DAIRY FARM BUSINESS SUMMARY

May 1987

A.E. Ext. 87-10

EASTERN PLATEAU REGION
1986

Robert A. Milligan
Linda D. Putnam

Department of Agricultural Economics
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York 14853

1986 DAIRY FARM BUSINESS SUMMARY
Eastern Plateau Region*

Introduction

Dairy farmers throughout the State have been participating in New York Cooperative Extension's farm business summary and analysis program since the early 1950's. Each participating farmer receives a complete business and financial summary and analysis of his or her farm business. The information in this report represents an average of all the 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 record data and application of modern farm business management decision-making techniques. In short, DFBS identifies the business and financial information farmers need and demonstrates how to use it 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 1986 DFBS output 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.

The summary section of this report features accrual accounting for farm business expenses and receipts, measures of profitability with and without appreciation, a complete balance sheet including analysis, and a cash flow summary and analysis. The farm resources are examined and evaluated in the analysis section which features crop production costs, cost of producing milk, and capital and labor efficiency.

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

---

*This summary was prepared by Linda D. Putnam and Robert A. Milligan, Department of Agricultural Economics, New York State College of Agriculture and Life Sciences, Cornell University, in cooperation with Cooperative Extension Agents Carl Crispell, Tom Donnelly, and Jerry LeClar. The Eastern Plateau Region is comprised of Broome, Chemung, Chenango, Delaware, Otsego, Schuyler, Tioga, and Tompkins Counties.

SUMMARY OF THE FARM BUSINESS

Business Characteristics

Finding the right management strategies is an important part of farming. 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
72 Eastern Plateau Region Dairy Farms, 1986

Type of Farm	Number
Dairy	68
Part-time dairy	4
Dairy cash-crop	0
Part-time cash-crop dairy	0

Type of Ownership	Number
Owner	63
Renter	9

Milking System	Number
Bucket & carry	0
Dumping station	5
Pipeline	47
Herringbone parlor	19
Other parlor	1

Production Records	Number
DHIC	54
O.S.	9

Type of Business	Number
Single proprietorship	51
Partnership	20
Corporation	1
Other	0

Type of Barn	Number
Stanchion	51
Freestall	19
Other	2

Business Record System	Number
ELFAC	9
Account Book	29
Agrifax (mail-in only)	12
On-Farm Computer	5
Other	17

	Number
Other	4
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. 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 income from crop sales that exceed 10 percent of milk sales.

A farm renter owns no farm real estate at the end of the year or owns no tillable land.

Dairy Termination Program participants that sold their cows in 1986 are not included in the report.

Income Statement

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

CASH AND ACCRUAL FARM EXPENSES
72 Eastern Plateau Region Dairy Farms, 1986

Expense Item	Cash Paid +	Change in Inventory* +	Change in Accounts Payable	= Accrual Expenses
Hired Labor	$ 14,641		$ 44	$ 14,685
Feed				
Dairy grain & conc.	41,753	$ -301	78	41,530
Dairy roughage	1,063	-45	0	1,018
Other livestock	793	35	0	828
Machinery				
Mach. hire, rent/lease	1,741		40	1,781
Machinery repairs/parts	7,317	-69	-30	7,218
Auto exp. (farm share)	552		0	552
Fuel, oil & grease	4,832	-71	-58	4,703
Livestock				
Replacement livestock	2,075		0	2,075
Breeding	2,742	-25	-6	2,711
Vet & medicine	3,581	-1	37	3,617
Milk marketing	10,242		0	10,242
Cattle lease/rent	247		0	247
Other livestock expense	6,389	27	-13	6,403
Crops				
Fertilizer & lime	7,342	32	-134	7,240
Seeds & plants	2,917	-69	-28	2,820
Spray, other crop exp.	2,746	-38	4	2,712
Real Estate				
Land/bldg./fence repair	1,811	-98	52	1,765
Taxes	4,528		120	4,648
Insurance	3,277		-1	3,276
Rent & lease	4,754		17	4,771
Other				
Telephone (farm share)	610		1	611
Electricity (farm share)	4,975		11	4,986
Interest paid	15,186		0	15,186
Miscellaneous	1,650	20	-6	1,664
Total Operating	$147,764	$ -603	$ 128	$147,289
Expansion livestock	413		0	413
Machinery depreciation				14,596
Building depreciation				7,723
TOTAL ACCRUAL EXPENSES				$170,021

*An increase in inventory is a negative number since it represents purchased inputs not used and must be subtracted in arriving at accrual expenses.

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.

Accrual expenses are the costs of inputs actually used in this year's production. The value of feed and supplies used out of inventory are included as are the costs of inputs purchased but not paid for (net increases in accounts payable). Items paid for and not used (net additions to inventory) are excluded from accrual expenses as are payments made on inputs used in a prior year (net decreases in accounts payable).

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

CASH AND ACCRUAL FARM EXPENSES WORKSHEET

Expense Item	Cash Paid	+ Change in Inventory	+ 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 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 must be 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.

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.

CASH AND ACCRUAL FARM RECEIPTS
72 Eastern Plateau Region Dairy Farms, 1986

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	+	Accrual Receipts
Milk sales	$163,393				$ 1,059		$164,452
Dairy cattle	10,606		$ 3,687		-65		14,229
Dairy calves	1,991				0		1,991
Other livestock	274		243		6		523
Crops	1,215		1,729		221		3,164
Government receipts	2,113				28		2,141
Custom machine work	465				-94		371
Gas tax refund	102				0		102
Other	1,643				6		1,649
Less nonfarm noncash cap.*			0				0
Total Accrual Receipts	$181,801		$ 5,659		$ 1,161		$188,621

*Gifts or inheritances of cattle or crops included in inventory or used in the business.

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.

Accrual receipts represent the value of all farm commodities produced and services actually provided by the farmer during the year. Increases in livestock inventory caused by herd growth and/or quality, are added and decreases caused by herd reduction are subtracted. Changes in inventories of crops grown are accounted for in accrual receipts. Changes in accounts receivable include the January milk check for this December's marketings compared with the previous January's check, and other delayed payments.

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	$_____		$_____		$_____		$_____

To calculate the change in inventory to be included in the above worksheet, subtract the beginning of year values from the end of year values excluding appreciation. The changes in inventories caused by changing prices must be excluded from the calculation of accrual receipts. Changes in accounts receivable are also determined by subtracting beginning of year balances from end of year balances.

Profitability Analysis

Farm owners/operators contribute labor, management, and capital to their businesses and the best combination of these resources produces optimum profits. Farm profits 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 with and without appreciation. Appreciation represents the change in values caused by changes in prices during the year 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 in the profitability analysis.

