

# DAIRY FARM BUSINESS SUMMARY

## EASTERN NEW YORK RENTER SUMMARY 1985

FARM NO. 38001

JANUARY 30, 1986

INCOME STATEMENT (continued)

Receipts	Cash	Change in Accounts	Accrual
Milk sales	\$ 131850		\$ 131850
Dairy cattle	9540		23540
Dairy calves	0		1330
Other livestock	400		1600
Crops	230		12885
Gov't receipts	250		230
Custom machine work	160		160
Gas tax refund	200		200
Other	0		0
<b>TOTAL ACCRUAL RECEIPTS</b>	<b>\$ 16436</b>		<b>\$ 16436</b>

Change in livestock inventories in group feeds inventories

RETURN TO OPERATOR(S) & PARTNER(S) UNPAID, REVENUE, & EQUITY CAPITAL

Total Accrual Receipts

- Total Accrual Expenses

= NET FARM INCOME

RETURN TO OPERATOR(S) & PARTNER(S) UNPAID, REVENUE, & EQUITY CAPITAL

Net Farm Income

- Family Labor Unpaid

= RETURN TO OPERATOR(S) & PARTNER(S) UNPAID, REVENUE, & EQUITY CAPITAL

RETURN TO OPERATOR(S) & PARTNER(S) UNPAID, REVENUE, & EQUITY CAPITAL

Return to Operator's Management & Equity Capital

- Real Interest on \$

Capital \$ 25

= LABOR & MANAGEMENT

LABOR & MANAGEMENT

2.00 OPERATOR

RETURN TO EQUITY CAPITAL

Return to Operator's Management & Equity Capital

- Value of Operator's Management & Equity Capital

= RETURN ON EQUITY CAPITAL

Rate of Return

FARM NO. 38001

JANUARY 30, 1986

INCOME STATEMENT

Sam Francis

Expenses	Cash	Change in Accounts	Accrual
Hired Labor	\$ 5200		\$ 5200
Feed			
Dairy grain & conc.			
Dairy roughage			
Other livestock			
Machinery			
Mach hire, rent/lease			
Machinery repairs/parts			
Auto expenses (if any)			
Fuel, oil & grease			
Livestock			
Replacement livestock			
Breeding			
Veterinary & medicine			
Milk marketing			
Cattle lease/rent			
Other livestock exps			
Crops			
Fertilizer & lime			
Seeds & plants			
Spray, other crop			
Real Estate			
Land/build/tenure rev			
Taxes			
Insurance			
Rent & lease			
Other			
Telephone (farm & electric)			
Electricity (farm & electric)			
Interest paid			
Miscellaneous			
<b>TOTAL OPERATING EXPENSES</b>	<b>\$ 5200</b>	<b>\$ 6000</b>	<b>\$ 43730</b>

NEW YORK COOPERATIVE EXTENSION  
Prepared by  
DEPARTMENT OF AGRICULTURAL ECONOMICS  
CORNELL UNIVERSITY

Name Sam Francis  
Address RD 1 Box 19  
Danby, NY

1985 DAIRY FARM BUSINESS SUMMARY

FARM NO. 38001

JANUARY 30, 1986

PROGRESS OF THE FARM BUSINESS

SELECTED FACTORS	1981	1984	1985
Size of Business			
Avg # of cows	65	67	77
Avg # of heifers	50	30	50
Milk sold, lbs.	910000	964800	1116500
Worker equiv.	2.75	2.75	2.75
Total tillable acres	260	260	260
Rates of Production			
Milk sold per cow, lbs.	14000	14400	14500
Hay DM per acre, tons	2.8	2.4	2.7
Corn silage per acre, tons	14	14	14
Labor Efficiency			
Cows per worker	24	24	28
Milk sold per worker, lbs.	330909	350836	406000
Cost Control			
Grain & conc. purch. as % milk sales	28%	29%	28%
Dairy feed & crop exp. per cwt. milk	\$ 4.38	\$ 4.17	\$ 5.46
Labor and mach. costs per cow	\$ 786	\$ 868	\$ 821
Capital Efficiency (average for year)			
Farm capital per cow	\$ 5754	\$ 5719	\$ 5507
Real estate per cow	\$ 2346	\$ 2351	\$ 2500
Machinery and equipment per cow	\$ 1362	\$ 1316	\$ 1179
Capital turnover, years	2.4	2.8	2.3
Profitability			
Net farm income w/o apprec.	\$ 1200	\$ -8426	\$ 18557
Net farm income w/ appreciation	\$ 19315	\$ -5881	\$ 13602
Labor & management income	\$ -11529	\$ -19844	\$ 2974
Rate return on equity capital w/apprec	-5.4%	-19.7%	-6.5%
Financial Summary			
Farm net worth	\$ 224575	\$ 238362	\$ 278667
Debt to asset ratio	0.44	0.42	0.38
Farm debt per cow	\$ 2603	\$ 2883	\$ 3212
Cash flow coverage ratio	1.06	1.16	1.22

