

# DAIRY FARM BUSINESS SUMMARY

## EASTERN NEW YORK RENTER SUMMARY 1993



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**EASTERN NEW YORK RENTERS**

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## 1993 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 eight 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. Four 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 29 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 141 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 29 farms in Albany, Broome, Chenango, Columbia, Delaware, Oneida, Orange, Otsego, Rensselaer, Saratoga, Schoharie, Sullivan, and Washington Counties are summarized in this publication. The Eastern New York region consists of these counties plus Dutchess, Fulton, Greene, Herkimer, Madison, Montgomery, Schenectady, and Ulster Counties which do not have dairy farm business summary participants that classify as renters (see Figure 1 on page 2). The 141 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 \$135 per tillable acre on the owned dairy farms compared to only \$95 on the rented farms. This accounts for a \$22,139 difference in costs between owned and rented farms.

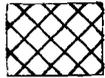
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<sup>1</sup>Smith, Stuart F., Wayne A. Knoblauch, and Linda D. Putnam, Dairy Farm Management Business Summary, New York, 1993, R.B. 94-07, September 1994.

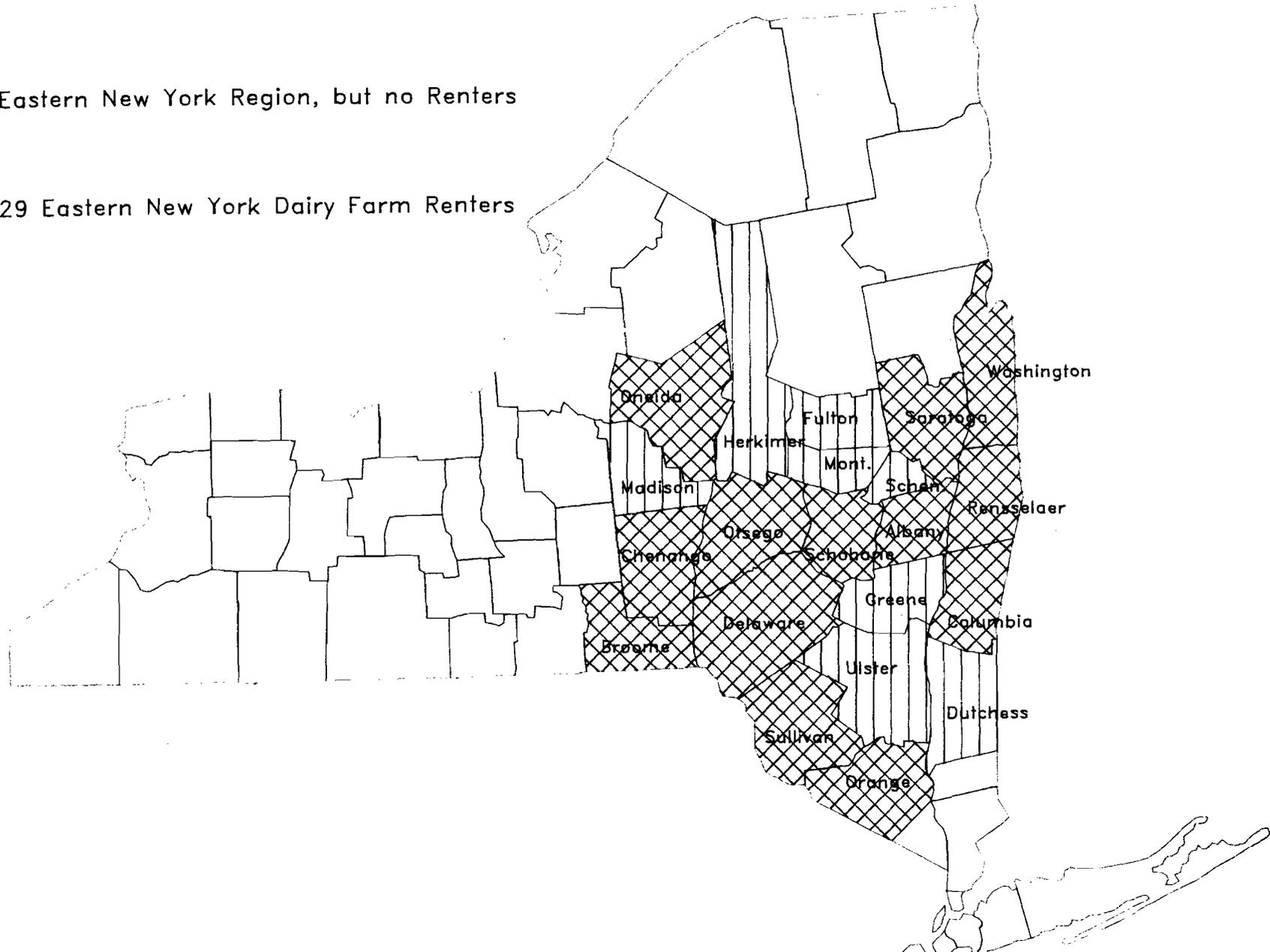
Figure 1. Location of Eastern New York Dairy Farm Renters, 1993.