NET FARM INCOME
72 Eastern Plateau Region Dairy Farms, 1986

Item	Average	My Farm
Total accrual receipts	$188,622	$_____
Appreciation: Livestock	2,079	_____
Machinery	5,299	_____
Real Estate	9,629	_____
Other Stocks/Certificates	92	_____
Total Including Appreciation	$205,721	$_____
Total accrual expenses	170,021	-_____
Net Farm Income (with appreciation)	35,700	$_____
Net Farm Income (without appreciation)	18,601	$_____

Return to operators' labor, management, and equity capital measures the total business profits for the farm operators. 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 compiled 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
72 Eastern Plateau Region Dairy Farms, 1986

	Average		My Farm	
Item	With Apprec.	Without Apprec.	With Apprec.	Without Apprec.
Net farm income	$ 35,700	$ 18,601	$_____	$_____
Family labor unpaid @ $600 per month	- 2,400	- 2,400	-_____	-_____
Return to operators' labor, management, & equity	$ 33,300	$ 16,201	$_____	$_____

Labor and management income is the share of net farm income without appreciation returned to the operators' labor and management. Appreciation is not included as part of the return to labor and management. Labor and management income is determined by deducting the 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 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 per operator measures the return to each operator's labor and management.

LABOR AND MANAGEMENT INCOME
72 Eastern Plateau Region Dairy Farms, 1986

Item	Average	My Farm
Return to operators' labor, management, & equity without appreciation	$ 16,201	$_____
Real interest @ 5% on $274,907 average equity capital	- 13,745	-_____
Labor & Management Income	$ 2,456	$_____
Labor & Management Income per 1.25 Operator/Managers	$ 1,965	$_____

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 or value 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 EQUITY CAPITAL
72 Eastern Plateau Region Dairy Farms, 1986

Item	Average	My Farm
Return to operators' labor, management, & equity capital with appreciation	$ 33,300	$_____
Value of operators' labor & management	- 22,898	-_____
Return on equity capital with appreciation	$ 10,402	$_____
Rate of return on equity capital with appreciation	3.8%	_____%
Return on equity capital without appreciation	$ -6,697	$_____
Rate of return without appreciation	-2.4%	_____%

Farm and Family Financial Status

Evaluating the financial status of the farm business and the farm family is an important part of business analysis. The first step is to recognize all the assets and liabilities that make up the balance sheet. The second step is to analyze your filled out balance sheet by evaluating changes made during the year.

1986 FARM BUSINESS & NONFARM BALANCE SHEET
72 Eastern Plateau Region Dairy Farms, 1986

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 3,520	$ 3,863	Accounts payable	$ 5,633	$ 5,760
Accounts rec.	14,492	15,652	Operating debt	3,556	3,422
Feed & supplies	37,426	39,757	Short-term	2,914	3,236
Total	$ 55,438	$ 59,272	Total	$ 12,103	$ 12,417
Intermediate			Intermediate		
Dairy cows:				$ 69,260	$ 67,011
owned	$ 68,211	$ 71,936			
leased	712	616			
Heifers	26,653	28,643			
Bulls/other lvstk.	550	844			
Mach./eq. owned	86,530	89,118	Financial lease		
Mach./eq. leased	569	391	(cattle/mach.)	1,281	1,007
FLB/PCA stock	3,424	3,308	FLB/PCA stock	3,424	3,308
Coop stock & cert.	1,503	1,671			
Total	$188,152	$196,527	Total	$ 73,965	$ 71,325
Long-Term			Long-Term		
Land/buildings:				$ 98,907	$ 98,752
owned	$207,672	$210,222	Financial lease		
leased	4,432	5,051	(structures)	4,432	5,051
Total	$212,104	$215,273	Total	$103,340	$103,803
Total Farm Assets	$455,694	$471,072	Total Farm Liab.	$189,407	$187,545
			FARM NET WORTH	$266,287	$283,527

(Average for 53 farms reporting) Nonfarm Assets	Jan. 1	Dec. 31	Nonfarm Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, chkg. & savings	$ 4,106	$ 4,097	Nonfarm Liab.	$ 4,378	$ 3,843
Cash value life ins.	6,079	7,043	NONFARM NET WORTH	$ 39,120	$ 44,248
Nonfarm real estate	5,142	4,708	FARM & NONFARM*	Jan. 1	Dec. 31
Auto (personal sh.)	2,769	3,431	Total Assets	$499,192	$519,163
Stocks & bonds	6,396	6,660	Total Liabilities	193,785	191,388
Household furn.	11,530	11,739			
All other	7,477	10,412	TOTAL FARM & NON-FARM NET WORTH	$305,407	$327,775
Total Nonfarm	$ 43,498	$ 48,091			

*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 values of all future payments are listed as liabilities since the farmer is committed to make them. The present values are also listed as assets, representing the future value the item has to the business.

Date _____

1986 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		
Feed & supplies			Short-term:		
Total			Total		
Intermediate			**Intermediate**		
Dairy cows:					
owned					
leased					
Heifers					
Bulls/other lvstk.					
Mach./eq. owned					
Mach./eq. leased			Financial lease (cattle/mach.)		
FLB/PCA stock			FLB/PCA stock		
Coop stock & cert.					
Total			Total		
Long-Term			**Long-Term**		
Land/buildings:					
owned					
leased					
Total			Financial lease (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
			Nonfarm Liab.:		
Personal cash, chkg. & savings					
Cash value life ins.					
Nonfarm real est.					
Auto (pers. share)			Total Nonfarm Liabilities		
Stocks & bonds					
Household furn.					
All other			Nonfarm Net Worth		
Total Nonfarm					

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 and other factors measuring levels of debt. Percent equity is calculated by dividing net worth by 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 a crucial indicator of financial health.

BALANCE SHEET ANALYSIS
72 Eastern Plateau Region Dairy Farms, 1986

Item	Average	My Farm
Financial Ratios - Farm:		
Percent equity	60%	____%
Debt/asset ratio: total	0.40	____
long-term	0.48	____
intermediate/current	0.33	____
Change in Farm Net Worth:		
Without appreciation	$ 140	$____
With appreciation	$ 17,239	$____
Farm Debt Analysis:		
Accounts payable as % of total debt	3%	____%
Long-term liabilities as a % of total debt	55%	____%
Current & inter. liab. as a % of total debt	45%	____%

Farm Debt Levels:	Per Cow	Per Tillable Acre Owned	Per Cow	Per Tillable Acre Owned
Total farm debt	$ 2,206	$ 1,321	$____	$____
Long-term debt	1,221	731	____	____
Intermediate & current debt	985	590	____	____

The 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
72 Eastern Plateau Region Dairy Farms, 1986

Item	Avg. of Regional Farms		My Farm	
	R.E.	Mach./Eq.	R.E.	Mach./Eq.
Value beg. of year	$207,672	$ 86,530	$____	$____
Purchases	$ 6,757*	$ 12,682	$____	$____
Gift/inheritance	+ 0	+ 42	+____	+____
Lost capital	- 925	--	-____	
Sales	- 3,442	- 839	-____	-____
Depreciation	- 7,723	- 14,596	-____	-____
Net investment	$+ -5,333	$+ -2,711	$+____	$+____
Appreciation	+ 7,883**	+ 5,299	+____	+____
Value end of year	$210,222	$ 89,118	$____	$____

* $ 2,387 land and $ 4,370 buildings and/or depreciable improvements.
**Excludes $1,746 of appreciation on assets sold during the year.

