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# **DAIRY FARM BUSINESS SUMMARY**

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## **EASTERN NEW YORK RENTER SUMMARY 1998**

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**EASTERN NEW YORK RENTERS**  
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## 1998 EASTERN NEW YORK DAIRY FARM RENTER BUSINESS SUMMARY

### INTRODUCTION

Dairy farmers throughout New York State submit business records for summarization and analysis through Cornell Cooperative Extension's Farm Business Management Program. Averages from a compilation of the individual farm reports are published in six regional summaries and in one statewide summary.<sup>1</sup>

Accrual procedures have been used to provide the most accurate accounting of farm receipts and farm expenses for measuring farm profits. An explanation of these procedures is found on pages 4-6. Three measures of farm profits are calculated on pages 7 and 8. The balance sheet, statement of owner equity, and cash flow statement are featured on pages 9-16. The dairy program analysis includes data on the costs of producing milk (pages 19 and 20).

This Eastern New York Dairy Farm Renter Business Summary is an average of 22 businesses that are renting substantially all of the farm real estate. The farm income, financial summary, and business analysis sections of this report include comparisons with average data on 137 owned dairy farms in the region. This report is prepared in workbook form for farm renters to use in the systematic study of their farm business operations.

Business records for 22 farms in Delaware, Oneida, Orange, Rensselaer, Saratoga, Schoharie, Sullivan, and Washington Counties are summarized in this publication. The Eastern New York region consists of these counties plus Albany, Chenango, Columbia, Cortland, Dutchess, Essex, Fulton, Greene, Herkimer, Lewis, Madison, Montgomery, Otsego, Schenectady, and Ulster Counties which do not have dairy farm business summary participants that classify as renters (see Figure 1 on page 2). The 137 owned dairy farms summarized in this publication include farms from the entire region.

#### Use Comparative Profitability Data With Caution

The profitability analysis on page 8 where labor and management income is calculated implies that renting a dairy farm is more profitable than owning one. Concessionary rental rates set by some land owners is a major factor. The farm owners are often father and mother and other landlords who are willing to accept a very low return for their investment. Total real estate costs including depreciation and interest on real estate investment averaged \$143 per tillable acre on the owned dairy farms compared to \$122 on the rented farms. This accounts for a \$31,053 difference in costs between owned and rented farms.

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<sup>1</sup>Wayne A. Knoblauch, Linda D. Putnam and Jason Karszes, Dairy Farm Management Business Summary, New York, 1998, R.B. 99-11, October 1999.



## SUMMARY AND ANALYSIS OF THE FARM BUSINESS

### Business Characteristics and Resources Used

Recognition of important business characteristics and identification of the farm resources used are necessary for evaluating management performance. The combination of resources and management practices is known as farm organization. Important farm business characteristics, the number of farms reporting these characteristics, and a listing of the average labor, land, and dairy cattle resources used are presented in the following table.

### BUSINESS CHARACTERISTICS AND RESOURCES USED 22 Eastern New York Dairy Farm Renters, 1998

<u>Type of Business</u>	<u>Number</u>	<u>bST Usage</u>	<u>Number</u>	
Single proprietorship	16	Used on <25% of herd	3	
Partnership	5	Used on 25-75% of herd	7	
Corporation	1	Used on >75% of herd	0	
		Stopped using in 1998	1	
		Not used in 1998	11	
<u>Milking System</u>	<u>Number</u>			
Dumping station	0			
Pipeline	15	<u>Labor Force*</u>	<u>My Farm</u>	<u>Average</u>
Herringbone parlor	6	Operator 1	_____mo.	14.8
Other parlor	1	Operator 2	_____mo.	2.8
		Family paid	_____mo.	3.5
		Family unpaid	_____mo.	4.6
<u>Type of Barn</u>	<u>Number</u>	Hired	_____mo.	<u>7.6</u>
Stanchion	15	Total	_____mo.	33.4
Freestall	7	Worker equivalent		
Combination	0	(total ÷ 12)	_____	2.78
<u>Dairy Records Service</u>	<u>Number</u>			
DHIC	14	Operator/Manager Equiv.	_____	1.23
DHIC Owner-Sampler	5			
Other	0	<u>Land Use</u>	<u>My Farm</u>	<u>Average</u>
None	3	Total acres rented	_____	250
		Tillable acres rented	_____	165
<u>Business Record System</u>	<u>Number</u>			
Account Book	9	<u>Number of Cows</u>	<u>My Farm</u>	<u>Average</u>
Agrifax (mail-in only)	1	Beg. year (owned)	_____	84
Other	3	End year (owned & leased)	_____	86
On-farm computer	9	Average for year (owned & leased)	_____	85

\*Based on hours actually worked by owner/operator, instead of standard 12 months per full-time owner/operator. The standard 12 months is used for operator/manager equivalent when calculating labor and management income per operator.

Predominate business characteristics of the 22 rented farms include the single proprietorship, pipeline milking system, stanchion or conventional stall barn, DHIC herd records and an account book or on-farm computer record system. Forty-one percent of the renters were using on-farm computers compared to 35 percent of the owners.

The average size of the labor force on the rented farms was 27 percent less than the 3.79 worker equivalent on owned farms. The rented farms averaged 165 tillable acres and 85 cows compared to 357 tillable acres and 127 cows on the 137 owned dairy farms in the same region. The owned farms averaged 34 cows per worker, compared to 31 cows per worker on the rented farms. In 1998, the rented farms did not use land and labor resources as efficiently as the owned farms.

