402	1,102	706	4.30
626	29	422	1,172	778	4.61
677	30	455	1,221	849	4.90
734	32	502	1,277	899	5.14
811	36	600	1,417	971	5.76
992	44	818	1,724	1,200	6.56

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation Total	Net Farm Income Without Appreciation Per Cow	Labor & Mgmt. Inc. Per Oper.	Change in Net Worth w/Apprec.
(10)	(10)	(10)	(3)	(10)	(3)	(6)
$2,775	$6.35	$12.93	$40,149	$898	$19,515	$39,912
2,555	7.91	14.15	26,289	605	8,128	19,432
2,450	8.67	14.80	21,507	428	6,050	11,943
2,348	9.30	15.41	15,826	333	1,532	8,794
2,268	9.93	15.73	11,631	270	-2,987	5,960
2,110	10.38	16.26	9,116	208	-6,640	1,696
1,992	10.79	17.19	5,005	112	-12,236	-5,207
1,851	11.55	18.71	-4,188	-94	-21,253	-9,317
1,712	12.53	20.45	-9,409	-228	-27,862	-18,815
1,280	13.81	25.49	-18,464	-479	-44,633	-30,642

*Page number of the participant's DFBS where the factor is located.

FARM BUSINESS CHART FOR LARGE CONVENTIONAL STALL DAIRY FARMS

68 Conventional Stall Dairy Farms with More Than 60 Cows, New York, 1995

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-alent	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
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
4.92	136	2,430,052	22,384	4.9	22	49	853,220
3.89	107	2,056,068	20,798	3.6	18	37	687,405
3.42	98	1,801,505	20,239	3.1	16	33	618,788
3.06	87	1,648,270	19,664	2.8	15	31	578,386
2.90	78	1,504,222	18,979	2.4	14	29	557,226
2.58	74	1,400,199	18,582	2.2	13	28	531,807
2.49	68	1,298,599	17,925	2.0	12	27	500,757
2.35	65	1,235,093	16,883	1.9	11	24	446,692
2.12	64	1,158,481	15,411	1.7	9	21	399,585
1.65	62	957,357	14,147	1.3	6	17	298,742

Cost Control					
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(10)	(10)	(11)	(11)	(10)	(10)
$335	14%	$212	$683	$505	$2.79
435	18	315	844	594	3.23
490	21	344	884	640	3.56
558	23	374	930	684	3.98
598	26	404	969	749	4.23
656	28	441	1,027	832	4.43
693	31	491	1,121	878	4.63
764	31	523	1,182	932	4.83
846	34	563	1,268	1,014	5.29
1,022	39	684	1,415	1,214	6.36

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Inc. Per Oper.	Change in Net Worth w/Apprec.
			Total	Per Cow		
(10)	(10)	(10)	(3)	(10)	(3)	(6)
$2,926	$6.79	$12.40	$87,656	$1,006	$32,253	$70,650
2,693	8.17	13.11	53,325	646	19,865	39,931
2,613	9.18	13.47	42,377	517	14,407	24,514
2,534	9.58	13.89	35,885	423	9,185	14,916
2,465	9.89	14.34	28,572	356	3,870	8,131
2,404	10.25	14.88	19,770	228	-3,049	1,044
2,320	10.83	15.59	12,264	165	-12,034	-8,929
2,176	11.27	16.38	5,880	72	-23,384	-16,430
2,030	12.00	17.00	-3,258	-46	-31,508	-26,729
1,882	13.71	18.86	-23,460	-314	-59,820	-60,370

*Page number of the participant's DFBS where the factor is located.

FARM BUSINESS CHART FOR SMALL FREESTALL DAIRY FARMS

69 Freestall Barn Dairy Farms with 150 or Less Cows, New York, 1995

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-alent	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
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
5.44	142	2,957,949	24,252	5.1	21	60	1,025,375
4.35	134	2,710,333	21,428	3.9	18	44	844,297
3.92	128	2,508,000	20,047	3.3	17	41	758,138
3.48	123	2,348,502	19,586	2.9	16	37	696,409
3.22	114	2,166,542	19,015	2.8	15	34	650,447
3.07	107	1,998,898	18,579	2.6	14	32	613,804
2.73	100	1,804,910	17,842	2.4	13	30	586,143
2.32	88	1,581,246	16,689	2.1	12	29	538,567
1.92	73	1,265,897	15,793	1.7	11	26	480,795
1.32	52	751,092	12,993	1.1	10	23	368,345