Cash Flow Summary and Analysis

Completing an annual cash flow summary and analysis is important to understand 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, the cash inflows and cash outflows when beginning and ending balances are included, are identical. The imbalance is, therefore, the error from incorrect accounting of cash inflows and cash outflows.

ANNUAL CASH FLOW STATEMENT
72 Eastern Plateau Region Dairy Farms, 1986

Item	Average	My Farm
Cash Inflows		
Beginning farm cash, checking & savings	$ 3,520	$
Cash farm receipts	181,801	
Sale of assets: Machinery	839	
Real estate	3,523	
Other stock & certificate	0	
Money borrowed (intermediate & long-term)	25,551	
Money borrowed (short-term)	2,306	
Increase in operating debt	0	
Nonfarm income	5,524	
Cash from nonfarm capital used in the business	423	
Money borrowed - nonfarm	340	
Total	$223,827	$
Cash Outflows		
Cash farm expenses	$147,763	$
Capital purchases: Expansion livestock	413	
Machinery	12,682	
Real estate	6,757	
Other stock & certificate	76	
Principal payments (intermediate & long-term)	27,955	
Principal payments (short-term)	1,985	
Decrease in operating debt	134	
Nonfarm debt payments	917	
Personal withdrawals & family expenditures	13,772	
Ending farm cash, checking & savings	3,863	
Total	$216,317	$
Imbalance (error)	$ 7,510	$

Repayment Analysis

The second step of cash flow planning is to compare and evaluate debt payments planned and made last year, and estimate the payments required in the current year. It is helpful to compare and evaluate by using debt payments per unit of production and receipt/debt payment ratios.

FARM DEBT PAYMENTS PLANNED
Same 41 Eastern Plateau Region Dairy Farms, 1986 & 1987

	Average			My Farm		
	1986 Payments		Planned	1986 Payments		Planned
Debt Payments	Planned	Made	1987	Planned	Made	1987
Long-term	$ 11,939	$ 18,844	$ 12,056	$	$	$
Intermediate-term	18,779	20,630	17,297			
Short-term	2,560	2,313	2,135			
Operating (net reduction)	535	684	860			
Accounts payable (net reduction)	659	979	310			
Total	$ 34,471	$ 43,449	$ 32,658	$	$	$
Per cow	$ 415	$ 523		$	$	
Per cwt. 1986 milk	$ 2.67	$ 3.36		$	$	
Percent of total 1986 receipts	19%	24%				
Percent of 1986 milk receipts	21%	27%				

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 1987.

CASH FLOW COVERAGE RATIO
Same 41 Eastern Plateau Region Dairy Farms, 1986

Item	Average	My Farm
Cash farm receipts	$178,666	$
- Cash farm expenses	143,623	
+ Interest paid	15,526	
- Net personal withdrawals from farm*	6,926	
(A) = Amount Available for Debt Service	$ 43,643	$
(B) = Debt Payments Planned for 1986	$ 34,471	$
(A ÷ B) = Cash Flow Coverage Ratio for 1986	1.27	

*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.

ANALYSIS OF THE FARM BUSINESS

The farm business has been divided into three parts to allow a more indepth analysis of the cropping program, the dairy program, and the factors affecting capital and labor efficiency.

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
72 Eastern Plateau Region Dairy Farms, 1986

Item	Average			My Farm		
Land	Owned	Rented	Total	Owned	Rented	Total
Tillable	142	107	249			
Nontillable	65	21	86			
Other nontillable	99	16	115			
Total	306	143	449			

Crop Yields	Farms	Acres	Prod/Acre	Acres	Prod/Acre
Hay crop	72	130	2.60 tn DM		tn DM
Corn silage	69	56	14.43 tn		tn
			4.77 tn DM		tn DM
Other forage	10	17	1.56 tn DM		tn DM
Total forage	72	186	3.21 tn DM		tn DM
Corn grain	38	69	106.91 bu		bu
Oats	15	28	66.26 bu		bu
Wheat	2	57	47.17 bu		bu
Other crops	4	32			
Tillable pasture	20	38			
Idle	17	27			
Total Tillable Acres	72	249			

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
72 Eastern Plateau Region Dairy Farms, 1986

Item	Average	My Farm
Total tillable acres per cow	3.02	
Total forage acres per cow	2.26	
Harvested forage dry matter, tons per cow	7.26	

Cropping Program Analysis (continued)

A substantial number of cooperators have allocated crop expenses to hay crop, corn, and other crop production. This additional data has been compiled to show the traditional crop expenses per acre and per production unit for these crops.

CROP RELATED ACCRUAL EXPENSES
Eastern Plateau Region Dairy Farms, 1986

Item	Total Per Till. Acre	Hay Crop Per Acre	Hay Crop Per Ton DM	Corn Per Acre	Corn Per Ton Silage Equiv.*	Other Crops Per Acre
Number of farms reporting	72	39		38		18
Average number of acres	249	129		89		19
Fertilizer & lime	$ 29.08	$ 22.86	$ 8.59	$ 45.21	$ 2.61	$ 26.61
Seeds & plants	11.33	6.56	2.47	19.50	1.13	20.93
Spray & other crop expense	10.90	7.46	2.80	25.73	1.48	11.27
Total	$ 51.31	$ 36.88	$ 13.85	$ 90.43	$ 5.22	$ 58.81
My Farm:						
Fertilizer & lime	$_____	$_____	$_____	$_____	$_____	$_____
Seeds & plants	_____	_____	_____	_____	_____	_____
Spray & other crop expense	_____	_____	_____	_____	_____	_____
Total	$_____	$_____	$_____	$_____	$_____	$_____

*Corn grain converted to silage equivalent using 5.88 bushels of dry shell equivalent to equal one ton of corn silage as fed.

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 per total tillable acre.

ACCRUAL MACHINERY EXPENSES
72 Eastern Plateau Region Dairy Farms, 1986

Machinery Expense Item	Average Total Expenses	Average Per Til. Acre	My Farm Total Expenses	My Farm Per Til. Acre
Fuel, oil & grease	$ 4,703	$ 18.89	$_____	$_____
Machinery repairs & parts	7,218	29.00	_____	_____
Machine hire, rent & lease	1,781	7.16	_____	_____
Auto expense (farm share)	552	2.22	_____	_____
Interest (5%)	4,391	17.64	_____	_____
Depreciation	14,596	58.64	_____	_____
Total	$ 33,241	$ 133.55	$_____	$_____

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 real increase in inventory has been included as an accrual farm receipt on page 5.