Eastern New York Region, but no Renters



29 Eastern New York Dairy Farm Renters



## 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  
29 Eastern New York Dairy Farm Renters, 1993

<u>Type of Business</u>	<u>Number</u>	<u>Labor Force</u>	<u>My Farm</u>	<u>Average</u>
Single proprietorship	22	Operator 1.	___ mo.	11.72
Partnership	7	Operator 2.	___ mo.	3.24
		Operator 3.	___ mo.	0.41
<u>Milking System</u>	<u>Number</u>	Family paid	___ mo.	2.10
Dumping station	1	Family unpaid	___ mo.	2.69
Pipeline	21	Hired	___ mo.	<u>6.14</u>
Herringbone parlor	6	Total	___ mo.	26.30
Other parlor	1			
		Worker equivalent		
<u>Type of Barn</u>	<u>Number</u>	(total % 12)	___	2.19
Stanchion	21	Operator/Manager		
Freestall	6	Equivalent		
Combination	2	(Oper. mo. % 12)	___	1.28
<u>Dairy Records Service</u>	<u>Number</u>	<u>Land Use</u>	<u>My Farm</u>	<u>Average</u>
DHIC	21	Total acres rented	___	310
DHIC Owner-Sampler	4	Tillable acres rented	___	203
Other	2			
None	2			
<u>Business Record System</u>	<u>Number</u>	<u>Number of Cows</u>	<u>My Farm</u>	<u>Average</u>
Account Book	12	Beg. year (owned)	___	66
Agrifax (mail-in only)	9	End year (owned &		
ELFAC	0	leased)	___	70
Other	6	Average for year		
On-farm computer	2	(owned & leased)	___	68

Predominate business characteristics of the 29 rented farms include the single proprietorship, pipeline milking system, stanchion or conventional stall barn, DHIC herd records and an account book record system. Only 6.9 percent of the renters were using on-farm computers compared to 24 percent of the owners.

The average size of the labor force on the rented farms was 31 percent less than the 3.17 worker equivalent on owned farms. The rented farms averaged 203 tillable acres and 68 cows compared to 309 tillable acres and 102 cows on the 141 owned dairy farms in the same region. The owned farms averaged 32 cows per worker compared to 31 on the rented farms. In 1993, 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  
29 Eastern New York Dairy Farm Renters, 1993

<u>Expense Item</u>	Cash Paid +	Inventory or Prepaid Expense +	Change in Accounts Payable =	Accrual Expenses	Percent of Total
<u>Hired Labor</u>	\$ 11,152	\$ 0 ◀	\$ 38	\$ 11,190	8
<u>Feed</u>					
Dairy grain & conc.	43,412	-741	415	43,086	29
Dairy roughage	4,566	-497	-931	3,138	2
Other livestock	171	8	0	179	<1
<u>Machinery</u>					
Mach. hire, rent/lease	2,759	52 ◀	69	2,880	2
Machinery repairs/parts	7,767	40	-89	7,718	5
Auto expense (farm share)	850	0 ◀	0	850	1
Fuel, oil & grease	4,528	52	-2	4,578	3
<u>Livestock</u>					
Replacement livestock	4,918	0 ◀	0	4,918	3
Breeding	2,745	-16	43	2,772	2
Vet & medicine	3,802	2	99	3,903	3
Milk marketing	11,463	0 ◀	0	11,463	8
Cattle lease/rent	576	0 ◀	0	576	<1
Other livestock expense	9,643	4	2	9,649	6
<u>Crops</u>					
Fertilizer & lime	4,254	-72	22	4,204	3
Seeds & plants	2,544	-175	-14	2,355	2
Spray, other crop exp.	2,456	-43	-70	2,343	2
<u>Real Estate</u>					
Land/bldg./fence repair	1,475	16	4	1,495	1
Taxes	708	0 ◀	0	708	<1
Rent & lease	15,556	0 ◀	98	15,654	10
<u>Other</u>					
Insurance	2,381	0 ◀	-1	2,380	2
Telephone (farm share)	722	0 ◀	-3	719	<1
Electricity (farm share)	4,782	0 ◀	0	4,782	3
Interest paid	5,225	0 ◀	0	5,225	3
Miscellaneous	<u>1,980</u>	<u>0</u>	<u>23</u>	<u>2,003</u>	<u>1</u>
Total Operating	\$150,435	\$-1,370	\$-297	\$148,768	100
Expansion livestock	\$1,030	\$0 ◀	\$-7	1,023	
Machinery depreciation				8,649	
Building depreciation				<u>791</u>	
<b>TOTAL ACCRUAL EXPENSES</b>				<u>\$159,231</u>	

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

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

Changes in prepaid expenses apply to non-inventory categories (noted by \* in the tables). Include any expenses that have been paid for in advance of their use, for example, 1994 rent paid in 1993. A positive change is the amount the prepayment account declined from beginning to end year, a negative change indicates an increase in the account.

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

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

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

CASH AND ACCRUAL FARM EXPENSES WORKSHEET

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

CASH AND ACCRUAL FARM RECEIPTS  
29 Eastern New York Dairy Farm Renters, 1993

Receipt Item	Cash Receipts	+ Change in Inventory	+ Change in Accounts Receivable	= Accrual Receipts
Milk sales	\$162,589		\$1,146	\$163,735
Dairy cattle	9,387	\$ 5,303	-54	14,636
Dairy calves	2,825		-6	2,819
Other livestock	460	-34	0	426
Crops	1,856	-1,912	0	-56
Government receipts	2,736	-95*	130	2,771
Custom machine work	381		0	381
Gas tax refund	91		0	91
Other	1,209		0	1,209
- Nonfarm noncash capital**	_____	(-) _____ 0	_____	(-) _____ 0
<b>Total Accrual Receipts</b>	<b>\$181,534</b>	<b>\$ 3,262</b>	<b>\$1,216</b>	<b>\$186,012</b>

\*Change in advanced government receipts.