PARTNERSHIP, ACCT. BOOK, DOP.

Linda D. Putnam

Stuart F. Smith

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

It is the policy of Cornell University actively to support equality of educational and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, national or ethnic origin, sex, age or handicap. The University is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.

## 1985 EASTERN NEW YORK DAIRY FARM RENTER BUSINESS SUMMARY

### INTRODUCTION

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

The 1985 Dairy Farm Business Summary features improved accrual accounting procedures, a new measure of farm profitability, a more indepth balance sheet, an annual cash flow statement, and several major improvements in the business analysis format and the analysis measures used. These and other changes are identified in the body of this report.

This special Eastern New York Dairy Summary is an average of 20 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 144 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 20 farms in Columbia, Delaware, Montgomery, Orange, Otsego, Rensselaer, Schoharie, Sullivan, and Washington Counties are summarized in this publication. The Eastern New York region consists of these counties plus Albany, Herkimer, Saratoga, Schenectady, and Ulster Counties which do not have farms that classify as renters. The 144 owned dairy farms summarized in this publication include farms from the entire region.

## SUMMARY OF THE FARM BUSINESS

Business Characteristics

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

BUSINESS CHARACTERISTICS AND RESOURCES USED  
20 Eastern New York Dairy Farm Renters, 1985

<u>Type of Business</u>	<u>Number</u>	<u>Type of Barn</u>	<u>Number</u>	
Single proprietorship	12	Stanchion	18	
Partnership	8	Freestall	2	
<u>Milking System</u>	<u>Number</u>	<u>Business Record System</u>	<u>Number</u>	
Dumping station	3	Account Book	11	
Pipeline	14	Agrifax (mail-in only)	5	
Herringbone parlor	3	Other	4	
<u>Dairy Records Service</u>	<u>Number</u>			
DHIC	15			
O.S.	1			
None	4			
<u>Labor Force</u>	<u>My Farm</u>	<u>Land Use</u>	<u>My Farm</u>	<u>Average</u>
Operator 1.	_____ mo. 12	Total acres rented	_____	364
Operator 2.	_____ mo. 5	Tillable acres rented	_____	194
Operator 3.	_____ mo. 1			
Family paid	_____ mo. 3	<u>Number of Cows</u>	<u>My Farm</u>	<u>Average</u>
Family unpaid	_____ mo. 3	Beg. year (owned)	_____	61
Hired	_____ mo. 5	End year (owned &		
Total	_____ mo. 29	leased)	_____	64
		Average for year		
		(owned & leased)	_____	63
Worker Equivalent				
(total + 12)	_____ 2.42			
Operator/Manager				
Equivalent				
(Oper. mo. + 12)	_____ 1.50			