Income Statement

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

CASH AND ACCRUAL FARM EXPENSES  
22 Eastern New York Dairy Farm Renters, 1998

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses	Percent of Total
<u>Hired Labor</u>	\$ 14,950		\$ 23	<<	\$ -137		\$ 14,790	8
<u>Feed</u>								
Dairy grain & concentrate	70,980		4,687		550		66,842	34
Dairy roughage	13,295		2,528		952		11,719	6
Other livestock	9		0		0		9	<1
<u>Machinery</u>								
Machinery, hire, rent & lease	2,717		0	<<	0		2,717	1
Machinery repair & farm veh. exp.	11,859		5		-11		11,844	6
Fuel, oil & grease	3,846		43		0		3,803	2
<u>Livestock</u>								
Replacement livestock	5,957		0	<<	-724		5,233	3
Breeding	3,610		227		0		3,384	2
Vet & medicine	5,505		24		-46		5,434	3
Milk marketing	11,065		0	<<	0		11,065	6
Bedding	2,760		3		0		2,757	1
Milking supplies	6,566		98		-220		6,248	3
Cattle lease & rent	0		0	<<	0		0	0
Custom boarding	460		0	<<	0		460	<1
bST expense	1,991		-23		0		2,014	1
Other livestock expense	3,888		30		-228		3,631	2
<u>Crops</u>								
Fertilizer & lime	5,449		1,551		21		3,918	2
Seeds & plants	2,478		-68		-2		2,544	1
Spray, other crop expense	4,900		1,432		0		3,468	2
<u>Real Estate</u>								
Land, building & fence repair	2,940		36		45		2,950	2
Taxes	666		0	<<	0		666	<1
Rent & lease	15,508		0	<<	91		15,599	8
<u>Other</u>								
Insurance	2,493		38	<<	0		2,455	1
Utilities (farm share)	6,927		91	<<	0		6,836	3
Interest paid	4,950		0	<<	0		4,950	2
Miscellaneous	<u>2,863</u>		<u>0</u>		<u>0</u>		<u>2,863</u>	<u>1</u>
Total Operating	\$ 208,633		\$ 10,723		\$ 289		\$ 198,199	100
Expansion livestock	\$ 1,237		\$ 0	<<	\$ 0		\$ 1,237	
Machinery depreciation							7,283	
Building depreciation							<u>354</u>	
TOTAL ACCRUAL EXPENSES							\$ 207,073	

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

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





CASH AND ACCRUAL FARM RECEIPTS  
22 Eastern New York Dairy Farm Renters, 1998

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Expenses
Milk Sales	\$ 242,794				\$ 1,802		\$ 244,596
Dairy cattle	7,401		\$ 6,223		0		13,624
Dairy calves	2,648				0		2,648
Other livestock	23		-52		0		-30
Crops	1,244		-1,563		184		-135
Government receipts	2,655		0*		0		2,655
Custom machine work	2,734				0		2,734
Gas tax refund	186				0		186
Other	1,519				0		1,519
- Nonfarm noncash capital**			(-) 0				(-) 0
Total Accrual Receipts	\$ 261,203		\$ 4,608		\$ 1,986		\$ 267,797

\*Change in advanced government receipts.

\*\*Gifts or inheritances of cattle or crops included in inventory.

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

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

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

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

CASH AND ACCRUAL FARM RECEIPT WORKSHEET

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Expenses
Milk Sales	\$ _____				\$ _____		\$ _____
Dairy cattle	_____		\$ _____		_____		_____
Dairy calves	_____		_____		_____		_____
Other livestock	_____		_____		_____		_____
Crops	_____		_____		_____		_____
Government receipts	_____		_____		_____		_____
Custom machine work	_____				_____		_____
Gas tax refund	_____				_____		_____
Other	_____				_____		_____
- Nonfarm noncash capital**			(-) _____				(-) _____
Total Accrual Receipts	\$ _____		\$ _____		\$ _____		\$ _____

### Profitability Analysis

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

Net farm income is the total combined return to the farm operator(s) 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 annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than Farm Credit stock). Appreciation is a major factor contributing to changes in farm net worth and must be included for a complete profitability analysis.

#### NET FARM INCOME Eastern New York Dairy Farm Renters and Owners, 1998

Item	22 Dairy Farm Renters	137 Dairy Farm Owners	My Farm
Total accrual receipts	\$ 267,797	\$ 448,090	\$ _____
+ Appreciation: Livestock	734	4,361	_____
Machinery	916	3,464	_____
Real Estate	288	5,294	_____
Other Stock & Certificates	<u>-95</u>	<u>583</u>	_____
= Total Including Appreciation	\$ 269,640	\$ 461,792	\$ _____
- Total accrual expenses	<u>207,073</u>	<u>368,036</u>	_____
= Net Farm Income (with appreciation)	\$ 62,567	\$ 93,756	\$ _____
Per cow	\$ 736	\$ 738	\$ _____
Net Farm Income (without appreciation)	\$ 60,724	\$ 80,054	\$ _____
Per cow	\$ 714	\$ 630	\$ _____

Labor and management income is the return which farm operators receive for their labor and management used in operating the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and management income is calculated by deducting from net farm income excluding appreciation a charge for unpaid family labor and the opportunity cost of using equity capital at a 5 percent interest rate. The interest charge of 5 percent reflects the long-term average rate of return that a farmer might expect to earn in comparable risk investments in a low inflation economy.

LABOR AND MANAGEMENT INCOME  
Eastern New York Dairy Farm Renters and Owners, 1998

Item	22 Dairy Farm Renters	137 Dairy Farm Owners	My Farm
Net farm income without appreciation	\$ 60,724	\$ 80,054	\$ _____
- Family labor unpaid @ \$1,600 per month	- 7,360	- 4,960	- _____
- Interest on average equity capital @ 5% real rate	- <u>9,307</u>	- <u>29,447</u>	- _____
= Labor & Management Income	\$ 44,057	\$ 45,647	\$ _____
Labor & Management Income per Operator/Manager	\$ 35,819	\$ 26,694	\$ _____

Return to equity capital measures the net return remaining for the farmer's equity or owned capital after a charge has been made for unpaid family labor and 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 to 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 to all capital is calculated by adding interest paid to the return to equity capital and then dividing by average farm assets to calculate the rate of return on average total capital.

RETURN TO EQUITY CAPITAL AND RETURN TO ALL CAPITAL  
Eastern New York Dairy Farm Renters and Owners, 1998

Item	22 Dairy Farm Renters	137 Dairy Farm Owners	My Farm
Net farm income with appreciation	\$ 62,567	\$ 93,756	\$ _____
- Family labor unpaid @ \$1,600 per month	\$ 7,360	\$ 4,960	\$ _____
- Value of operators' labor & management	<u>29,045</u>	<u>36,420</u>	_____
= Return to equity capital with appreciation	\$ 26,162	\$ 52,376	\$ _____
+ Interest paid	<u>4,950</u>	<u>20,029</u>	_____
= Return to all capital with appreciation	\$ 31,112	\$ 72,405	\$ _____
Return to equity capital without appreciation	\$ 24,319	\$ 38,674	\$ _____
Return to all capital without appreciation	\$ 29,269	\$ 58,703	\$ _____
Rate of return on average equity capital:			
with appreciation	14.1%	8.9%	_____ %
without appreciation	13.1%	6.6%	_____ %
Rate of return on all capital:			
with appreciation	11.1%	8.3%	_____ %
without appreciation	10.5%	6.7%	_____ %