DAIRY HERD INVENTORY
72 Eastern Plateau Region Dairy Farms, 1986

Item	Dairy Cows		Heifers	
	Number	Value	Number	Value
Beginning of year (owned)	81	$ 68,211	66	$ 26,653
+ Change without appreciation		2,830		857
+ Appreciation		895		1,133
End of year (owned)	84	$ 71,936	67	$ 28,643
End including leased	85			
Average number	82		66	
My Farm:				
Beginning of year (owned)		$		$
+ Change without appreciation				
+ Appreciation				
End of year (owned)				
End including leased				
Average number		$		$

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
72 Eastern Plateau Region Dairy Farms, 1986

Item	Average	My Farm
Total milk sold, lbs.	1,316,672	
Milk sold per cow, lbs.	15,992	
Average milk plant test, percent butterfat	3.68	

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
72 Eastern Plateau Region Dairy Farms, 1986

Item	Average Total	Average Per Cow	Average Per Cwt.	My Farm Total	My Farm Per Cow	My Farm Per Cwt.
Accrual Receipts						
Milk	$164,452	$ 1,997	$ 12.49	$	$	$
Dairy cattle	14,228	173	1.08			
Dairy calves	1,991	24	0.15			
Total	$180,672	$ 2,194	$ 13.72	$	$	$
Accrual Costs of Producing Milk						
Operating costs	$123,119	$ 1,495	$ 9.35	$	$	$
Total costs w/o opers' labor, mgmt. & capital	$148,251	$ 1,801	$ 11.26	$	$	$
Total Costs	$184,894	$ 2,246	$ 14.04	$	$	$

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 the comparison of different size dairy farms.

DAIRY RELATED ACCRUAL EXPENSES
72 Eastern Plateau Region Dairy Farms, 1986

Item	Average Per Cow	Average Per Cwt.	My Farm Per Cow	My Farm Per Cwt.
Purchased dairy grain & concentrates	$ 504	$ 3.15	$	$
Purchased dairy roughage	12	0.08		
Total Purchased Dairy Feed	$ 517	$ 3.23	$	$
Purchased grain & conc. as % of milk receipts	25%		%	
Purchased feed & crop exp.	$ 672	$ 4.20	$	$
Purchased feed & crop exp. as % of milk receipts	34%		%	
Breeding	$ 33	$ 0.21	$	$
Veterinary & medicine	44	0.27		
Milk marketing	124	0.78		
Cattle lease	3	0.02		
Other livestock expense	78	0.49		

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.

CAPITAL EFFICIENCY
72 Eastern Plateau Region Dairy Farms, 1986

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	$163,547	$ 5,628	$ 1,862	$ 3,263
Real estate		2,595		1,505
Machinery & equipment	31,166	1,073	355	
Capital turnover, years		2.25		
My Farm:				
Farm capital	$_____	$_____	$_____	$_____
Real estate		_____		_____
Machinery & equipment	_____	_____	_____	_____
Capital turnover, years		_____		

LABOR FORCE INVENTORY AND ANALYSIS
72 Eastern Plateau Region Dairy Farms, 1986

Labor Force	Months	Age	Years of Educ.	Value of Labor & Mgmt.
Operator number 1	12	43	14	$ 17,979
Operator number 2	3	35	14	4,530
Operator number 3	<1	59	13	389
Family paid	5			
Family unpaid	4			
Hired	10			
Total	34	+ 12 =	2.83 Worker Equivalent	
			1.25 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	82	29	_____	_____
Milk sold, pounds	1,316,672	464,708	_____	_____
Tillable acres	249	88	_____	_____
Work units	861	304	_____	_____

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 ($850/mo.)	$ 12,750	$ 155	$ 51.22	$_____	$_____	$_____
Family unpd.($600/mo.)	2,400	29	9.64	_____	_____	_____
Hired	14,685	178	59.00	_____	_____	_____
Total Labor	$ 29,835	$ 362	$119.87	$_____	$_____	$_____
Machinery Cost	$ 33,241	$ 404	$133.55	$_____	$_____	$_____
Total Labor & Mach.	$ 63,076	$ 766	$253.42	$_____	$_____	$_____

ANNUAL CASH FLOW WORKSHEET

Item	Regional Average (per cow)	My Farm Total	My Farm Per Cow	Expected Change	1987 Projection
Average number of cows	82				
Accrual Oper. Receipts					
Milk	$ 1,997	$	$		$
Dairy cattle	173				
Dairy calves	24				
Other livestock	6				
Crops	38				
Misc. receipts	52				
Total	$ 2,291	$	$		$
Accrual Oper. Expenses					
Hired labor	$ 178	$	$		$
Dairy grain & conc.	504				
Dairy roughage	12				
Other lvstk. feed	10				
Mach. hire/rent/lease	22				
Mach. rpr./parts & auto	94				
Fuel, oil & grease	57				
Replacement lvstk.	25				
Breeding	33				
Vet & medicine	44				
Milk marketing	124				
Cattle lease	3				
Other lvstk. exp.	78				
Fertilizer & lime	88				
Seeds & plants	34				
Spray/other crop exp.	33				
Land, bldg.,fence repair	21				
Taxes	56				
Insurance	40				
Real est. rent/lease	58				
Utilities	68				
Miscellaneous	20				
Total Less Int. Paid	$ 1,604				$
Net Accrual Operating Income (without interest paid)	(total) $ 56,519	$			$
- Change in lvstk./crop inv.	5,659				
- Change in accts. rec.	1,161				
+ Change in feed/supply inv.	-603				
+ Change in accts. payable*	127				
NET CASH FLOW	$ 49,224	$			$
- Net personal withdrawals & family expenditures	7,908				
Available for Debt Payments, Investments & Savings	$ 41,316	$			$
- Farm Debt Payments	45,712				
Available for Investment & Savings	$ -4,396	$			$
- Capital Purchases: cattle, machinery & improvements	$ 19,928				
Additional Capital Needed		$			$

*Less change in account payable for interest.

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 41 Eastern Plateau Region Dairy Farms, 1985 & 1986

	Average		My Farm		
Selected Factors	1985	1986	1985	1986	Goal
Size of Business					
Average number of cows	81	83			
Average number of heifers	62	63			
Milk sold, lbs.	1,214,335	1,291,343			
Worker equivalent	2.78	2.83			
Total tillable acres	240	246			
Rates of Production					
Milk sold per cow, lbs.	15,001	15,540			
Hay DM per acre, tons	2.33	2.46			
Corn silage per acre, tons	14	15			
Labor Efficiency					
Cows per worker	29	29			
Milk sold/worker, lbs.	437,054	455,768			
Cost Control					
Grain & conc. purchased as % of milk sales	25%	26%	%	%	%
Dairy feed & crop exp. per cwt. milk	$ 4.38	$ 4.31	$	$	$
Labor & mach. costs/cow	$ 755	$ 740	$	$	$
Capital Efficiency*					
Farm capital per cow	$ 5,490	$ 5,355	$	$	$
Real estate per cow	$ 2,557	$ 2,405	$	$	$
Mach. & equip. per cow	$ 1,060	$ 1,053	$	$	$
Capital turnover, years	2.43	2.21			
Profitability					
Net farm inc. w/o apprec.	$ 22,293	$ 17,469	$	$	$
Net farm inc. w/apprec.	$ 21,160	$ 35,373	$	$	$
Labor & mgmt. income	$ 6,837	$ 1,723	$	$	$
Rate of return on eq. capital w/apprec.	-0.60%	4.49%	%	%	%
Financial Summary					
Farm net worth, end year	$267,260	$273,741	$	$	$
Debt to asset ratio	0.40	0.39			
Farm debt per cow	$ 2,116	$ 2,075	$	$	$