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

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

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

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

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

CASH AND ACCRUAL FARM RECEIPT WORKSHEET

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

## 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, 1993

Item	29 Dairy Farm Renters	141 Dairy Farm Owners	My Farm
Total accrual receipts	\$186,012	\$293,089	\$ _____
+ Appreciation: Livestock	2,049	1,427	_____
Machinery	1,922	1,110	_____
Real Estate	597	3,204	_____
Other Stock/Cert.	97	306	_____
= Total Including Appreciation	\$190,677	\$299,136	\$ _____
- Total accrual expenses	159,231	260,064	_____
= Net Farm Income (with appreciation)	\$ 31,446	\$ 39,072	\$ _____
Net Farm Income (without appreciation)	\$ 26,781	\$ 33,025	\$ _____

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

### RETURN TO OPERATOR(S') LABOR, MANAGEMENT, AND EQUITY Eastern New York Dairy Farm Renters and Owners, 1992

Item	29 Dairy Farm Renters	141 Dairy Farm Owners	My Farm
Net farm income (with appreciation)	\$31,446	\$39,072	\$ _____
- Family labor unpaid @ \$1,400 per month	3,766	3,570	_____
= Return to operators' labor, management, & equity (with appreciation)	\$27,680	\$35,502	\$ _____
- Appreciation	4,665	6,047	_____
= Return to operators' labor, management, & equity (without appreciation)	\$23,015	\$29,455	\$ _____

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

LABOR AND MANAGEMENT INCOME  
Eastern New York Dairy Farm Renters and Owners, 1993

Item	29 Dairy Farm Renters	141 Dairy Farm Owners	My Farm
Return to operators' labor, mgmt., & equity without appreciation	\$23,015	\$29,455	\$_____
- Real interest @ 5% on average equity capital	<u>9,230</u>	<u>25,823</u>	-_____
= Labor & Management Income	\$13,785	\$ 3,632	\$_____
Labor & Management Income per Operator/Manager	\$10,770	\$ 2,576	\$_____

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

RETURN ON EQUITY CAPITAL AND RETURN ON TOTAL CAPITAL  
Eastern New York Dairy Farm Renters and Owners, 1993

Item	29 Dairy Farm Renters	144 Dairy Farm Owners	My Farm
Return to operators' labor, mgmt., & equity capital with apprec.	\$27,680	\$35,502	\$_____
- Value of operators' labor & mgmt.	<u>24,427</u>	<u>28,617</u>	_____
= Return on equity capital with apprec.	\$ 3,253	\$ 6,885	\$_____
+ Interest paid	<u>5,225</u>	<u>14,803</u>	_____
= Return on total capital with apprec.	\$ 8,478	\$21,688	\$_____
Return on equity capital without apprec.	\$-1,412	\$ 838	\$_____
Return on total capital without apprec.	\$ 3,813	\$15,641	\$_____
Rate of return on average equity capital:			
with appreciation	1.8%	1.3%	_____%
without appreciation	-0.8%	0.2%	_____%
Rate of return on average total capital:			
with appreciation	3.3%	2.9%	_____%
without appreciation	1.5%	2.1%	_____%

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.

1993 FARM BUSINESS & NONFARM BALANCE SHEET  
29 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	\$ 4,674	\$ 4,499	Accounts payable	\$ 3,103	\$ 2,800
Accounts rec.	13,234	14,450	Operating debt	4,240	5,916
Prepaid exp.	52	0	Short-term	1,743	1,623
Feed & supplies	<u>33,258</u>	<u>32,770</u>	Advanced govt. rec.		95
Total	\$ 51,218	\$51,719	Current Portion:		
<u>Intermediate</u>			Intermediate	0	14,155
Dairy cows: owned	\$ 72,522	\$ 76,295	Long Term	<u>0</u>	<u>208</u>
leased	0	0	Total	\$ 9,086	\$ 24,797
Heifers	27,705	31,153	<u>Intermediate</u>		
Bulls/other lvstk.	796	893	Structured debt		
Mach./eq. owned	78,234	79,832	1-10 years	\$ 57,346	\$ 41,618
Mach./eq. leased	0	361	Financial lease		
Farm Credit stock	929	1,041	(cattle/mach.)	0	361
Other stock/cert.	<u>3,277</u>	<u>3,501</u>	Farm Credit stock	<u>929</u>	<u>1,041</u>
Total	\$183,463	\$193,076	Total	\$ 58,275	\$ 43,020
<u>Long-Term</u>			<u>Long Term</u>		
Land/buildings:			Structured debt		
owned	\$ 13,866	\$ 14,695	≥ 10 years	\$ 1,993	\$ 1,678
leased	<u>0</u>	<u>312</u>	Financial lease		
Total	\$ 13,866	\$ 15,007	(structures)	<u>0</u>	<u>312</u>
Total Farm Assets	\$248,547	\$259,802	Total	\$ 1,993	\$ 1,990
			Total Farm Liab.	\$ 69,354	\$ 69,807
			FARM NET WORTH	\$179,193	\$189,995

(Average for 16 farms reporting)			Nonfarm Liabilities*		
Nonfarm Assets*			& Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
Personal cash, chkg. & savings	\$ 2,887	\$ 3,886	Nonfarm Liab.	\$11,850	\$13,719
Cash value life ins.	6,294	6,438	NONFARM NET WORTH	\$41,152	\$41,674
Nonfarm real estate	26,500	26,688	<u>FARM &amp; NONFARM*</u>		
Auto (personal sh.)	5,788	5,881	Total Assets	\$301,549	\$315,195
Stocks & bonds	2,305	3,590	Total Liabilities	<u>81,204</u>	<u>83,526</u>
Household furn.	6,938	6,469	<u>TOTAL FARM &amp; NON-</u>		
All other	<u>2,291</u>	<u>2,441</u>	FARM NET WORTH	\$220,345	\$231,669
Total Nonfarm	\$53,002	\$55,393			

\*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 1993 that are for participation in the 1994 program are the end year balance and payments received in 1992 for participation in the 1993 program are the beginning year balance.