### Farm and Family Financial Status

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

#### 1998 FARM BUSINESS & NONFARM BALANCE SHEET 22 Eastern New York Dairy Farm Renters

Farm Assets			Farm Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 6,943	\$ 10,713	Accounts payable	\$ 10,237	\$ 10,527
Accounts receivable	16,391	18,377	Operating debt	4,375	6,770
Prepaid expenses	0	151	Short term	123	50
Feed & supplies	36,603	45,611	Advanced gov't. receipt	0	0
Total Current	\$ 59,937	\$ 74,852	Current portion:		
			Intermediate	14,085	12,957
			Long term	791	2,213
			Total Current	\$ 29,611	\$ 32,517
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy Cows:			Structured debt		
owned	\$ 85,559	\$ 89,516	1-10 years	\$ 55,203	\$ 49,019
leased	0	0	Financial lease		
Heifers	27,841	30,841	(cattle & machinery)	1,276	2,969
Bulls & other livestock	602	550	Farm Credit stock	602	599
Mach. & equip. owned	75,036	86,869	Total Intermediate	\$ 57,081	\$ 52,587
Mach. & equip. leased	1,276	2,969			
Farm Credit stock	602	599	<u>Long Term</u>		
Other stock & cert.	1,385	685	Structured debt		
Total Intermediate	\$ 192,301	\$ 212,029	≥ 10 years	\$ 4,905	\$ 9,657
<u>Long Term</u>			Financial lease		
Land & buildings:			(structures)	0	0
owned	\$ 9,182	\$ 10,318	Total Long Term	\$ 4,905	\$ 9,657
leased	0	0			
Total Long Term	\$ 9,182	\$ 10,318	Total Farm Liabilities	\$ 91,597	\$ 94,761
Total Farm Assets	\$ 261,420	\$ 297,199	FARM NET WORTH	\$ 169,823	\$ 202,438
(Average for 11 farms reporting)					
<u>Nonfarm Assets*</u>	Jan.1	Dec. 31	<u>Nonfarm Liabilities* &amp; Net Worth</u>	Jan. 1	Dec. 31
Personal cash, checking & savings	\$ 12,182	\$ 22,933	Nonfarm Liabilities	\$ 7,182	\$ 6,592
Cash value life ins.	11,336	9,624	NONFARM NET WORTH	\$ 81,465	\$ 77,664
Nonfarm real estate	26,727	16,818			
Auto (personal share)	4,455	4,591	<u>FARM &amp; NONFARM**</u>	Jan. 1	Dec. 21
Stocks & bonds	12,273	14,245	Total Assets	\$ 350,067	\$ 381,455
Household furn.	8,000	8,000	Total Liabilities	98,779	101,353
All other	13,674	8,045			
Total Nonfarm	\$ 88,647	\$ 84,256	TOTAL FARM & NON-FARM NET WORTH	\$ 251,288	\$ 280,102

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

Financial lease obligations are included in the balance sheet. The present value of all future payments is listed as a liability since the farmer is committed to make the payments by signing the lease. The present value is also listed as an asset, representing the future value the item has to the business.

Advance government receipts are included as current liabilities. Government payments received in 1998 that are for participation in the 1999 program are the end year balance and payments received in 1997 for participation in the 1998 program are the beginning year balance.

Date \_\_\_\_\_

1998 FARM BUSINESS & NONFARM BALANCE SHEET

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	_____	_____	Accounts payable	_____	_____
			Operating debt	_____	_____
Accounts receivable	_____	_____		_____	_____
			Short term	_____	_____
Prepaid expenses	_____	_____		_____	_____
Feed & supplies	_____	_____	Advanced gov't. receipt	_____	_____
Total Current	_____	_____	Current portion:		
			Intermediate	_____	_____
<u>Intermediate</u>			Long term	_____	_____
Dairy Cows:			Total Current	_____	_____
owned	_____	_____	<u>Intermediate</u>		
leased	_____	_____		_____	_____
Heifers	_____	_____	Financial lease	_____	_____
Bulls & other livestock	_____	_____	(cattle & machinery)	_____	_____
Mach. & equip. owned	_____	_____	Farm Credit stock	_____	_____
Mach. & equip. leased	_____	_____	Total Intermediate	_____	_____
Farm Credit stock	_____	_____			
Other stock & cert.	_____	_____	<u>Long Term</u>		
Total Intermediate	_____	_____		_____	_____
<u>Long Term</u>			Financial lease	_____	_____
Land & buildings:			(structures)	_____	_____
owned	_____	_____	Total Long Term	_____	_____
leased	_____	_____			
Total Long Term	_____	_____	Total Farm Liabilities	_____	_____
Total Farm Assets	_____	_____	FARM NET WORTH	_____	_____
Nonfarm Assets	Jan.1	Dec. 31	Nonfarm Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	_____	_____	Nonfarm Liabilities	_____	_____
Cash value life ins.	_____	_____		_____	_____
Nonfarm real estate	_____	_____		_____	_____
Auto (personal share)	_____	_____		_____	_____
Stocks & bonds	_____	_____	Total Nonfarm Liabilities	_____	_____
Household furn.	_____	_____			
All other	_____	_____	Nonfarm Net Worth	_____	_____
Total Nonfarm	_____	_____			
TOTAL FARM & NONFARM				Jan. 1	Dec. 31
Total Farm and Nonfarm Assets				_____	_____
Less Total Farm & Nonfarm Liabilities				_____	_____
Farm & Nonfarm Net Worth				_____	_____

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

**BALANCE SHEET ANALYSIS**  
Easter New York Dairy Farm Renters and Owners, 1998

Item	22 Dairy Farm Renters	137 Dairy Farm Owners	My Farm
<u>Financial Ratios - Farm:</u>			
Percent equity	68%	68%	_____ %
Debt/asset ratio: total	0.32	0.32	_____
long term	0.94	0.30	_____
intermediate & current	0.30	0.33	_____
Current Ratio:	2.30	2.30	_____
Working Capital      \$42,335      As % of total expenses	20% (\$70,519)	19%	
<u>Farm Debt Analysis:</u>			
Accounts payable as % of total debt	11%	3%	_____ %
Long term liabilities as a % of total debt	10%	42%	_____ %
Current & intermediate liabilities as a % of total debt	90%	58%	_____ %
<u>Farm Debt Levels Per Cow:</u>			
Total farm debt	\$ 1,102	\$ 2,183	\$ _____
Long term debt	\$ 112	\$ 911	\$ _____
Intermediate & long term debt	\$ 724	\$ 1,773	\$ _____
Intermediate & current debt	\$ 990	\$ 1,272	\$ _____