*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 404 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
404 New York Dairy Farms, 1985

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
6.8	252	4,319,504	18,980	4.6	21	48	747,314
4.4	134	2,108,684	17,551	3.6	18	37	575,840
3.5	101	1,596,188	16,655	3.1	16	33	516,053
3.1	85	1,304,015	16,116	2.9	15	31	472,387
2.8	73	1,128,297	15,543	2.6	15	29	432,993
2.5	65	972,841	14,953	2.4	14	26	400,211
2.3	58	824,836	14,399	2.2	13	24	367,373
2.0	50	725,500	13,682	2.0	12	23	330,625
1.8	44	628,376	12,849	1.7	10	20	290,454
1.4	34	466,272	11,055	1.3	8	16	215,433

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
$185	10%	$212	$ 503	$375	$2.52
288	15	282	605	464	3.23
352	18	326	670	525	3.60
397	21	370	726	567	3.87
439	23	404	783	605	4.10
476	25	435	832	647	4.31
518	27	471	882	683	4.48
562	28	516	956	731	4.77
608	31	572	1,025	783	5.12
721	36	759	1,251	913	5.85

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
404 New York Dairy Farms, 1985

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.
$2,735	$16.52	$ 901	$ 6.10	$1,667	$11.26
2,508	15.15	1,112	7.70	1,895	12.55
2,399	14.68	1,231	8.39	2,007	13.29
2,290	14.40	1,334	8.93	2,088	13.94
2,197	14.13	1,399	9.39	2,196	14.47
2,097	13.91	1,498	9.82	2,281	15.02
1,999	13.67	1,584	10.32	2,360	15.82
1,898	13.42	1,672	10.94	2,480	16.55
1,760	13.08	1,800	11.82	2,609	17.45
1,507	12.11	2,074	13.81	3,032	20.80

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
$101,576	$98,427	$100,957	$97,616	$67,398	$49,398
51,232	54,238	49,740	52,972	27,247	19,608
34,730	36,084	33,833	35,030	16,338	11,912
26,015	25,033	24,933	23,703	10,248	7,708
19,413	18,975	17,901	17,131	5,056	3,887
13,695	12,180	12,066	9,951	-342	-320
9,055	6,473	6,863	4,834	-5,172	-4,523
2,290	-56	374	-1,936	-10,015	-8,491
-6,727	-9,810	-8,364	-11,125	-19,381	-16,205
-28,801	-39,020	-30,637	-40,495	-46,928	-43,181

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, 12, and 17 of this publication. References to DFBS output page numbers for participating dairy farmers are provided in the table headings.

FINANCIAL ANALYSIS CHART
404 New York Dairy Farms, 1985

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)
$ 25	1%	7.03	$1,012	$ 70
171	9	2.15	780	568
264	14	1.58	674	1,011
332	18	1.30	606	1,489
406	20	1.10	527	1,858
460	24	0.96	460	2,195
518	27	0.80	387	2,584
591	31	0.65	313	3,130
722	37	0.43	244	3,679
1,165	63	-0.04	42	4,795

Solvency				Efficiency & Profitability		
	Debt/Asset Ratio					
Percent Equity (DFBS pg. 5)	Total (5)	Current & Intermediate (5)	Long Term (5)	Total Farm Cap. Per Cow (10)	Capital Turnover (years) (10)	Rate of Return on Equity Cap. (3)
99%	0.01	0.00	0.00	$3,705	1.67	14
90	0.10	0.04	0.01	4,524	2.00	6
82	0.18	0.11	0.10	4,960	2.19	4
75	0.25	0.16	0.25	5,289	2.40	1
68	0.32	0.23	0.37	5,654	2.60	-1
61	0.39	0.29	0.50	5,955	2.77	-4
53	0.47	0.36	0.63	6,342	2.93	-6
44	0.56	0.44	0.73	6,837	3.14	-11
36	0.64	0.55	0.89	7,671	3.46	-20
16	0.84	0.81	1.38	9,498	4.57	-83

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: _____

_____ _____

_____ _____

FARM BUSINESS SUMMARY BY HERD SIZE
404 New York Dairy Farms, 1985

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	33	93	82	55	38
ACCRUAL EXPENSES					
Hired labor	$ 4,093	$ 5,937	$ 9,313	$ 13,051	$ 18,026
Dairy grain & concentrate	15,862	22,245	27,169	33,379	37,599
Dairy roughage	813	816	933	1,158	767
Other livestock feed	164	250	555	705	2,234
Machine hire/rent/lease	588	1,018	1,305	1,644	1,251
Machine repairs/parts	2,560	4,470	5,735	7,900	10,291
Auto expense (farm share)	405	488	450	645	368
Fuel, oil & grease	2,442	3,192	4,276	5,625	7,090
Replacement livestock	465	926	1,800	1,350	1,078
Breeding	998	1,300	1,949	2,565	2,491
Veterinary & medicine	1,173	1,672	2,601	2,933	3,664
Milk marketing	4,836	6,395	8,313	10,033	10,296
Cattle lease/rent	3	39	33	80	0
Other livestock expense	2,492	3,684	5,053	5,607	8,095
Fertilizer & lime	2,255	4,002	5,849	7,976	10,357
Seeds & plants	712	1,311	2,131	2,954	4,128
Spray & other crop expense	476	1,033	2,077	2,626	2,881
Land/building/fence repair	778	1,340	1,518	1,989	2,769
Taxes & insurance	3,725	4,505	6,227	6,668	9,482
Telephone & electricity	2,267	3,054	4,025	4,926	5,436
Interest paid	4,443	8,829	12,031	13,163	17,536
Misc. (including rent)	1,660	2,764	3,348	4,895	5,516
Total Operating Expenses	$ 53,210	$79,270	$106,691	$131,872	$161,355
Expansion livestock	968	346	874	774	844
Machinery depreciation	6,124	7,704	10,941	15,593	17,741
Building depreciation	2,193	3,217	5,039	8,144	8,004
Total Accrual Expenses	$62,495	$90,537	$123,545	$156,383	$187,944
ACCRUAL RECEIPTS					
Milk sales	$59,218	$ 88,407	$119,550	$151,834	$183,742
Dairy cattle	4,811	6,521	9,436	11,266	14,400
Dairy calves	933	1,163	1,444	1,798	2,364
Other livestock	97	243	352	436	472
Crops	1,030	806	592	1,949	3,216
Misc. receipts	1,975	3,156	5,102	5,737	7,682
Total Accrual Receipts	$68,064	$100,296	$136,476	$173,020	$211,876
PROFITABILITY ANALYSIS					
Net farm income (w/o apprec.)	$5,569	$9,759	$12,931	$16,637	$23,932
Net farm income (w/apprec.)	$4,706	$8,700	$9,716	$19,487	$19,249
Labor & mgmt. income	$-3,996	$-592	$-718	$-453	$4,124
Number of operators	1.08	1.17	1.33	1.42	1.42
Labor & mgmt. inc./oper.	$-3,689	$-508	$-539	$-320	$2,911
Rate of return on equity capital (w/o apprec.)	-6.6%	-6.4%	-4.0%	-2.3%	-0.6%
Rate of return on equity capital (w/apprec.)	-7.1%	-7.0%	-5.3%	-1.4%	-1.8%