Date \_\_\_\_\_

## 1993 FARM BUSINESS &amp; NONFARM BALANCE SHEET

			Farm Liabilities & Net Worth		
Farm Assets	Jan. 1	Dec. 31	Jan. 1	Dec. 31	
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	_____	_____	Accounts payable	_____	_____
Accounts rec.	_____	_____	Operating debt:	_____	_____
Prepaid expense	_____	_____	Short Term:	_____	_____
Feed & supplies	_____	_____	Adv. govt. rec.	_____	_____
Total	_____	_____	Current Portion:		
<u>Intermediate</u>			Intermediate	_____	_____
Dairy cows:			Long Term	_____	_____
owned	_____	_____	Total	_____	_____
leased	_____	_____	<u>Intermediate</u>		
Heifers	_____	_____	Financial lease		
Bulls/other lvstk.	_____	_____	(cattle/mach.)	_____	_____
Mach./eq. owned	_____	_____	Farm Credit Stock	_____	_____
Mach./eq. leased	_____	_____	Total	_____	_____
Farm Credit stock	_____	_____	<u>Long-Term</u>		
Other stock/cert.	_____	_____	Land/buildings:		
Total	_____	_____	owned	_____	_____
			leased	_____	_____
			Total	_____	_____
<u>Long-Term</u>			Total Farm Assets	_____	_____
Land/buildings:					
owned	_____	_____	Financial lease		
leased	_____	_____	(structures)	_____	_____
Total	_____	_____	Total	_____	_____
			Total Farm Liab.	_____	_____
			FARM NET WORTH	_____	_____
			Nonfarm Liabilities & Net Worth		
Nonfarm Assets	Jan. 1	Dec. 31	Jan. 1	Dec. 31	
Personal cash, chkg. & savings	_____	_____	Nonfarm Liab.:	_____	_____
Cash val. life ins.	_____	_____		_____	_____
Nonfarm real est.	_____	_____		_____	_____
Auto (pers. share)	_____	_____		_____	_____
Stocks & bonds	_____	_____	Total Nonfarm Liabilities	_____	_____
Household furn.	_____	_____	Nonfarm		
All other	_____	_____	Net Worth	_____	_____
Total Nonfarm	_____	_____			
			<u>TOTAL FARM &amp; NONFARM</u>		
Total Farm and Nonfarm Assets			Jan. 1	Dec. 31	
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  
Eastern New York Dairy Farm Renters and Owners, 1993

Item	29 Dairy Farm Renters	141 Dairy Farm Owners	My Farm
<u>Financial Ratios - Farm:</u>			
Percent equity	73%	70%	_____ %
Debt/asset ratio: total	0.27	0.30	_____
long-term	0.13	0.26	_____
intermediate/current	0.28	0.34	_____
<u>Farm Debt Analysis:</u>			
Accounts payable as % of total debt	4%	3%	_____ %
Long-term liabilities as a % of total debt	3%	42%	_____ %
Current & inter. liab. as a % of total debt	97%	58%	_____ %
<u>Farm Debt Levels Per Cow:</u>			
Total farm debt	\$997	\$2,127	\$_____
Long-term debt	\$ 28	\$ 893	_____
Intermediate & current debt	\$969	\$1,234	_____

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, 1993

Item	29 Dairy Farm Renters	141 Dairy Farm Owners	My Farm
Value beg. of year	\$78,234	\$127,446	\$_____
Purchases	\$8,830	\$16,104	\$_____
+ Nonfarm noncash transfer	0	0	+_____
- Net Sales	505	832	-_____
- Depreciation	<u>8,649</u>	<u>13,617</u>	-_____
= Net investment	-324	1,655	=+_____
+ Appreciation	<u>1,922</u>	<u>1,110</u>	+_____
= Value end of year	\$79,832	\$130,212	\$_____

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)  
29 Eastern New York Dairy Farm Renters, 1993

Item	Average	Mv Farm
Beginning of year farm net worth	\$179,193	\$ _____
Net farm income w/o apprec.	\$26,781	\$ _____
+Nonfarm cash income	+ 4,585	+ _____
-Personal withdrawals & family expenditures excluding non-farm borrowings	<u>-25,355</u>	- _____
RETAINED EARNINGS	+\$ 6,011	+\$ _____
Nonfarm noncash transfers to farm	\$ 0	\$ _____
+Cash used in business from nonfarm capital	+ 2,000	+ _____
-Note/mortgage from farm real estate sold (nonfarm)	<u>0</u>	- _____
CONTRIBUTED/WITHDRAWN CAPITAL	+\$2,000	+\$ _____
Appreciation	\$ 4,665	\$ _____
-Lost capital	<u>- 1,398</u>	- _____
CHANGE IN VALUATION EQUITY	+\$ 3,267	+\$ _____
IMBALANCE/ERROR	<u>-\$ 476</u>	-\$ _____
End of year farm net worth*	=\$189,995	=\$ _____
Change in net worth with apprec.	\$ 10,802	\$ _____
<hr/>		
<u>Change in Net Worth</u>		
Without appreciation	\$ 6,137	\$ _____
With appreciation	\$10,802	\$ _____