Farm inventory balance is an accounting of the value of machinery and equipment 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 MACHINERY AND EQUIPMENT INVENTORY BALANCE**  
Eastern New York Dairy Farm Renters and Owners, 1998

Item	22 Dairy Farm Renters	137 Dairy Farm Owners	My Farm
Value beginning of year	\$ 75,036	\$ 149,244	\$ _____
Purchases	\$ 20,010	\$ 32,920	\$ _____
+ Nonfarm noncash transfer	0	219	_____
- Net Sales	1,809	2,340	_____
- Depreciation	<u>7,283</u>	<u>16,707</u>	_____
= Net investment	10,917	14,093	_____
+ Appreciation	<u>916</u>	<u>3,464</u>	_____
= Value end of year	\$ 86,869	\$ 166,801	\$ _____

The Statement of Owner Equity has two purposes. It allows (1) verification that the accrual income statement and market value balance sheet are interrelated and 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 the farmer 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) and (3) increases or decreases in the value (price) of assets owned by the business (called change in valuation equity).

The change in farm net worth without appreciation is an excellent indicator of farm generated financial progress.

STATEMENT OF OWNER EQUITY (RECONCILIATION)  
22 Eastern New York Dairy Farm Renters, 1998

Item	Average	My Farm
Beginning of year farm net worth	\$ 169,823	\$ _____
Net farm income without appreciation	\$ 60,724	\$ _____
+ Nonfarm cash income	+ 5,088	+ _____
- Personal withdrawals & family expenditures excluding nonfarm borrowings	- 36,310	- _____
RETAINED EARNINGS	+ \$ 29,502	+ \$ _____
Nonfarm noncash transfers to farm	\$ 0	\$ _____
+ Cash used in business from nonfarm capital	+ 1520	+ _____
- Note/mortgage from farm real estate sold (nonfarm)	- 0	- _____
CONTRIBUTED/WITHDRAWN CAPITAL	+ \$ 1,520	+ \$ _____
Appreciation	\$ 1,843	\$ _____
- Lost capital	- 0	- _____
CHANGE IN VALUATION EQUITY	+ \$ 1,843	+ \$ _____
IMBALANCE/ERROR	- \$ 250	- \$ _____
End of year farm net worth*	= \$ 202,438	= \$ _____
Change in net worth with appreciation.	\$ 32,615	\$ _____

Change in Net Worth

Without appreciation	\$ 30,772	\$ _____
With appreciation	\$ 32,615	\$ _____

\*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.

ANNUAL CASH FLOW STATEMENT  
22 Eastern New York Dairy Farm Renters, 1998

Item	Average	
<u>Cash Flow from Operating Activities</u>		
Cash farm receipts	\$ 261,203	
- Cash farm expenses	<u>208,633</u>	
= Net cash farm income		\$ 52,570
Personal withdrawals & family expenses including nonfarm debt payments	\$ 36,310	
- Nonfarm income	<u>5,088</u>	
- Net cash withdrawals from the farm		<u>\$ 31,222</u>
= Net Provided by Operating Activities		\$ 21,348
<u>Cash Flow From Investing Activities</u>		
Sale of assets: Machinery	\$ 1809	
+ real estate	0	
+ other stock & certificates	<u>727</u>	
= Total asset sales		\$ 2536
Capital purchases: expansion livestock	\$ 1237	
+ machinery	20,010	
+ real estate	1203	
+ other stock & certificates	<u>122</u>	
- Total invested in farm assets		<u>\$ 22,572</u>
= Net Provided by Investment Activities		\$ -20,036
<u>Cash Flow From Financing Activities</u>		
Money borrowed (intermediate & long term)	\$ 20,706	
+ Money borrowed (short term)	0	
+ Increase in operating debt	2395	
+ Cash from nonfarm capital used in business	1520	
+ Money borrowed - nonfarm	<u>0</u>	
= Cash inflow from financing		\$ 24,621
Principal payments (intermediate & long term)	\$ 21,843	
+ Principal payments (short term)	73	
+ Decrease in operating debt	<u>0</u>	
- Cash outflow for financing		<u>\$ 21,916</u>
= Net Provided by Financing Activities		\$ 2705
<u>Cash Flow From Reserves</u>		
Beginning farm cash, checking & savings	\$ 6,943	
- Ending farm cash, checking & savings	<u>10,713</u>	
= Net Provided from Reserves		<u>\$ -3770</u>
<u>Imbalance (error)</u>		\$ 247



## ANNUAL CASH FLOW STATEMENT

Item		My Farm
<u>Cash Flow from Operating Activities</u>		
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		\$ _____
<u>Cash Flow From Investing Activities</u>		
Sale of assets: Machinery	\$ _____	
+ real estate	_____	
+ other stock & certificates	_____	
= Total asset sales		\$ _____
Capital purchases: expansion livestock	\$ _____	
+ machinery	_____	
+ real estate	_____	
+ other stock & certificates	_____	
- Total invested in farm assets		\$ _____
= Net Provided by Investment Activities		\$ _____
<u>Cash Flow From Financing Activities</u>		
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		\$ _____
<u>Cash Flow From Reserves</u>		
Beginning farm cash, checking & savings		\$ _____
- Ending farm cash, checking & savings		_____
= Net Provided from Reserves		\$ _____
<u>Imbalance (error)</u>		
		\$ _____

### Repayment Analysis

The second step in cash flow analysis is to compare the debt payments planned for the last year with the amount actually paid. The measures listed below provide a number of different perspectives on the repayment performance of the business. However, the critical question to many farmers and lenders is whether planned payments can be made in 1999. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 1999 debt payments shown below.