FARM BUSINESS SUMMARY BY HERD SIZE
404 New York Dairy Farms, 1985

Item — Farm Size:	100 to 149 Cows	150 to 199 Cows	200 to 249 Cows	250 or More Cows
Number of farms	54	20	14	15
ACCRUAL EXPENSES				
Hired labor	$ 26,831	$ 37,871	$ 69,656	$118,623
Dairy grain & concentrate	52,504	69,080	119,361	181,104
Dairy roughage	979	3,007	1,464	6,896
Other livestock feed	1,253	1,581	176	193
Machine hire/rent/lease	1,828	2,514	4,138	3,541
Machine repairs/parts	12,204	17,945	30,301	37,855
Auto expense (farm share)	372	377	829	303
Fuel, oil & grease	9,375	12,763	18,866	24,475
Replacement livestock	1,300	2,816	1,521	3,244
Breeding	3,611	4,415	7,083	11,731
Veterinary & medicine	5,044	6,398	9,844	20,184
Milk marketing	13,992	19,197	30,848	38,127
Cattle lease/rent	68	188	0	344
Other livestock expense	9,665	13,049	17,907	31,495
Fertilizer & lime	11,193	19,173	23,424	33,953
Seeds & plants	4,444	6,000	7,942	14,478
Spray & other crop expense	3,981	7,053	10,397	15,416
Land/building/fence repair	2,981	4,147	4,852	9,358
Taxes & insurance	10,303	12,467	16,682	23,234
Telephone & electricity	6,501	7,470	11,821	17,907
Interest paid	23,255	34,925	45,152	75,543
Misc. (including rent)	6,759	11,814	17,838	21,921
Total Operating Expenses	$208,443	$294,250	$450,102	$689,925
Expansion livestock	1,127	7,108	1,680	16,690
Machinery depreciation	20,258	26,978	32,499	45,087
Building depreciation	9,161	17,114	16,621	35,310
Total Accrual Expenses	$238,989	$345,450	$500,902	$787,012
ACCRUAL RECEIPTS				
Milk sales	$236,108	$320,343	$468,190	$796,157
Dairy cattle	20,211	32,874	46,908	81,554
Dairy calves	2,992	3,559	5,168	8,731
Other livestock	556	21	89	775
Crops	193	5,092	10,339	16,228
Misc. receipts	7,420	16,589	21,994	15,205
Total Accrual Receipts	$267,480	$378,478	$552,688	$918,650
PROFITABILITY ANALYSIS				
Net farm income (w/o apprec.)	$28,491	$33,028	$51,786	$131,638
Net farm income (w/apprec.)	$29,111	$24,269	$44,731	$120,705
Labor & mgmt. income	$5,196	$6,896	$17,279	$76,669
Number of operators	1.50	1.58	1.67	1.58
Labor & mgmt. inc./oper.	$3,464	$4,355	$10,367	$48,423
Rate of return on equity capital (w/o apprec.)	-0.0%	0.6%	2.8%	8.7%
Rate of return on equity capital (w/apprec.)	0.1%	-1.1%	1.8%	7.7%

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
404 New York Dairy Farms, 1985

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.	$ 2,208	$ 1,936	$ 1,264	$ 1,427	$ 2,280	$ 2,584
Accounts receivable	6,052	5,791	7,548	7,173	10,835	10,530
Feed & supplies	11,016	11,551	17,075	17,168	25,038	25,601
Dairy cows*	27,508	25,568	40,790	38,285	55,435	52,811
Heifers	11,583	9,208	15,737	13,815	22,773	19,303
Bulls & other lvstk.	560	479	878	812	599	474
Machinery & equipment*	41,341	40,782	53,683	54,064	80,279	78,950
Coop stocks & cert.	2,024	2,145	2,615	2,487	4,237	4,524
Land & buildings*	110,929	115,967	140,467	144,528	194,568	196,143
Total Farm Assets	$213,221	$213,427	$280,057	$279,759	$396,044	$390,921
Pers. cash/chkg./sav.	$ 7,817	$ 8,760	$ 2,456	$ 2,551	$ 3,725	$ 3,960
Cash value of life ins.	3,230	3,214	3,465	3,561	3,239	3,187
Nonfarm real estate	2,342	2,115	4,371	4,221	8,953	9,312
Auto (personal share)	2,118	2,224	2,246	2,522	2,190	2,416
Stocks & bonds	5,868	5,976	1,643	2,005	16,266	16,945
Household furnishings	7,192	7,365	8,216	8,391	6,930	7,925
All other	1,298	1,121	3,098	2,119	268	1,048
Total Nonfarm Assets**	$ 29,866	$ 30,776	$ 25,495	$ 25,369	$ 41,569	$ 44,793
Total Farm & Nonfarm Assets	$243,087	$244,203	$305,552	$305,128	$437,613	$435,714
LIABILITIES						
Accounts payable	$ 1,955	$ 2,293	$ 4,525	$ 4,396	$ 3,675	$ 3,744
Operating debt	0	0	323	592	798	1,192
Short term	984	871	1,169	1,399	1,450	1,265
Intermediate*	17,813	17,003	36,012	36,825	44,541	44,628
Long term*	32,026	34,951	70,323	73,521	89,325	89,105
Total Farm Liab.	$ 52,777	$ 55,118	$112,353	$116,734	$139,789	$139,933
Total Nonfarm Liab.**	438	579	752	1,181	2,664	2,838
Total Farm & Nonfarm Liabilities	$ 53,215	$ 55,697	$113,105	$117,915	$142,453	$142,771
Farm Net Worth (Equity Capital)	$160,444	$158,310	$167,704	$163,026	$256,255	$250,987
Farm & Nonfarm Net Worth	$189,872	$188,506	$192,447	$187,213	$295,160	$292,943

FINANCIAL MEASURES	Less than 40 Cows	40 to 54 Cows	55 to 69 Cows
Percent equity	74%	58%	64%
Debt/asset ratio-long term	0.30	0.51	0.45
Debt/asset ratio-inter. & current	0.21	0.32	0.26
Total farm debt per cow	$1,621	$2,382	$2,186
Annual debt payments made	$12,166	$20,351	$30,885
Debt payments made per cow	$368	$432	$500
Debt payments as % of milk sales	20%	23%	26%
Amount avail. for debt service	$16,942	$23,026	$30,400
Cash flow coverage ratio for 1985	1.74	1.07	1.04

*Includes discounted lease payments.
**Average of farms reporting nonfarm assets and liabilities for 1985.