Income Statement

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

CASH AND ACCRUAL FARM EXPENSES  
20 Eastern New York Dairy Farm Renters, 1985

Expense Item	Cash Paid	Change in + Inventory	Change in + Accounts Payable	Accrual - Expenses
<u>Hired Labor</u>	\$ 7,800		\$ 0	\$ 7,800
<u>Feed</u>				
Dairy grain & conc.	33,001	\$ -64	192	33,129
Dairy roughage	1,767	0	20	1,787
Other livestock	60	24	0	84
<u>Machinery</u>				
Mach. hire, rent/lease	1,468		0	1,468
Machinery repairs/parts	4,500	-33	164	4,631
Auto expense (farm share)	809		0	809
Fuel, oil & grease	4,708	-45	9	4,672
<u>Livestock</u>				
Replacement livestock	1,663		0	1,663
Breeding	1,921	4	2	1,927
Vet & medicine	2,200	-13	15	2,202
Milk marketing	9,376		-23	9,353
Cattle lease/rent	100		0	100
Other livestock expense	5,822	58	-40	5,840
<u>Crops</u>				
Fertilizer & lime	5,170	1,378	-293	6,255
Seeds & plants	1,505	-290	0	1,215
Spray, other crop exp.	1,599	-265	0	1,334
<u>Real Estate</u>				
Land/bldg./fence repair	1,225		26	1,251
Taxes	768		0	768
Insurance	1,743		0	1,743
Rent & lease	10,645		0	10,645
<u>Other</u>				
Telephone (farm share)	827		0	827
Electricity (farm share)	3,191		0	3,191
Interest paid	4,247		0	4,247
Miscellaneous	1,614	-220	0	1,394
Total Operating	\$107,729	\$534	\$ 72	\$108,335
Expansion livestock	\$ 133		\$ 0	133
Machinery depreciation				10,232
Building depreciation				469
<b>TOTAL ACCRUAL EXPENSES</b>				<b>\$119,169</b>

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

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

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

# CASH AND ACCRUAL FARM EXPENSES WORKSHEET

Expense Item	Cash Paid +	Change in Inventory +	Change in Accounts Payable +	Accrual Expenses -
<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	_____	_____	_____	_____
Insurance	_____	_____	_____	_____
Rent & lease	_____	_____	_____	_____
<u>Other</u>				
Telephone (farm share)	_____	_____	_____	_____
Electricity (farm share)	_____	_____	_____	_____
Interest paid	_____	_____	_____	_____
Miscellaneous	_____	_____	_____	_____
Total Operating	\$ _____	\$ _____	\$ _____	\$ _____
Expansion livestock	_____	_____	_____	_____
Machinery depreciation	_____	_____	_____	_____
Building depreciation	_____	_____	_____	_____
<b>TOTAL ACCRUAL EXPENSES</b>	<b>\$ _____</b>	<b>\$ _____</b>	<b>\$ _____</b>	<b>\$ _____</b>

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

Accrual expenses are the costs of inputs actually used in this year's production. Purchased feed and supplies used out of inventory must be included. Beginning of year less end of year purchased feed and supply inventory equals the change in inventory to include in accrual expenses. Feed, supplies, and services used but not paid for must be included by adding the net increase in operating accounts payable. Increases in operating accounts payable are determined by subtracting the balance at the beginning of the year from the end of year balance.

CASH AND ACCRUAL FARM RECEIPTS  
20 Eastern New York Dairy Farm Renters, 1985

Receipt Item	Cash Receipts	Change in + Inventory	Change in Accounts + Receivable	Accrual + Receipts
Milk sales	\$125,412		\$821	\$126,233
Dairy cattle	6,075	\$1,686	0	7,761
Dairy calves	1,561		0	1,561
Other livestock	201	339	0	540
Crops	574	2,534	10	3,118
Government receipts	310		0	310
Custom machine work	44		0	44
Gas tax refund	55		14	69
Other	328		93	421
Total Accrual Receipts	\$134,560	\$4,559	\$938	\$140,057

Cash receipts includes the gross value of milk checks received during the year plus all other payments received for the sale of farm products, services, and government programs.

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

CASH AND ACCRUAL FARM RECEIPT WORKSHEET

Receipt Item	Cash Receipts	Change in + Inventory	Change in Accounts + Receivable	Accrual + Receipts
Milk sales	\$ _____	\$ _____	\$ _____	\$ _____
Dairy cattle	_____	_____	_____	_____
Dairy calves	_____	_____	_____	_____
Other livestock	_____	_____	_____	_____
Crops	_____	_____	_____	_____
Government receipts	_____	_____	_____	_____
Custom machine work	_____	_____	_____	_____
Gas tax refund	_____	_____	_____	_____
Other	_____	_____	_____	_____
Total Accrual Receipts	\$ _____	\$ _____	\$ _____	\$ _____

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

### Profitability Analysis

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

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.

Net farm income is computed with and without appreciation. Appreciation represents the change in inventory values caused by changes in prices during the year. Appreciation is a major factor contributing to changes in farm net worth and must be included in the profitability analysis.