#### FARM DEBT PAYMENTS PLANNED Same 16 Eastern New York Dairy Farm Renters, 1998\*

Debt Payments	Average			My Farm		
	1998 Payments		Planned 1999	1998 Payments		Planned 1999
	Planned	Made		Planned	Made	
Long-term	\$ 1770	\$ 756	\$ 1696	\$ _____	\$ _____	\$ _____
Intermediate-term	21,456	23,488	17,030	_____	_____	_____
Short-term	54	31	23	_____	_____	_____
Operating (net red.)	1257	0	4615	_____	_____	_____
Accounts payable (net reduction)	<u>6538</u>	<u>1210</u>	<u>1154</u>	_____	_____	_____
Total	\$ 31,075	\$ 25,485	\$ 24,518	\$ _____	\$ _____	\$ _____
Per cow	\$ 361	\$ 296		\$ _____	\$ _____	
Per cwt. 1998 milk	\$ 1.90	\$ 1.56		\$ _____	\$ _____	
Percent of total 1998 receipts	11%	9%		_____	_____	
Percent of 1998 milk receipts	12%	10%		_____	_____	

\*Farms that completed Dairy Farm Business Summaries for both 1997 and 1998.

The cash flow coverage ratio and debt coverage ratio measure the ability of the farm business to meet its planned debt payment schedule. The ratios show the percentage of planned payments (as of December 31, 1997) that could have been made with the amount available for debt service in 1998. Farmers that did not participate in DFBS last year will find in their report coverage ratios based on planned debt payments for 1999.

#### COVERAGE RATIOS Same 16 New York Dairy Farm Renters 1997 & 1998

Item	Average	Item	My Farm
<u>Cash Flow Coverage Ratio</u>		<u>Debt Coverage Ratio</u>	
Cash farm receipts	\$ 282,052	Net farm income (w/o appreciation)	\$ 69,480
- Cash farm expenses	222,958	+ Depreciation	9,171
+ Interest paid (cash)	3,844	+ Interest paid (accrual)	3,844
- Net personal withdrawals from farm*	<u>32,708</u>	- Net personal withdrawals from farm*	<u>32,708</u>
(A) = Amount Available for Debt Service	\$ 30,230	(A') = Repayment Capacity	\$ 49,787
(B) = Debt Payments Planned for 1998 (as of December 31, 1997)	\$ 31,075	(B) = Debt Payments Planned for 1998 (as of December 31, 1997)	\$ 31,075
(A/B)=Cash Flow Coverage Ratio for 1998	0.97	(A'/B)=Debt Coverage Ratio for 1998	1.60
Same 107 Eastern New York Dairy Farm Owners, 1997 & 1998			
(A) = Amount Available for Debt Service	\$ 61,259	(A') = Repayment Capacity	\$ 95,196
(B) = Debt Payments Planned for 1998	53,083	(B) = Debt Payments Planned for 1998	53,083
(A/B)=Cash Flow Coverage Ratio for 1998	1.15	(A'/B)=Debt Coverage Ratio for 1998	1.79

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

## ANNUAL CASH FLOW WORKSHEET

Item	22 Dairy Farm Renters	My Farm		Expected Change	1999 Projection
		Total	Per Cow		
	(per cow)				
Average number of cows	85				
<u>Accrual Operating Receipts</u>					
Milk	\$ 2,878	\$	\$		\$
Dairy cattle	160				
Dairy calves	31				
Other livestock	0				
Crops	-2				
Misc. receipts	83				
Total	\$ 3,151	\$	\$		\$
<u>Accrual Operating Expenses</u>					
Hired labor	\$ 174	\$	\$		\$
Dairy grain & concentrate	786				
Dairy roughage	138				
Other livestock feed	0				
Machinery hire, rent & lease	32				
Machinery repair & vehicle exp.	139				
Fuel, oil & grease	45				
Replacement livestock	62				
Breeding	40				
Vet & medicine	64				
Milk marketing	130				
Bedding	32				
Milking supplies	74				
Cattle lease	0				
Custom boarding	5				
bST expense	24				
Other livestock expense	43				
Fertilizer & lime	46				
Seeds & plants	30				
Spray & other crop expense	41				
Land, building & fence repair	35				
Taxes	8				
Real estate rent & lease	184				
Insurance	29				
Utilities	80				
Miscellaneous	34				
Total Less Interest Paid	\$ 2,274	\$	\$	\$	\$
<u>Net Accrual Operating Income</u>	(Total)				
(without interest paid)	\$ 74,548	\$			\$
- Change in livestock & crop inv.	4,608				
- Change in accounts receivable	1,986				
- Change in feed & supply inv.*	10,723				
+ Change in accounts payable**	289				
NET CASH FLOW	\$ 57,520	\$			\$
- Net family withdrawals	31,222				
Available for Farm Debt Payments					
& Investments	\$ 26,298	\$			\$
- Farm debt payments	26,700				
Available for Farm Investments	\$ -402	\$			\$
- Capital purchases: cattle,					
machinery & improvements	\$ 22,572	\$		\$	\$
Additional Capital Needed		\$			\$

\*Includes change in prepaid expenses.

\*\*Excludes change in interest account payable.

### Cropping Program Analysis

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

#### LAND RESOURCES AND CROP PRODUCTION Eastern New York Dairy Farm Renters Reporting, 1998

Item	Average of Farms Reporting			My Farm	
<u>Crop Yields</u>	<u>Farms</u>	<u>Acres</u>	<u>Prod/Acre*</u>	<u>Acres</u>	<u>Prod/Acre</u>
Hay crop	16	135	2.19 tn DM	_____	_____ tn DM
Corn silage	14	66	11.00 tn	_____	_____ tn
			3.58 tn DM	_____	_____ tn DM
Other forage	1	25	4.00 tn DM	_____	_____ tn DM
Total forage	17	182	2.62 tn DM	_____	_____ tn DM
Corn grain	4	67	83 bu	_____	_____ bu
Oats	2	12	39 bu	_____	_____ bu
Wheat	0	0	0.00 bu	_____	_____ bu
Other crops	1	13		_____	
Tillable pasture	3	50		_____	
Idle	4	17		_____	
Total Tillable Acres	22	165		_____	

\*1998 average yields for 137 dairy farm owners in Eastern New York included: all hay crops, 2.6 tons dry matter per acre; corn silage, 15 tons per acre.

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 indicate how efficiently the land resource is being used and how well total forage requirements are being met.

#### CROP MANAGEMENT FACTORS Eastern New York Dairy Farm Renters and Owners, 1998

Item	22 Dairy Farm Renters	137 Dairy Farm Owners	My Farm
Total tillable acres per cow	1.94	2.81	_____
Total forage acres per cow	1.66	2.49	_____
Harvested forage dry matter, tons per cow	4.34	8.38	_____

Average fertilizer and lime, seeds and plants, and spray and other crop expenses have been computed per tillable acre for all farms in the first column of the table below. Average hay crop and corn crop related expenses are from the limited number of farms allocating crop expenses. Additional expense items such as fuels, labor, and machinery repairs are not included. Rotational grazing was used on 2 rented farms and 23 owned farms in the region.