FARM FAMILY FINANCIAL SITUATION
BY HERD SIZE
404 New York Dairy Farms, 1985

Farms with:	70 to 84 Cows		85 to 99 Cows	
Item	Jan. 1	Dec. 31	Jan. 1	Dec. 31
ASSETS				
Farm cash/chkg./savings	$ 5,766	$ 4,884	$ 2,617	$ 3,422
Accounts receivable	14,697	14,487	16,078	15,871
Feed & supplies	35,637	35,228	44,666	46,961
Dairy cows*	65,176	62,650	82,318	78,084
Heifers	29,022	25,175	35,773	32,808
Bulls & other lvstk.	747	981	1,382	1,372
Machinery & equipment*	95,054	98,240	115,793	116,850
Coop stocks & cert.	5,003	5,700	8,095	8,876
Land & buildings*	204,940	208,015	260,816	257,440
Total Farm Assets	$456,042	$455,360	$567,538	$561,684
Pers. cash/chkg./savings	$ 15,519	$ 13,636	$ 4,787	$ 6,288
Cash value of life ins.	4,650	5,373	3,600	3,859
Nonfarm real estate	13,829	13,700	4,813	5,542
Auto (personal share)	2,819	3,158	2,265	2,338
Stocks & bonds	9,052	10,261	1,940	3,000
Household furnishings	7,200	7,223	3,604	4,792
All other	5,321	5,986	4,084	4,752
Total Nonfarm Assets**	$ 58,390	$ 59,336	$ 25,092	$ 30,571
Total Farm & Nonfarm Assets	$514,432	$514,696	$592,630	$592,255
LIABILITIES				
Accounts payable	$ 5,037	$ 6,816	$ 4,539	$ 4,883
Operating debt	1,074	1,924	4,013	4,144
Short term	1,148	2,185	3,724	2,827
Intermediate*	44,336	46,725	68,472	67,533
Long term*	90,933	88,906	116,051	119,142
Total Farm Liab.	$142,529	$146,555	$196,799	$198,529
Total Nonfarm Liab.**	454	1,242	21	21
Total Farm & Nonfarm Liabilities	$142,983	$147,797	$196,820	$198,550
Farm Net Worth (Equity Capital)	$313,513	$308,805	$370,739	$363,155
Farm & Nonfarm Net Worth	$371,449	$366,899	$395,810	$393,705

FINANCIAL MEASURES	70 to 84 Cows	85 to 99 Cows
Percent equity	68%	65%
Debt/asset ratio-long term	0.43	0.46
Debt/asset ratio-inter. & current	0.23	0.26
Total farm debt per cow	$1,879	$2,112
Annual debt payments made	$30,462	$39,392
Debt payments made per cow	$402	$426
Debt payments as % of milk sales	20%	21%
Amount avail. for debt service	$41,194	$45,661
Cash flow coverage ratio for 1985	1.40	1.09

*Includes discounted lease payments.
**Average of farms reporting nonfarm assets and liabilities for 1985.

FARM FAMILY FINANCIAL SITUATION
BY HERD SIZE
404 New York Dairy Farms, 1985

Farms with:	100 to 149 Cows		150 to 199 Cows	
Item	Jan. 1	Dec. 31	Jan. 1	Dec. 31
ASSETS				
Farm cash/chkg./savings	$ 4,109	$ 3,938	$ 5,551	$ 6,336
Accounts receivable	20,971	20,473	27,818	32,064
Feed & supplies	57,947	56,439	71,818	73,963
Dairy cows*	102,408	98,777	135,614	136,797
Heifers	46,781	45,478	59,207	53,197
Bulls & other lvstk.	1,699	1,255	905	868
Machinery & equipment*	128,332	127,976	157,670	159,826
Coop stocks & cert.	12,808	13,373	24,972	28,919
Land & buildings*	312,736	317,406	411,748	407,082
Total Farm Assets	$687,791	$685,115	$895,303	$899,052
Pers. cash/chkg./savings	$ 3,454	$ 3,103	$ 1,248	$ 1,313
Cash value of life ins.	3,101	3,480	14,353	14,730
Nonfarm real estate	14,212	15,212	8,333	9,167
Auto (personal share)	3,465	3,582	3,550	2,700
Stocks & bonds	6,212	9,026	1,963	3,404
Household furnishings	9,167	9,785	11,417	11,417
All other	2,949	3,461	6,660	6,826
Total Nonfarm Assets**	$ 42,561	$ 47,648	$ 47,523	$ 49,556
Total Farm & Nonfarm Assets	$730,352	$732,763	$942,826	$948,608
LIABILITIES				
Accounts payable	$ 8,457	$ 6,855	$ 15,603	$ 11,279
Operating debt	2,275	2,809	12,751	11,042
Short term	4,442	5,789	4,901	2,918
Intermediate*	95,195	94,518	153,072	153,000
Long term*	129,707	131,237	204,102	220,169
Total Farm Liab.	$240,075	$241,208	$390,429	$398,408
Total Nonfarm Liab.**	1,064	946	4,650	3,984
Total Farm & Nonfarm Liabilities	$241,139	$242,154	$395,079	$402,392
Farm Net Worth (Equity Capital)	$447,716	$443,907	$504,874	$500,644
Farm & Nonfarm Net Worth	$489,213	$490,609	$547,747	$546,216

FINANCIAL MEASURES	100 to 149 Cows	150 to 199 Cows
Percent equity	65%	56%
Debt/asset ratio-long term	0.41	0.54
Debt/asset ratio-inter. & current	0.30	0.36
Total farm debt per cow	$1,977	$2,371
Annual debt payments made	$60,605	$98,620
Debt payments made per cow	$503	$611
Debt payments as % of milk sales	25%	31%
Amount avail. for debt service	$59,930	$75,317
Cash flow coverage ratio for 1985	1.01	0.86

*Includes discounted lease payments.
**Average of farms reporting nonfarm assets and liabilities for 1985.

FARM FAMILY FINANCIAL SITUATION
BY HERD SIZE
404 New York Dairy Farms, 1985

Farms with:	200 to 249 Cows		More than 250 Cows	
Item	Jan. 1	Dec. 31	Jan. 1	Dec. 31
ASSETS				
Farm cash/chkg./savings	$ 6,837	$ 11,847	$ 8,039	$ 5,409
Accounts receivable	46,843	43,442	68,068	72,250
Feed & supplies	100,424	108,417	172,391	180,862
Dairy cows*	188,896	191,052	282,847	294,830
Heifers	84,355	73,254	128,368	122,225
Bulls & other lvstk.	2,011	2,250	1,938	1,876
Machinery & equipment*	183,392	181,153	252,055	254,436
Coop stocks & cert.	27,566	27,920	43,310	46,142
Land & buildings*	499,166	501,587	781,420	808,694
Total Farm Assets	$1,139,490	$1,140,922	$1,738,436	$1,786,724
Pers. cash/chkg./savings	$ 16,800	$ 13,613	$ 1,068	$ 1,428
Cash value of life ins.	8,038	9,825	5,226	6,400
Nonfarm real estate	12,750	24,000	0	0
Auto (personal share)	4,813	4,000	1,700	1,000
Stocks & bonds	6,875	8,563	1,000	1,000
Household furnishings	11,585	11,460	5,400	4,800
All other	5,483	6,247	3,150	3,086
Total Nonfarm Assets**	$ 66,343	$ 77,707	$ 17,544	$ 17,714
Total Farm & Nonfarm Assets	$1,205,833	$1,218,629	$1,755,980	$1,804,438
LIABILITIES				
Accounts payable	$ 14,599	$ 15,885	$ 14,777	$ 12,388
Operating debt	12,829	14,851	6,667	9,667
Short term	814	1,984	13,302	28,805
Intermediate*	161,140	159,375	325,610	326,324
Long term*	284,505	269,685	332,094	321,161
Total Farm Liab.	$473,887	$461,780	$ 692,450	$ 698,344
Total Nonfarm Liab.**	0	0	0	0
Total Farm & Nonfarm Liabilities	$473,887	$461,780	$ 692,450	$ 698,344
Farm Net Worth (Equity Capital)	$665,603	$679,142	$1,045,986	$1,088,380
Farm & Nonfarm Net Worth	$731,946	$756,849	$1,063,530	$1,106,094