\*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  
29 Eastern New York Dairy Farm Renters, 1993

<u>Item</u>	<u>Average</u>	
<u>Cash Flow from Operating Activities</u>		
Cash farm receipts	\$181,534	
- Cash farm expenses	<u>150,435</u>	
= Net cash farm income		\$ 31,098
Nonfarm income	\$ 4,585	
- Personal withdrawals/family expenses including nonfarm debt payments	<u>27,557</u>	
+ Net cash nonfarm income		<u>\$-22,972</u>
= Net Provided by Operating Activities		\$ 8,126
<u>Cash Flow From Investing Activities</u>		
Sale of assets: Machinery	\$ 505	
+ real estate	364	
+ other stock/cert.	<u>0</u>	
= Total asset sales		\$ 869
Capital purchases: expansion livestock	\$ 1,030	
+ machinery	8,830	
+ real estate	2,785	
+ other stock/cert.	<u>127</u>	
- Total invested in farm assets		<u>\$ 12,772</u>
= Net Provided by Investment Activities		\$-11,903
<u>Cash Flow From Financing Activities</u>		
Money borrowed (inter. & long-term)	\$14,864	
+ Money borrowed (short-term)	2,634	
+ Increase in operating debt	1,676	
+ Cash from nonfarm cap. used in business	2,000	
+ Money borrowed - nonfarm	<u>2,202</u>	
= Cash inflow from financing		\$23,376
Principal payments (inter. & long-term)	\$16,544	
+ Principal payments (short-term)	2,754	
+ Decrease in operating debt	<u>0</u>	
- Cash outflow for financing		<u>\$19,298</u>
= Net Provided by Financing Activities		\$ 4,078
<u>Cash Flow From Reserves</u>		
Beginning farm cash, checking & savings		\$ 4,674
- Ending farm cash, checking & savings		<u>4,499</u>
= Net Provided from Reserves		<u>\$ 175</u>
<u>Imbalance (error)</u>		\$ 476

## ANNUAL CASH FLOW STATEMENT

<u>Item</u>	<u>My Farm</u>
<u>Cash Flow from Operating Activities</u>	
Cash farm receipts	\$ _____
- Cash farm expenses	_____
= Net cash farm income	\$ _____
Nonfarm income	\$ _____
- Personal withdrawals/family expenses including nonfarm debt payments	_____
+ Net cash nonfarm income	\$ _____
= Net Provided by Operating Activities	\$ _____
<u>Cash Flow From Investing Activities</u>	
Sale of assets: Machinery	\$ _____
+ real estate	_____
+ other stock/cert.	_____
= Total asset sales	\$ _____
Capital purchases: expansion livestock	\$ _____
+ machinery	_____
+ real estate	_____
+ other stock/cert.	_____
- Total invested in farm assets	\$ _____
= Net Provided by Investment Activities	\$ _____
<u>Cash Flow From Financing Activities</u>	
Money borrowed (inter. & long-term)	\$ _____
+ Money borrowed (short-term)	_____
+ Increase in operating debt	_____
+ Cash from nonfarm cap. used in business	_____
+ Money borrowed - nonfarm	_____
= Cash inflow from financing	\$ _____
Principal payments (inter. & 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>	<u>\$ _____</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 1994. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 1994 debt payments shown below.

**FARM DEBT PAYMENTS PLANNED**  
Same 22 Eastern New York Dairy Farm Renters, 1993\*

Debt Payments	Average			My Farm		
	1993 Payments		Planned 1994	1993 Payments		Planned 1994
	Planned	Made		Planned	Made	
Long-term	\$ 191	\$ 185	\$ 191	\$ _____	\$ _____	\$ _____
Intermediate-term	18,526	21,352	16,744	_____	_____	_____
Short-term	1,029	2,859	1,255	_____	_____	_____
Operating (net red.)	610	0	1,508	_____	_____	_____
Accounts payable (net reduction)	<u>1,227</u>	<u>423</u>	<u>460</u>	_____	_____	_____
Total	\$21,582	\$24,819	\$20,158	\$ _____	\$ _____	\$ _____
Per cow	\$304	\$350		\$ _____	\$ _____	
Per cwt. 1993 milk	\$1.63	\$1.88		\$ _____	\$ _____	
Percent of total						
1993 receipts	11%	12%		_____	_____	
Percent of 1993 milk receipts	12%	14%		_____	_____	

\*Farms that completed Dairy Farm Business Summaries for both 1992 and 1993.

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 1994.