**CROP RELATED ACCRUAL EXPENSES**  
Eastern New York Dairy Farm Renters and Owners, 1998

Expense	Total/ Till. Acre	Hay Crop		All Corn Per Acre	Corn Silage Per Ton DM	Corn Grain Per Dry Shell Bu.
		Per Acre	Per Ton DM			
<u>22 Dairy Farm Renters:</u>						
		Average 3 Farms Reporting Individual Crop Costs				
Fertilizer & lime	\$23.75	\$12.45	\$3.08	\$49.17	\$11.22	\$0.59
Seeds & plants	15.42	0.00	0.00	36.40	8.31	0.43
Spray & other crop expense	<u>21.02</u>	<u>0.00</u>	<u>0.00</u>	<u>28.76</u>	<u>6.57</u>	<u>0.34</u>
Total	\$60.19	\$12.45	\$3.08	\$114.33	\$26.10	\$1.36
<u>137 Dairy Farm Owners:</u>						
		Average 25 Farms Reporting Individual Crop Costs				
Fertilizer & lime	\$35.20	\$27.25	\$8.73	\$42.56	\$7.99	\$0.39
Seeds & plants	16.84	11.30	3.62	27.03	5.08	0.25
Spray & other crop expense	<u>17.83</u>	<u>4.35</u>	<u>1.39</u>	<u>45.29</u>	<u>8.51</u>	<u>0.42</u>
Total	\$69.87	\$42.90	\$13.74	\$114.88	\$21.58	\$1.06
<u>My Farm:</u>						
Fertilizer & lime	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
Seeds & plants	_____	_____	_____	_____	_____	_____
Spray & other crop expense	_____	_____	_____	_____	_____	_____
Total	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____

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

**ACCRUAL MACHINERY EXPENSES**  
Eastern New York Dairy Farm Renters and Owners, 1998

Item	Average Per Tillable Acre		My Farm	
	22 Dairy Farm Renters	137 Dairy Farm Owners	Total Expenses	Per Till. Acres
Fuel, oil & grease	\$23.05	\$21.34	\$ _____	\$ _____
Machine repair & farm veh. exp.	71.78	71.87	_____	_____
Machine hire, rent & lease	16.47	20.30	_____	_____
Interest (5%)	25.18	22.69	_____	_____
Depreciation	<u>44.14</u>	<u>46.80</u>	_____	_____
Total	\$180.61	\$182.99	\$ _____	\$ _____

Dairy Program Analysis

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

DAIRY HERD INVENTORY  
Eastern New York Dairy Farm Renters and Owners, 1998

	Dairy Cows		Heifers					
Item	No.	Value	Bred		Open		Calves	
			No.	Value	No.	Value	No.	Value
<u>22 Dairy Farm Renters:</u>								
Beginning year (owned)	84	\$ 85,559	15	\$ 13,916	18	\$ 9,882	15	\$ 4,043
+ Change w/o apprec.		3,418		741		1,311		752
+ Appreciation		<u>539</u>		<u>163</u>		<u>32</u>		<u>0</u>
End year (owned)	86	\$ 89,516	16	\$ 14,820	19	\$ 11,225	18	\$ 4,795
End including leased	86							
Average number	85		50	(all age groups)				
<u>137 Dairy Farm Owners:</u>								
Beginning year (owned)	125	\$ 130,622	36	\$ 31,655	31	\$ 16,736	29	\$ 8,112
+ Change w/o apprec.		6,824		1,392		1,777		91
+ Appreciation		<u>2,848</u>		<u>633</u>		<u>574</u>		<u>287</u>
End year (owned)	131	\$ 140,294	37	\$ 33,680	34	\$ 19,087	28	\$ 8,490
End including leased	132							
Average number	127		96	(all age groups)				
<u>My Farm:</u>								
Beginning 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 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  
Eastern New York Dairy Farm Renters and Owners, 1998

Item	22 Dairy Farm Renters	137 Dairy Farm Owners	My Farm
Total milk sold, lbs.	1,540,548	2,502,950	_____
Milk sold per cow, lbs.	18,231	19,721	_____
Average milk plant test, % butterfat	3.69%	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 are compared with the accrual costs of producing milk per hundredweight of milk. Using the whole farm method, operating cost of producing milk is estimated by deducting nonmilk accrual receipts from total accrual operating expenses plus expansion livestock purchased. Purchased input cost of producing milk is the operating cost plus depreciation. Total cost of producing milk includes the operating cost plus depreciation on machinery and buildings, the value of unpaid family labor, the value of operator(s) labor and management, and an interest charge for using equity capital.

COST OF PRODUCING MILK AND ACCRUAL RECEIPTS FROM MILK  
Eastern New York Dairy Farm Renters and Owners, 1998

Item	22 Renters		137 Owners		My Farm	
	Total	Per Cwt.	Total	Per Cwt.	Total	Per Cwt.
<u>Accrual Cost of Producing Milk</u>						
Operating cost	\$176,235	\$11.44	\$293,612	\$11.73	\$ _____	\$ _____
Purchased input cost	\$183,872	\$11.94	\$320,768	\$12.82	\$ _____	\$ _____
Total cost	\$229,584	\$14.90	\$391,595	\$15.65	\$ _____	\$ _____
<u>Accrual Receipts from Milk</u>	\$244,596	\$15.88	\$400,822	\$16.01	\$ _____	\$ _____
Net Milk Receipts	\$233,531	\$15.16	\$381,916	\$15.26	\$ _____	\$ _____

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 for strengths and areas for improvement.