#### NET FARM INCOME Eastern New York Dairy Farm Renters and Owners, 1985

Item	20 Dairy Farm Renters	144 Dairy Farm Owners	My Farm
Total accrual receipts	\$140,057	\$166,450	\$ _____
Appreciation: Livestock	-7,706	-7,775	_____
Machinery	3,298	1,861	_____
Real Estate	419	6,542	_____
Total Including Appreciation	\$136,068	\$167,078	\$ _____
- Total accrual expenses	119,169	152,985	_____
Net Farm Income (with appreciation)	\$ 16,899	\$ 14,093	\$ _____
Net Farm Income (without appreciation)	\$ 20,888	\$ 13,465	\$ _____

Return to operator(s') labor, management, and equity capital measures the total business profits for the farm operators. It is calculated by deducting a charge for unpaid family labor from net farm income. Operator(s') labor is not included in unpaid family labor. Return to operator(s') labor, management, and equity capital has been compiled with and without appreciation.

#### RETURN TO OPERATOR(S') LABOR, MANAGEMENT, AND EQUITY Eastern New York Dairy Farm Renters and Owners, 1985

Item	20 Dairy Farm Renters	144 Dairy Farm Owners	My Farm
Net farm income (with appreciation)	\$16,899	\$14,093	\$ _____
- Family labor unpaid @ \$550 per month	1,650	1,100	_____
Return to operator(s') labor, management, & equity (with appreciation)	\$15,249	\$12,993	\$ _____
- Appreciation	3,989	628	_____
Return to operator(s') labor, management, & equity (without appreciation)	\$19,238	\$12,365	\$ _____



Labor and management income is the share of net farm income without appreciation returned to the operator(s') labor and management. Appreciation is not included as part of the return to labor and management. Labor and management income is determined by deducting the cost of using equity capital at a real interest rate of five percent, from the return to operator(s') labor, management, and equity capital excluding appreciation. The interest charge reflects the long-term average rate of return that a farmer might expect to earn in comparable risk investments in a low inflation economy.

Labor and management income per operator measures the return to each operator's labor and management.

LABOR AND MANAGEMENT INCOME  
Eastern New York Dairy Farm Renters and Owners, 1985

Item	20 Dairy Farm Renters	144 Dairy Farm Owners	My Farm
Return to operator(s') labor, management, & equity without appreciation	\$19,238	\$12,365	\$ _____
- Real interest @ 5% on equity capital	<u>6,334</u>	<u>14,849</u>	- _____
Labor & Management Income	\$12,904	\$-2,484	\$ _____
Labor & Management Income per Operator	\$8,603	\$-1,863	\$ _____

Return on equity capital measures the net return remaining for the farmer's equity or owned capital after a charge has been made for the owner-operator's labor and management. The earnings or amount of net farm income allocated to labor and management is the opportunity cost or value of operator(s') 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 end of year farm net worth or equity capital.

RETURN ON EQUITY CAPITAL  
Eastern New York Dairy Farm Renters and Owners, 1985

Item	20 Dairy Farm Renters	144 Dairy Farm Owners	My Farm
Return to operator(s') labor, management, & equity capital with appreciation	\$15,249	\$12,993	\$ _____
- Value of operator(s') labor & management	<u>21,658</u>	<u>20,214</u>	_____
Return on equity capital with appreciation	\$-6,409	\$-7,221	\$ _____
Rate of return on equity capital with appreciation	-5.1%	-2.4%	_____ %
Return on equity capital without apprec.	\$-2,420	\$-7,849	\$ _____
Rate of return without appreciation	-1.9%	-2.6%	_____ %

# Farm and Family Financial Status

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

## 1985 FARM BUSINESS & NONFARM BALANCE SHEET 20 Eastern New York Dairy Farm Renters, 1985

Farm Assets			Farm Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 2,605	\$ 2,050	Accounts payable	\$ 5,437	\$ 5,502
Accounts rec.	11,369	12,199	Operating debt	5,033	5,526
Feed & supplies	20,331	22,331	Short-term	0	535
Total	\$34,305	\$36,580	Total	\$10,470	\$11,564
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows:				\$30,663	\$32,141
owned	\$50,727	\$ 47,186			
leased	0	0			
Heifers	18,521	16,050			
Bulls/other lvstk.	299	629			
Mach./eq. owned	61,048	61,893			
Mach./eq. leased	0	0	Financial lease		
Coop stock & cert.	6,457	6,549	(cattle/mach.)	0	0
Total	\$137,052	\$132,307	Total	\$30,663	\$32,141
<u>Long-Term</u>			<u>Long-Term</u>		
Land/buildings:				\$ 7,518	\$ 7,262
owned	\$ 8,375	\$ 8,758			
leased	1,767	1,464	Financial lease		
Total	\$10,142	\$10,222	(structures)	1,767	1,464
			Total	\$ 9,285	\$ 8,727
Total Farm Assets	\$181,499	\$179,109	Total Farm Liab.	\$50,418	\$52,431
			FARM NET WORTH	\$131,081	\$126,678