Cost Control					
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(10)	(10)	(11)	(11)	(10)	(10)
$382	16%	$204	$642	$534	$3.04
521	22	293	744	688	3.88
569	23	335	829	729	4.13
600	25	380	887	769	4.31
625	27	421	945	823	4.51
661	28	451	1,000	868	4.73
706	29	499	1,095	899	4.86
748	31	563	1,178	965	5.09
834	33	611	1,245	1,051	5.35
975	37	766	1,443	1,211	6.02

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation Total	Net Farm Income Without Appreciation Per Cow	Labor & Mgmt. Inc. Per Oper.	Change in Net Worth w/Apprec.
(10)	(10)	(10)	(3)	(10)	(3)	(6)
$3,157	$7.66	$11.63	$88,760	$772	$49,497	$65,163
2,781	8.88	13.19	62,353	609	23,550	38,389
2,638	9.41	14.00	52,706	500	13,528	27,797
2,559	9.84	14.16	42,686	401	9,448	19,229
2,492	10.11	14.42	35,777	354	4,789	10,890
2,428	10.61	14.77	25,901	272	-1,925	4,352
2,327	11.12	15.32	11,541	116	-9,176	552
2,232	11.56	16.18	-358	-1	-17,625	-5,069
2,078	12.33	17.08	-10,185	-97	-29,406	-18,255
1,732	13.51	18.43	-26,410	-305	-45,511	-44,000

*Page number of the participant's DFBS where the factor is located.

FARM BUSINESS CHART FOR MEDIUM FREESTALL DAIRY FARMS
56 Freestall Barn Dairy Farms with 151-300 Cows, New York, 1995

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-alent	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
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
8.11	290	6,658,798	24,927	5.2	22	56	1,108,890
7.01	254	5,713,413	23,249	4.1	19	51	1,010,447
6.26	241	5,114,805	22,243	3.6	18	49	941,529
5.84	231	4,601,857	21,310	3.3	16	42	886,593
5.61	219	4,282,657	20,808	2.9	15	39	820,679
5.26	201	3,983,158	19,804	2.7	14	36	775,036
4.82	189	3,743,536	18,853	2.5	13	35	725,997
4.25	179	3,502,068	18,118	2.2	12	33	666,957
3.96	166	3,239,384	17,306	1.7	10	30	614,691
3.36	159	2,795,824	15,997	1.2	3	27	525,722

Cost Control					
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(10)	(10)	(11)	(11)	(10)	(10)
$494	19%	$217	$635	$630	$3.30
618	23	262	721	794	3.75
668	25	331	788	839	4.03
716	26	362	820	876	4.24
745	28	386	881	902	4.55
786	30	423	942	935	4.68
826	30	466	994	974	4.87
856	32	494	1,070	1,054	5.19
897	34	536	1,142	1,106	5.34
973	37	654	1,310	1,192	5.83

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Apprec. Total	Net Farm Income Without Apprec. Per Cow	Labor & Mgmt. Inc. Per Oper.	Change in Net Worth w/Apprec.
(10)	(10)	(10)	(3)	(10)	(3)	(6)
$3,331	$7.96	$10.95	$186,160	$864	$95,164	$144,572
3,069	9.50	12.48	121,682	536	50,181	108,786
2,970	9.87	12.90	92,523	433	28,686	66,921
2,788	10.31	13.05	77,745	355	22,827	40,000
2,669	10.57	13.46	53,375	277	14,847	22,733
2,558	10.89	13.92	38,496	194	2,857	7,412
2,475	11.23	14.16	27,801	125	-4,795	-2,413
2,375	11.63	14.54	14,994	72	-10,777	-9,829
2,271	12.07	15.16	5,641	33	-26,567	-37,956
2,086	12.91	16.22	-33,266	-154	-62,013	-83,503

*Page number of the participant's DFBS where the factor is located.

FARM BUSINESS CHART FOR LARGE FREESTALL DAIRY FARMS

34 Freestall Barn Dairy Farms with 300 or More Cows, New York, 1995

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-alent	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
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
26.37	1,474	31,629,692	24,975	5.6	22	59	1,315,065
15.65	726	16,568,552	23,563	4.5	21	50	1,108,188
13.90	586	12,395,786	22,714	3.8	19	47	1,027,822
11.56	476	10,646,886	21,776	3.5	18	44	961,574
9.83	426	9,473,879	21,582	3.3	18	43	941,375
9.36	399	8,803,496	21,380	2.8	17	42	921,860
9.06	363	8,131,190	21,238	2.6	16	40	857,407
8.66	338	7,243,944	20,638	2.5	13	38	821,803
8.24	316	6,726,055	19,753	2.3	12	37	738,236
7.35	305	6,230,654	18,841	1.9	10	32	687,101