**CASH FLOW COVERAGE RATIO**  
Eastern New York Dairy Farm Renters and Owners, 1993

Item	Same 22	Same 120	My Farm
	Farm Renters	Farm Owners	
Cash farm receipts	\$195,975	\$283,397	\$ _____
- Cash farm expenses	162,600	235,322	_____
+ Interest paid	4,638	14,893	_____
- Net personal withdrawals from farm*	<u>20,242</u>	<u>25,519</u>	_____
(A) = Amount Available for Debt Service	\$17,771	\$37,449	\$ _____
(B) = Debt Payments Planned for 1993 (as of December 31, 1992)	\$21,582	\$43,592	\$ _____
(A % B) = Cash Flow Coverage Ratio for 1993	0.82	0.86	_____

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

## ANNUAL CASH FLOW WORKSHEET

Item	29 Dairy	My Farm		Expected Change	1994 Projection
	Farm Renters (per cow)	Total	Per Cow		
Average number of cows	68				
<u>Accrual Oper. Receipts</u>					
Milk	\$2,404	\$	\$		\$
Dairy cattle	215				
Dairy calves	41				
Other livestock	6				
Crops	-1				
Misc. receipts	65				
Total	\$2,730	\$	\$		\$
<u>Accrual Oper. Expenses</u>					
Hired labor	\$ 164	\$	\$		\$
Dairy grain & conc.	633				
Dairy roughage	46				
Other lvstk. feed	3				
Mach. hire/rent/lease	42				
Mach. repair/parts & auto	126				
Fuel, oil & grease	67				
Replacement lvstk.	72				
Breeding	41				
Vet & medicine	57				
Milk marketing	168				
Cattle lease	9				
Other lvstk. exp.	142				
Fertilizer & lime	62				
Seeds & plants	35				
Spray/other crop exp.	34				
Land, bldg., fence repair	22				
Taxes	10				
Real est. rent/lease	230				
Insurance	35				
Utilities	81				
Miscellaneous	29				
Total Less Interest Paid	\$2,108	\$	\$	\$	\$
<u>Net Accrual Operating Income</u> (total)					
(without interest paid)	\$42,471	\$			\$
- Change in lvstk./crop inv.	3,262				
- Change in accts. rec.	1,216				
+ Change in feed/supply inv.*	-1,370				
+ Change in accts. payable**	-297				
NET CASH FLOW	\$36,326	\$			\$
- Net personal withdrawals & family expenditures	20,770				
Available for Farm Debt Payments & Investments	\$15,556	\$			\$
- Farm debt payments	24,643				
Available for Farm Investments	\$-9,087	\$			\$
- Capital purchases: cattle, machinery & improvements	\$12,772	\$		\$	\$
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  
29 Eastern New York Dairy Farm Renters, 1993

Item	Average of Farms Reporting			My Farm	
	Farms	Acres	Prod/Acre*	Acres	Prod/Acre
<u>Crop Yields</u>					
Hay crop	27	124	2.28 tn DM	_____	_____ tn DM
Corn silage	24	62	11.61 tn	_____	_____ tn
			4.11 tn DM	_____	_____ tn DM
Other forage	3	19	0.74 tn DM	_____	_____ tn DM
Total forage	27	181	2.71 tn DM	_____	_____ tn DM
Corn grain	12	42	106.71 bu	_____	_____ bu
Oats	4	19	69.26 bu	_____	_____ bu
Wheat	0	0	0.00 bu	_____	_____ bu
Other crops	0	0		_____	
Tillable pasture	5	20		_____	
Idle	10	29		_____	
Total Tillable Acres	29	203		_____	

\*1993 average yields for 141 dairy farm owners in Eastern New York included: all hay crops, 2.4 tons dry matter per acre; corn silage, 13.9 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, 1993

Item	29 Dairy	141 Dairy	My Farm
	Farm Renters	Farm Owners	
Total tillable acres per cow	2.98	3.02	_____
Total forage acres per cow	2.48	2.52	_____
Harvested forage dry matter, tons per cow	6.71	7.69	_____

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.

**CROP RELATED ACCRUAL EXPENSES**  
Eastern New York Dairy Farm Renters and Owners, 1993

Expense	Total/ Till. Acre	Hay Crop		All Corn Per Acre	Corn Sil. Per Ton DM	Corn Grain Per Dry Shell Bu.
		Per Acre	Per Ton DM			
<b>29 Dairy Farm Renters:</b> Average 3 Farms Reporting Individual Crop Costs						
Fertilizer & lime	\$20.71	\$10.43	\$ 5.32	\$44.92	\$10.80	\$0.36
Seeds & plants	11.60	9.19	4.69	31.34	7.54	0.25
Spray & other crop expense	<u>11.54</u>	<u>6.91</u>	<u>3.53</u>	<u>23.41</u>	<u>5.63</u>	<u>0.19</u>
Total	\$43.85	\$26.53	\$13.54	\$99.67	\$23.97	\$0.80
<b>141 Dairy Farm Owners:</b> Average 26 Farms Reporting Individual Crop Costs						
Fertilizer & lime	\$27.27	\$21.59	\$ 8.24	\$35.45	\$ 7.19	\$0.32
Seeds & plants	12.36	10.55	4.03	23.98	4.87	0.22
Spray & other crop expense	<u>11.30</u>	<u>5.81</u>	<u>2.22</u>	<u>22.69</u>	<u>4.61</u>	<u>0.21</u>
Total	\$50.93	\$37.95	\$14.49	\$82.12	\$16.67	\$0.75
<b>My Farm:</b>						
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, 1993

Item	Average Per Tillable Acre		My Farm	
	29 Dairy Farm Renters	141 Dairy Farm Owners	Total Expenses	Per Til. Acres
Fuel, oil & grease	\$ 22.55	\$ 24.60	\$ _____	\$ _____
Machinery repairs & parts	38.02	48.45	_____	_____
Machine hire, rent & lease	14.19	8.07	_____	_____
Auto expense (farm share)	4.19	2.87	_____	_____
Interest (5%)	19.47	20.85	_____	_____
Depreciation	<u>42.61</u>	<u>44.07</u>	_____	_____
Total	\$141.02	\$148.90	\$ _____	\$ _____