DAIRY RELATED ACCRUAL EXPENSES  
Eastern New York Dairy Farm Renters and Owners, 1998

Item	Average Per Cwt. Milk		Per Cwt.
	22 Renters	137 Owners	
Purchased dairy grain & concentrate	\$4.34	\$4.14	\$ _____
Purchased dairy roughage	0.76	0.17	_____
Total Purchased Dairy Feed	\$5.10	\$4.31	\$ _____
Purchased grain & concentrate as % of milk receipts	27%	26%	_____ %
Purchased feed & crop expense	\$5.74	\$5.31	\$ _____
Purchased feed & crop expense as % of milk receipts	36%	33%	_____ %
Breeding	\$0.22	\$0.21	\$ _____
Veterinary & medicine	0.35	0.47	_____
Milk marketing	0.72	0.76	_____
Bedding	0.18	0.15	_____
Milking supplies	0.41	0.33	_____
Cattle lease	0.00	0.00	_____
Custom boarding	0.03	0.06	_____
bST expense	0.13	0.15	_____
Other livestock expense	0.24	0.23	_____

### Capital and Labor Efficiency Analysis

Capital efficiency factors measure how intensively the capital is being used in the farm business. The asset turnover ratio is the ratio of total farm income to total farm assets. It is calculated by dividing total accrual operating receipts plus appreciation by average total farm assets. Measures of labor efficiency are key indicators of management's success in generating products per unit of labor input.

#### CAPITAL EFFICIENCY Eastern New York Dairy Farm Renters and Owners, 1998

Item	Per Worker	Per Cow	Per Tillable Acre
<u>22 Dairy Farm Renters:</u>			
Farm capital	\$ 100,471	\$ 3,286	\$ 1,693
Machinery & equipment	29,883	977	503
<u>Ratios</u>			
Asset turnover	Operating expense	Interest expense	Depreciation expense
0.97	0.73	0.02	0.03
<u>137 Dairy Farm Owners:</u>			
Farm capital	\$ 230,741	\$ 6,886	\$ 2,450
Machinery & equipment	42,741	1,276	454
<u>Ratios</u>			
Asset turnover	Operating expense	Interest expense	Depreciation expense
0.53	0.72	0.04	0.06
<u>My Farm:</u>			
Farm capital	\$ _____	\$ _____	\$ _____
Machinery & equipment	_____	_____	_____
Asset turnover ratio	_____	_____	_____

#### LABOR FORCE ANALYSIS Eastern New York Dairy Farm Renters and Owners, 1998

Efficiency	22 Renters		137 Owners		My Farm	
	Total	Per Worker	Total	Per Worker	Total	Per Worker
Cows, average number	85	31	127	34	_____	_____
Milk sold, pounds	1,540,548	554,154	2,502,950	660,409	_____	_____
Tillable acres	165	59	357	94	_____	_____
Work units	799	287	1,311	346	_____	_____
Labor Costs	22 Renters		137 Owners		My Farm	
	Total	Per Cow	Total	Per Cow	Total	Per Cow
Value of operator(s) labor*	\$ 28,160	\$ 331	\$ 32,480	\$ 256	\$ _____	\$ _____
Family unpaid*	7,360	87	4,960	39	_____	_____
Hired	14,790	174	38,687	305	_____	_____
Total Labor	\$ 50,310	\$ 592	\$ 76,127	\$ 599	\$ _____	\$ _____
Machinery Cost	\$ 29,801	\$ 351	\$ 65,327	\$ 514	\$ _____	\$ _____
Total Labor & Machinery	\$ 80,111	\$ 942	\$ 141,454	\$ 1,114	\$ _____	\$ _____

\*\$1,600 per month.



## COMPARATIVE ANALYSIS OF THE FARM BUSINESS

Progress of the Farm Business

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

PROGRESS OF THE FARM BUSINESS  
Same 16 Eastern New York Dairy Farm Renters, 1997 & 1998

Selected Factors	Average		My Farm		Goal
	1997	1998	1997	1998	
<u>Size of Business</u>					
Average number of cows	84	86	_____	_____	_____
Average number of heifers	53	55	_____	_____	_____
Milk sold, lbs.	1,529,866	1,638,113	_____	_____	_____
Worker equivalent	2.76	2.93	_____	_____	_____
Total tillable acres	177	177	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, lbs.	18,294	18,951	_____	_____	_____
Hay DM per acre, tons	2.2	2.5	_____	_____	_____
Corn silage per acre, tons	15.1	10.9	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	30	29	_____	_____	_____
Milk sold per worker, lbs.	554,299	559,083	_____	_____	_____
<u>Cost Control</u>					
Grain & concentrate purchased as % of milk sales	32%	25%	_____ %	_____ %	_____ %
Dairy feed & crop expense per cwt. milk	\$5.93	\$5.55	\$ _____	\$ _____	\$ _____
Labor & machinery costs/cow	\$927	\$993	\$ _____	\$ _____	\$ _____
Operating cost of producing cwt. milk	\$11.09	\$11.18	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency*</u>					
Farm capital per cow	\$3,289	\$3,553	\$ _____	\$ _____	\$ _____
Machinery & equipment per cow	\$929	\$1,041	\$ _____	\$ _____	\$ _____
Asset turnover ratio	0.89	0.94	_____	_____	_____
<u>Profitability</u>					
Net farm income without apprec.	\$37,178	\$69,480	\$ _____	\$ _____	\$ _____
Net farm income with apprec.	\$39,089	\$71,232	\$ _____	\$ _____	\$ _____
Labor & management income per operator/manager	\$16,717	\$40,584	\$ _____	\$ _____	\$ _____
Rate of return on equity capital with appreciation	3.6%	16.5%	_____ %	_____ %	_____ %
Rate of return on all capital with appreciation	4.2%	13.0%	_____ %	_____ %	_____ %
<u>Financial Summary</u>					
Farm net worth	\$197,829	\$237,611	\$ _____	\$ _____	\$ _____
Debt to asset ratio	0.31	0.27	_____	_____	_____
Farm debt per cow	\$1033	\$985	\$ _____	\$ _____	\$ _____

\*Average for the year.