Cost Control					
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(10)	(10)	(11)	(11)	(10)	(10)
$548	20%	$239	$723	$725	$3.45
621	22	261	819	807	3.73
652	24	298	850	848	3.91
691	25	320	883	880	3.97
742	26	339	916	905	4.13
775	27	357	940	940	4.36
807	28	368	975	962	4.46
837	29	396	1,019	997	4.55
882	31	463	1,097	1,041	4.76
919	32	576	1,178	1,144	5.16

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation Total	Net Farm Income Without Appreciation Per Cow	Labor & Mgmt. Inc. Per Oper.	Change in Net Worth w/Apprec.
(10)	(10)	(10)	(3)	(10)	(3)	(6)
$3,347	$7.91	$11.08	$498,538	$761	$285,694	$521,948
3,085	9.29	11.72	355,590	561	125,530	241,267
2,943	9.46	12.13	255,215	453	87,171	173,734
2,862	9.88	12.42	210,999	413	67,983	134,882
2,800	10.10	12.53	163,907	369	44,335	111,353
2,774	10.19	12.69	139,850	356	33,198	85,990
2,731	10.54	12.96	122,533	281	25,289	41,489
2,627	10.93	13.25	101,876	201	19,665	29,751
2,556	11.16	13.55	67,632	165	8,585	-3,450
2,454	11.60	14.31	-18,932	-48	-53,540	-67,952

*Page number of the participant's DFBS where the factor is located.

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 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 desired direction. Goals should be SMART:

1. Goals should be Specific.

2. Goals should be Measurable.

3. Goals should be Achievable but challenging.

4. Goals should be Rewarding.

5. Goals should be Timed with a designated date by which the goal will be achieved.

Goal setting on a dairy farm should be 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 objectives (long-range) and goals (short-range) when looking at the future of your farm business.

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

a. Begin with a mission statement which describes why the business exists based on the preferences and values of the owners.

b. Identify 4-6 objectives.

c. Identify SMART goals.

Worksheet for Setting Goals

I. Mission and Objectives

_____

_____

_____

_____

_____

_____

_____

_____

Worksheet for Setting Goals (Continued)

II. Goals

What	How	When	Who is Responsible

Summarize Your Business Performance

The Farm Business and Financial Analysis Charts on pages 22-25 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:	Needs improvement:

GLOSSARY AND LOCATION OF COMMON TERMS

Accounts Payable - Open accounts or bills owed to feed and supply firms, cattle dealers, veterinarians and other providers of farm services and supplies.

Accounts Receivable - Outstanding receipts from items sold or sales proceeds not yet received, such as the payment for December milk sales received in January.

Accrual Expenses - (defined on page 3)

Accrual Receipts - (defined on page 4)

Annual Cash Flow Statement - (defined on page 12)

Appreciation - (defined on page 5)

Asset Turnover Ratio - The ratio of total farm income to total farm assets, calculated by dividing total accrual operating receipts plus appreciation by average total farm assets.

Balance Sheet - A "snapshot" of the business financial position at a given point in time, usually December 31. The balance sheet equates the value of assets to liabilities plus net worth.

bST Usage - An estimate of the percentage of herd, on average, that was injected with bovine somatotropin during the year.

Capital Efficiency - The amount of capital invested per production unit. Relatively high investments per worker with low to moderate investments per cow imply efficient use of capital.

Cash From Nonfarm Capital Used in the Business - Transfers of money from nonfarm savings or investments to the farm business where it is used to pay operating expenses, make debt payments and/or capital purchases.

Cash Flow Coverage Ratio - (defined on page 14)

Cash Paid - (defined on page 2)

Cash Receipts - (defined on page 4)

Change in Accounts Payable - (defined on page 3)

Change in Accounts Receivable - (defined on page 4)

Change in Inventory - (defined on page 2)

Current Portion - (defined on page 7)

Dairy (farm) - A farm business where dairy farming is the primary enterprise, operating and managing this farm is a full-time occupation for one or more people and cropland is owned.

Dairy Cash-Crop (farm) - Operating and managing this farm is the full-time occupation of one or more people, cropland is owned but crop sales exceed 10 percent of accrual milk receipts.

Debt Per Cow - Total end-of-year debt divided by end-of-year number of cows.

Debt to Asset Ratios - (defined on page 10)

Deferred Taxes - (defined on page 9)

Dry Matter - The amount or proportion of dry material that remains after all water is removed. Commonly used to measure dry matter percent and tons of dry matter in feed.

Equity Capital - The farm operator/manager's owned capital or farm net worth.

Expansion Livestock - Purchased dairy cattle and other livestock that cause an increase in herd size from the beginning to the end of the year.