FINANCIAL MEASURES	200 to 249 Cows	More than 250 Cows
Percent equity	60%	61%
Debt/asset ratio-long term	0.54	0.40
Debt/asset ratio-inter. & current	0.30	0.39
Total farm debt per cow	$1,965	$1,962
Annual debt payments made	$92,757	$154,197
Debt payments made per cow	$412	$438
Debt payments as % of milk sales	19%	19%
Amount avail. for debt service	$97,464	$220,436
Cash flow coverage ratio for 1985	0.94	1.31

*Includes discounted lease payments.
**Average of farms reporting nonfarm assets and liabilities for 1985.

SELECTED BUSINESS FACTORS BY HERD SIZE
404 New York Dairy Farms, 1985

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	33	93	82	55	38
Cropping Program Analysis					
Total Tillable acres	107	165	206	258	329
Tillable acres rented*	25	53	63	86	106
Hay crop acres*	74	107	119	132	156
Corn silage acres*	17	29	40	54	73
Hay crop, tons DM/acre	2.1	2.2	2.5	2.4	2.6
Corn silage, tons/acre	13.1	13.2	13.5	14.4	13.7
Oats, bushels/acre	61.4	82.1	86.9	76.9	74.4
Forage DM per cow, tons	6.9	7.7	7.7	7.8	8.2
Tillable acres/cow	3.3	3.5	3.3	3.4	3.6
Fert. & lime exp./til. acre	$21.06	$24.20	$28.35	$30.93	$31.45
Total machinery costs	$14,171	$19,519	$26,647	$36,161	$42,527
Machinery cost/tillable acre	$132	$118	$129	$140	$129
Dairy Analysis					
Number of cows	33	47	62	76	92
Number of heifers	25	37	48	62	77
Milk sold, lbs.	465,289	691,467	924,535	1,162,676	1,430,313
Milk sold/cow, lbs.	14,113	14,722	14,897	15,346	15,485
Operating cost of prod. milk/cwt.	$9.53	$9.75	$9.71	$9.52	$9.31
Total cost of prod. milk/cwt.	$16.67	$15.46	$15.37	$15.00	$14.26
Price/cwt. milk sold	$12.73	$12.79	$12.93	$13.06	$12.85
Purchased dairy feed/cow	$506	$491	$453	$456	$415
Purchased dairy feed/cwt. milk	$3.58	$3.33	$3.04	$2.97	$2.68
Purchased grain & conc. as % of milk receipts	27%	25%	23%	22%	20%
Purchased feed & crop expense/cwt. milk	$4.32	$4.25	$4.13	$4.14	$3.90
Capital Efficiency					
Farm capital/worker	$116,359	$134,356	$162,820	$160,836	$173,727
Farm capital/cow	6,470	5,960	6,340	6,015	6,113
Farm capital/til. acre owned	2,602	2,477	2,752	2,649	2,532
Real estate/cow	3,441	3,034	3,148	2,725	2,805
Machinery investment/cow	1,245	1,147	1,283	1,276	1,259
Capital turnover, years	3.13	2.79	2.88	2.63	2.66
Labor Efficiency					
Worker equivalent	1.83	2.08	2.42	2.83	3.25
Operator/manager equivalent	1.08	1.17	1.33	1.42	1.42
Milk sold/worker, lbs.	253,794	331,904	382,566	410,356	440,096
Cows/worker	18	23	26	27	28
Work units/worker	188	243	272	289	324
Labor cost/cow	$490	$412	$374	$374	$360
Labor cost/tillable acre	$151	$117	$113	$110	$101

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

SELECTED BUSINESS FACTORS BY HERD SIZE
404 New York Dairy Farms, 1985

Item — Farms with:	100 to 149 Cows	150 to 199 Cows	200 to 249 Cows	250 or More Cows
Number of farms	54	20	14	15
Cropping Program Analysis				
Total Tillable acres	364	529	595	809
Tillable acres rented*	120	194	237	276
Hay crop acres*	180	235	237	280
Corn silage acres*	89	128	220	348
Hay crop, tons DM/acre	3.0	2.9	3.2	3.8
Corn silage, tons/acre	14.2	14.0	14.8	15.9
Oats, bushels/acre	81.7	64.9	71.4	93.6
Forage DM per cow, tons	8.2	8.1	8.3	8.5
Tillable acres/cow	3.1	3.3	2.7	2.4
Fert. & lime exp./til. acre	$30.74	$36.27	$39.35	$41.99
Total machinery costs	$50,416	$68,482	$95,644	$123,924
Machinery cost/tillable acre	$138	$130	$161	$153
Dairy Analysis				
Number of cows	119	160	223	342
Number of heifers	107	129	182	286
Milk sold, lbs.	1,839,601	2,450,256	3,618,728	6,189,863
Milk sold/cow, lbs.	15,524	15,295	16,233	18,099
Operating cost of prod. milk/cwt.	$9.63	$9.64	$10.10	$9.17
Total cost of prod. milk/cwt.	$14.04	$13.97	$13.35	$12.22
Price/cwt. milk sold	$12.83	$13.07	$12.94	$12.86
Purchased dairy feed/cow	$451	$450	$542	$550
Purchased dairy feed/cwt. milk	$2.91	$2.94	$3.34	$3.04
Purchased grain & conc. as % of milk receipts	22%	22%	25%	23%
Purchased feed & crop expense/cwt. milk	$3.97	$4.26	$4.49	$4.07
Capital Efficiency				
Farm capital/worker	$179,075	$199,373	$187,431	$215,826
Farm capital/cow	5,793	5,600	5,115	5,154
Farm capital/til. acre owned	2,813	2,678	3,185	3,307
Real estate/cow	2,659	2,556	2,245	2,325
Machinery investment/cow	1,081	991	818	740
Capital turnover, years	2.57	2.37	2.06	1.92
Labor Efficiency				
Worker equivalent	3.83	4.50	6.08	8.17
Operator/manager equivalent	1.50	1.58	1.67	1.58
Milk sold/worker, lbs.	479,896	544,501	594,859	757,942
Cows/worker	31	36	37	42
Work units/worker	332	379	382	439
Labor cost/cow	$357	$338	$387	$393
Labor cost/tillable acre	$116	$102	$145	$166

*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.

Prepared by T.R. Maloney, Extension Associate, Cornell University