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, 1993

Item	Dairy Cows		Heifers					
	No.	Value	Bred		Open	Calves		
	No.	Value	No.	Value	No.	Value	No.	Value
<u>29 Dairy Farm Renters:</u>								
Beg. year (owned)	66	\$72,522	18	\$15,373	13	\$7,774	16	\$4,557
+ Change w/o apprec.		2,030		1,442		1,893		-60
+ Appreciation		<u>1,743</u>		<u>138</u>		<u>-54</u>		<u>90</u>
End year (owned)	68	\$76,295	19	\$16,953	16	\$9,613	16	\$4,587
End incl. leased	70							
Average number	68		49 (all age groups)					
<u>141 Dairy Farm Owners:</u>								
Beg. year (owned)	100	\$104,995	27	\$23,801	26	\$14,158	25	\$6,948
+ Change w/o apprec.		7,472		1,377		1,550		-95
+ Appreciation		<u>867</u>		<u>275</u>		<u>182</u>		<u>100</u>
End year (owned)	106	\$113,334	28	\$25,453	28	\$15,890	24	\$6,953
End incl. leased	106							
Average number	102		79 (all age groups)					
<u>My Farm:</u>								
Beg. of year (owned)	___	\$___	___	\$___	___	\$___	___	\$___
+ Change w/o apprec.		___		___		___		___
+ Appreciation		___		___		___		___
End of year (owned)	___	\$___	___	\$___	___	\$___	___	\$___
End including leased	___							
Average number	___		___ (all age groups)					

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

MILK PRODUCTION  
Eastern New York Dairy Farm Renters and Owners, 1993

Item	29 Dairy Farm Renters	141 Dairy Farm Owners	My Farm
Total milk sold, lbs.	1,231,186	1,866,900	_____
Milk sold per cow, lbs.	18,087	18,264	_____
Average milk plant test, % butterfat	3.70	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 costs of producing milk are estimated by deducting nonmilk accrual receipts from total accrual operating expenses plus expansion livestock purchased. Purchased input costs of producing milk are the operating costs plus depreciation. Total costs of producing milk include the operating costs 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.

ACCRUAL RECEIPTS FROM DAIRY AND COST OF PRODUCING MILK  
Eastern New York Dairy Farm Renters and Owners, 1993

Item	29 Renters		141 Owners		My Farm	
	Total	Per Cwt.	Total	Per Cwt.	Total	Per Cwt.
<u>Accrual Costs of Producing Milk</u>						
Operating costs	\$127,514	\$10.36	\$196,865	\$10.55	\$_____	\$_____
Purchased input costs	\$136,954	\$11.12	\$217,721	\$11.66	\$_____	\$_____
Total Costs	\$174,377	\$14.16	\$275,731	\$14.77	\$_____	\$_____
<u>Accrual Receipts from Milk</u>						
	\$163,735	\$13.30	\$250,746	\$13.43	\$_____	\$_____

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, 1993

Item	Average Per Cwt. Milk		My Farm Per Cwt.
	29 Renters	141 Owners	
Purchased dairy grain & conc.	\$3.50	\$3.85	\$_____
Purchased dairy roughage	_____	_____	_____
Total Purchased Dairy Feed	\$3.75	\$3.90	\$_____
Purchased grain & conc. as % of milk receipts	26%	29%	_____%
Purchased feed & crop exp.	\$4.48	\$4.75	\$_____
Purchased feed & crop exp. as % of milk receipts	34%	35%	_____%
Breeding	\$0.23	\$0.21	\$_____
Veterinary & medicine	0.32	0.36	_____
Milk marketing	0.93	0.96	_____
Cattle lease	0.05	0.02	_____
Other livestock expense	0.78	0.65	_____

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, 1993

Item	Per Worker	Per Cow	Per Tillable Acre
<u>29 Dairy Farm Renters:</u>			
Farm capital	\$115,958	\$3,732	\$1,252
Machinery & equipment	36,138	1,163	390
Asset turnover ratio	0.75		
<u>141 Dairy Farm Owners:</u>			
Farm capital	\$232,992	\$7,221	\$2,388
Machinery & equipment	41,031	1,272	421
Asset turnover ratio	0.41		
<u>My Farm:</u>			
Farm capital	\$ _____	\$ _____	\$ _____
Machinery & equipment	_____	_____	_____
Asset turnover ratio	_____		

LABOR FORCE ANALYSIS  
Eastern New York Dairy Farm Renters and Owners, 1993

Efficiency	<u>29 Renters</u>		<u>141 Owners</u>		<u>My Farm</u>	
	Total	Per Worker	Total	Per Worker	Total	Per Worker
Cows, average number	68	31	102	32	_____	_____
Milk sold, pounds	1,231,186	561,685	1,866,900	589,411	_____	_____
Tillable acres	203	93	309	98	_____	_____
Work units	701	320	1,070	338	_____	_____

Labor Costs	<u>29 Renters</u>		<u>141 Owners</u>		<u>My Farm</u>	
	Total	Per Cow	Total	Per Cow	Total	Per Cow
Value of operator(s) labor*	\$21,518	\$316	\$23,688	\$232	\$ _____	\$ _____
Family unpaid*	3,766	55	3,570	35	_____	_____
Hired	<u>11,190</u>	<u>164</u>	<u>29,792</u>	<u>292</u>	_____	_____
Total Labor	\$36,474	\$536	\$57,050	\$558	\$ _____	\$ _____
Machinery Cost	\$28,627	\$420	\$46,009	\$450	\$ _____	\$ _____
Total Labor & Mach.	\$65,101	\$956	\$103,059	\$1,008	\$ _____	\$ _____