Farm Debt Payments as Percent of Milk Sales - Amount of milk income committed to debt repayment, calculated by dividing planned debt payments by total milk receipts. A reliable measure of repayment ability, see page 14.

Farm Debt Payments Per Cow - Planned or scheduled debt payments per cow represent the repayment plan scheduled at the beginning of the year divided by the average number of cows for the year. This measure of repayment ability is used in the Financial Analysis Chart.

Financial Lease - A long-term non-cancellable contract giving the lessee use of an asset in exchange for a series of lease payments. The term of a financial lease usually covers a major portion of the economic life of the asset. The lease is a substitute for purchase. The lessor retains ownership of the asset.

Income Statement - A complete and accurate account of farm business receipts and expenses used to measure profitability over a period of time such as one year or one month.

Labor and Management Income - (defined on page 6)

Labor and Management Income Per Operator - The return to the owner/manager's labor and management per full-time operator.

Labor Efficiency - Production capacity and output per worker.

Liquidity - Ability of business to generate cash to make debt payments or to convert assets to cash.

Net Farm Income - (defined on page 5)

Net Worth - The value of assets less liabilities equal net worth. It is the equity the owner has in owned assets.

Operating Costs of Producing Milk - (defined on page 19)

Opportunity Costs - The cost or charge made for using a resource based on its value in its most likely alternative use. The opportunity cost of a farmer's labor and management is the value he/she would receive if employed in his/her most qualified alternative position.

Other Livestock Expenses - All other dairy herd and livestock expenses not included in more specific categories. Other livestock expenses include; bST, DHIC, registration fees and transfers.

Part-Time Dairy (farm) - Dairy farming is the primary enterprise, cropland is owned but operating and managing this farm is not a full-time occupation for one or more people.

Personal Withdrawals and Family Expenditures Including Nonfarm Debt Payments - All the money removed from the farm business for personal or nonfarm use including family living expenses, health and life insurance, income taxes, nonfarm debt payments, and investments.

Profitability - The return or net income the owner/manager receives for using one or more of his or her resources in the farm business. True "economic profit" is what remains after deducting all the costs including the opportunity costs of the owner/manager's labor, management, and equity capital.

Purchased Inputs Cost of Producing Milk - (defined on page 19)

Renter - Farm business owner/operator owns no tillable land and commonly rents all other farm real estate.

Repayment Analysis - An evaluation of the business' ability to make planned debt payments.

Replacement Livestock - Dairy cattle and other livestock purchased to replace those that were culled or sold from the herd during the year.

Return on Equity Capital - (defined on page 7)

Return on Total Capital - (defined on page 7)

Solvency - The extent or ability of assets to cover or pay liabilities. Debt/asset and leverage ratios are common measures of solvency.

Total Costs of Producing Milk - (defined on page 19)

Whole Farm Method - A procedure used to calculate costs of producing milk on dairy farms without using enterprise cost accounts. All non-milk receipts are assigned a cost equal to their sale value and deducted from total farm expenses to determine the costs of producing milk.

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OTHER A.R.M.E. EXTENSION BULLETINS

EB No	Title	Author(s)
97-11	Dairy Farm Business Summary, Central Valleys Region, 1996	LaDue, E.L., S.F. Smith, L.D. Putnam, D. Bowne, Z. Kurdieh, C. Mentis, T. Wengert and C.Z. Radick
97-10	"Maximizing the Environmental Benefits per Dollar Expended": An Economic Interpretation and Review of Agricultural Environmental Benefits and Costs	Poe, G.
97-09	Dairy Farm Business Summary, Northern Hudson Region, 1996	Smith, S.F., L.D. Putnam, C.S. Wickswat, S. Buxton and D.R. Wood
97-08	Dairy Farm Business Summary, New York Large Herd Farms, 300 Cows or Larger, 1996	Karszes, J., W.A. Knoblauch and L.D. Putnam
97-07	Dairy Farm Business Summary, Southeastern New York Region, 1996	Knoblauch, W.A., L.D. Putnam, S.E. Hadcock, L.R. Hulle, M. Kiraly, C.A. McKeon
97-06	Dairy Farm Business Summary, Western and Central Plateau Region, 1996	Knoblauch, W.A., L.D. Putnam, C.A. Crispell, J.S. Petzen, J.W. Grace, A.N. Dufresne and G. Albrecht
97-05	Dairy Farm Business Summary: Western and Central Plain Region, 1996	Knoblauch, W.A., L.D. Putnam, J. Karszes, M. Stratton, C. Mentis and George Allhusen
97-04	Fruit Farm Business Summary, Lake Ontario Region, New York, 1995	White, G.B., A. DeMarree and L.D. Putnam
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