**RECEIPTS AND EXPENSES PER COW AND PER CWT.**

Same 16 Eastern New York Dairy Farm Renters, 1997 &amp; 1998

Item	1997		1998	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	84		86	
Cwt. Of Milk Sold		15,299		16,381
<b><u>ACCRUAL OPERATING RECEIPTS</u></b>				
Milk	\$ 2,554	\$ 14.02	\$ 3,044	\$ 15.98
Dairy cattle	156	0.86	161	0.85
Dairy calves	19	0.10	31	0.17
Other livestock	1	0.00	-1	-0.01
Crops	87	0.48	-8	-0.04
Miscellaneous receipts	94	0.51	105	0.55
Total Receipts	\$ 2,911	\$ 15.98	\$ 3,332	\$ 17.49
<b><u>ACCRUAL OPERATING EXPENSES</u></b>				
Hired labor	\$ 179	\$ .98	\$ 216	\$ 1.14
Dairy grain & concentrate	824	4.52	756	3.97
Dairy roughage	106	0.58	162	0.85
Nondairy feed	0	0.00	0	0.00
Machine hire/rent/lease	15	0.08	23	0.12
Mach. repair & vehicle exp.	142	0.78	144	0.75
Fuel, oil & grease	61	0.34	55	0.29
Replacement livestock	73	0.40	69	0.36
Breeding	38	0.21	45	0.23
Veterinary & medicine	62	0.34	64	0.34
Milk marketing	136	0.75	137	0.72
Bedding	26	0.14	33	0.17
Milking supplies	66	0.36	78	0.41
Cattle lease	0	0.00	0	0.00
Custom boarding	6	0.03	6	0.03
bST expense	20	0.11	29	0.15
Other livestock expense	35	0.19	47	0.25
Fertilizer & lime	71	0.39	52	0.28
Seeds & plants	24	0.13	35	0.18
Spray/other crop expense	54	0.30	51	0.27
Land, building, fence repair	32	0.18	33	0.17
Taxes	14	0.07	10	0.05
Real estate rent/lease	200	1.10	182	0.95
Insurance	28	0.16	32	0.17
Utilities	79	0.43	78	0.41
Interest paid	56	0.31	45	0.23
Miscellaneous	26	0.15	35	0.18
Total Operating Expenses	\$ 2,375	\$ 13.04	\$ 2,416	\$ 12.68
Expansion Livestock	1	0.00	2	0.01
Machinery Depreciation	85	0.47	101	0.53
Real Estate Depreciation	7	0.04	6	0.03
Total Expenses	\$ 2,468	\$ 13.55	\$ 2,524	\$ 13.25
Net Farm Income Without Appreciation	\$ 443	\$ 2.43	\$ 808	\$ 4.24

### 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 5 figures in each column represent the average of each 20 percent or quintile of farms included in the regional summary.

#### FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS

22 Eastern New York Dairy Farm Renters, 1998

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)*	(10)	(10)	(10)	(9)	(9)	(11)	(11)
5.5	167	3,251,729	22,630	3.6	21	49	863,118
3.0	92	1,644,568	20,583	2.8	18	35	742,100
2.4	70	1,325,897	18,054	2.3	15	31	539,763
2.0	63	1,089,616	16,890	1.7	11	27	451,275
1.6	46	711,039	13,298	1.3	8	21	348,083

  

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	14%	\$156	\$663	\$559	\$3.21
670	24	304	883	871	5.27
769	29	381	981	996	5.72
857	31	468	1,134	1,125	6.38
1,158	38	659	1,525	1,444	7.33

  

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 Income w/o Apprec.	Labor & Mgmt. Income Per Oper.
(10)	(10)	(10)	(3)	(3)	(3)
\$3,530	\$6.83	\$11.23	\$108,755	\$111,451	\$92,642
3,245	10.26	14.44	87,141	85,467	49,778
2,865	11.38	15.70	64,703	61,189	29,665
2,601	12.82	16.45	41,410	38,531	22,026
2,119	14.06	19.36	25,407	22,166	6,287

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

### Regional Financial Analysis Chart

The farm financial analysis chart 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 7, 8, 11, and 15 of this publication. References to DFBS output page numbers for participating dairy farmers are provided in the table headings.

#### FINANCIAL ANALYSIS CHART 22 Eastern New York Dairy Farm Renters, 1998

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)*	(optional page 12)	(8)	(8)	(5)
\$0	\$675	4.61	0%	\$0
5	476	1.68	1	412
129	380	1.02	5	964
257	263	0.45	9	1,776
693	12	-0.30	21	2,297

  

Solvency			Profitability	
Leverage Ratio**	Percent Equity	Debt/Asset Ratio	Percent Rate of Return with appreciation on:	
		Current & Intermediate	Equity	Investment***
	(5)	(5)	(3)	(3)
0.00	100%	0.00	91%	38%
0.12	95	0.09	31	17
0.29	79	0.24	10	10
0.59	51	0.60	4	6
0.93	13	0.93	-62	-7

  

Efficiency (Capital)			
Asset Turnover Ratio	Machinery Investment Per Cow	Total Farm Assets Per Cow	Change in Net Worth w/Appreciation
(11)	(11)	(11)	(6)
1.68	\$251	\$5,931	\$73,948
1.20	486	3,996	49,045
1.03	1,072	3,381	28,683
0.87	1,737	2,512	22,023
0.64	2,463	1,824	150

\*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.

\*\*\*Return on all farm capital (no deduction for interest paid) divided by total farm assets.

## 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. 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. 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 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

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## Worksheet for Setting Goals (continued)

## II. Goals

[illegible]

## Summarize Your Business Performance

The Farm Business and Financial Analysis Charts on pages 24 and 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.

<b>Strengths:</b> _____ _____ _____ _____ _____ _____	<b>Need Improvements:</b> _____ _____ _____ _____ _____ _____
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## 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 5)

**Accrual Receipts** - (defined on page 6)

**Annual Cash Flow Statement** - (defined on page 13)

**Appreciation** - (defined on page 7)

**Asset Turnover Ratio** - (defined on page 21)

**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 percentage of herd 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 15)

**Cash Paid** - (defined on page 4)

**Cash Receipts** - (defined on page 6)

**Change in Accounts Payable** - (defined on page 5)

**Change in Accounts Receivable** - (defined on page 6)

**Change in Inventory** - (defined on page 4)

**Current Portion** - Principal due in the next year for intermediate and long term debt.

**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 11)

**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 15.

**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-cancelable 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 8)

**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 7)

**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 20)

**Opportunity Cost** - 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; bedding, DHIC, milk house and parlor supplies, livestock board, registration fees and transfers.

**Part-Time Cash-Crop Dairy (farm)** - Operating and managing this farm is not a full-time occupation, crop sales exceed 10 percent of accrual milk receipts and cropland is owned.

**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 costs including the opportunity costs of the owner/manager's labor, management, and equity capital.

**Purchased Inputs Cost of Producing Milk** - (defined on page 20)

**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 8)

**Return on Total Capital** - (defined on page 8)

**Return to Operators' Labor, Management, and Equity Capital** - (defined on page 7)

**Rotational Grazing** - The dairy herd is on pasture at least three months of the year, changing paddock at least every three days.

**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 20)

**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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