\*\$1,400 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 22 Eastern New York Dairy Farm Renters, 1992 & 1993

Selected Factors	Average		My Farm		
	1992	1993	1992	1993	Goal
<u>Size of Business</u>					
Average number of cows	69	71	_____	_____	_____
Average number of heifers	54	55	_____	_____	_____
Milk sold, lbs.	1,255,190	1,322,455	_____	_____	_____
Worker equivalent	2.39	2.30	_____	_____	_____
Total tillable acres	199	198	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, lbs.	18,263	18,602	_____	_____	_____
Hay DM per acre, tons	2.6	2.2	_____	_____	_____
Corn silage per acre, tons	14	12	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	29	31	_____	_____	_____
Milk sold per worker, lbs.	525,140	574,955	_____	_____	_____
<u>Cost Control</u>					
Grain & conc. purchased as % of milk sales	25%	27%	_____%	_____%	_____%
Dairy feed & crop exp. per cwt. milk	\$4.61	\$4.58	\$_____	\$_____	\$_____
Labor & mach. costs/cow	\$1,028	\$975	\$_____	\$_____	\$_____
<u>Capital Efficiency*</u>					
Farm capital per cow	\$3,798	\$3,916	\$_____	\$_____	\$_____
Mach. & equip. per cow	\$1,159	\$1,202	\$_____	\$_____	\$_____
Asset turnover ratio	0.80	0.73	_____	_____	_____
<u>Profitability</u>					
Net farm income w/o apprec.	\$33,841	\$27,465	\$_____	\$_____	\$_____
Net farm income w/apprec.	\$38,217	\$32,597	\$_____	\$_____	\$_____
Labor & mgmt. income per operator/manager	\$14,840	\$9,764	\$_____	\$_____	\$_____
Rate of return on equity capital w/apprec.	3.8%	0.9%	_____%	_____%	_____%
Rate of return on all capital w/apprec.	4.7%	2.4%	_____%	_____%	_____%
<u>Financial Summary</u>					
Farm net worth	\$208,829	\$219,636	\$_____	\$_____	\$_____
Debt to asset ratio	0.24	0.23	_____	_____	_____
Farm debt per cow	\$929	\$865	\$_____	\$_____	\$_____

\*Average for the year.

Regional Farm Business Chart

The Farm Business Chart is a tool which can be used in analyzing your business. Compare your business by drawing a line through or near the figure in each column which represents your current level of performance. The five figures in each column represent the average of each 20 percent or quintile of farms included in the regional summary.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS  
29 Eastern New York Dairy Farm Renters, 1993

<u>Size of Business</u>			<u>Rates of Production</u>			<u>Labor Efficiency</u>	
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)
3.2	111	2,090,045	21,345	3.3	19	45	793,480
2.7	74	1,393,907	19,555	2.5	16	35	648,068
2.0	64	1,103,932	18,046	2.1	14	31	565,219
1.6	48	852,237	16,205	1.8	10	26	460,719
1.3	38	612,734	14,059	1.1	6	20	330,564

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)
\$358	16%	\$233	\$ 710	\$ 451	\$2.95
497	21	349	880	638	3.51
625	26	426	950	800	4.46
762	31	477	1,067	948	5.29
970	39	544	1,226	1,182	6.06

<u>Value and Cost of Production</u>			<u>Profitability</u>		
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income w/Apprec.	Net Farm Inc. w/o Apprec.	Labor & Mgt. Inc. Per Oper.
(10)	(10)	(10)	(3)	(3)	(3)
\$2,823	\$ 7.49	\$10.85	\$72,208	\$60,795	\$39,115
2,601	9.41	13.22	38,255	35,317	16,099
2,434	10.60	14.69	27,238	23,786	6,696
2,148	11.14	15.54	15,062	12,551	1,472
1,858	13.02	17.00	-927	-3,602	-12,147

\*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  
29 Eastern New York Dairy Farm Renters, 1993

Liquidity (repayment)

Planned Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio	Debt Payments as Percent of Milk Sales	Debt Per Cow
(8)*	(12)	(8)	(8)	(5)
\$ 22	\$520	2.82	3%	\$ 24
132	336	1.08	8	605
233	260	0.61	12	1,048
412	82	0.31	19	1,397
641	-99	-0.96	26	1,930

Solvency

Leverage Ratio**	Percent Equity	Debt/Asset Ratio Current & Intermediate
	(5)	(5)
0.01	99%	0.01
0.18	81	0.17
0.37	71	0.29
0.63	62	0.36
1.84	34	0.62

Profitability

Percent Rate of Return with appreciation on:	
Equity	Investment***
(3)	(3)
36%	23%
8	7
-2	0
-7	-3
-27	-11

Efficiency (Capital)

Asset Turnover Ratio	Machinery Investment Per Cow	Total Farm Assets Per Cow	Change in Net Worth w/Appreciation
(11)	(11)	(11)	(6)
1.31	\$ 200	\$2,061	\$ 42,843
0.86	750	3,120	16,765
0.74	1,122	3,690	9,371
0.63	1,504	4,269	250
0.53	2,015	5,246	-20,423

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

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

**Labor and Management Income** - (defined on page 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)

**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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