(Average for 13 farms reporting)

Nonfarm Assets*			Nonfarm Liabilities* & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
Personal cash, chkg. & savings	\$ 3,796	\$ 3,889	Nonfarm Liab.	\$8,780	\$8,613
Cash value life ins.	1,410	1,307	NONFARM NET WORTH	\$18,498	\$21,954
Nonfarm real estate	11,769	10,769	FARM & NONFARM*	Jan. 1	Dec. 31
Auto (personal sh.)	2,381	2,835	Total Assets	\$208,777	\$209,676
Stocks & bonds	1,642	1,827	Total Liabilities	59,198	61,044
Household furn.	5,400	5,923			
All other	880	4,016			
Total Nonfarm	\$27,278	\$30,567	TOTAL FARM & NON-FARM NET WORTH	\$149,579	\$148,632

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

## 1985 FARM BUSINESS &amp; NONFARM BALANCE SHEET

Farm Assets			Farm Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings			Accounts payable		
Accounts rec.			Operating debt		
Feed & supplies			Short-term:		
Total			Total		
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows:					
owned					
leased					
Heifers					
Bulls/other lvstk.					
Mach./eq. owned					
Mach./eq. leased			Financial lease		
Coop stock & cert.			(cattle/mach.)		
Total			Total		
<u>Long-Term</u>			<u>Long-Term</u>		
Land/buildings:					
owned					
leased					
Total			Financial lease		
			(structures)		
			Total		
Total Farm Assets			Total Farm Liab.		
			FARM NET WORTH		
Nonfarm Assets			Nonfarm Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
			<u>Nonfarm Liab.:</u>		
Personal cash, chkg. & savings					
Cash value					
life ins.					
Nonfarm real est.					
Auto (pers. share)			Total Nonfarm		
Stocks & bonds			Liabilities		
Household furn.					
All other			Nonfarm		
Total Nonfarm			Net Worth		
<u>TOTAL FARM &amp; NONFARM</u>			<u>Jan. 1      Dec. 31</u>		
Total Farm & Nonfarm Assets					
Less Total Farm & Nonfarm Liabilities					
Farm & Nonfarm Net Worth					

Balance sheet analysis continues by examining financial and debt ratios and factors measuring levels of debt. Percent equity is calculated by dividing net worth by assets. Equity increases as the value of assets increase more than liabilities. 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. The debt analysis ratios show how well the debt is structured and managed. Debt levels per unit of production include some old standards that are still useful if used with measures of cash flow and repayment ability.

**BALANCE SHEET ANALYSIS**  
Eastern New York Dairy Farm Renters and Owners, 1985

Item	20 Dairy Farm Renters	144 Dairy Farm Owners	My Farm
<u>Financial Ratios - Farm:</u>			
Percent equity	71%	67%	_____ %
Debt/asset ratio: total	0.29	0.33	_____
long-term	0.85	0.40	_____
intermediate/current	0.26	0.25	_____
<u>Financial Ratios - Farm &amp; Nonfarm:</u>			
Percent equity	71%	69%	_____ %
Total debt/asset ratio	0.29	0.31	_____
<u>Farm Debt Analysis:</u>			
Accounts payable as % of total debt	10%	4%	_____ %
Long-term liabilities as a % of total debt	17%	61%	_____ %
Current & inter. liab. as a % of total debt	83%	39%	_____ %
<u>Farm Debt Levels Per Cow:</u>			
Total farm debt	\$819	\$1,944	\$ _____
Long-term debt	136	1,192	_____
Intermediate & current debt	683	752	_____

Balance sheet analysis concludes with a summary of the inventory balancing procedure for machinery and equipment. It is important to account for the value of these assets used on the balance sheet and the changes that occur from the beginning to end of year. Changes in the livestock inventory are included in the dairy analysis.

**FARM MACHINERY AND EQUIPMENT INVENTORY BALANCE**  
Eastern New York Dairy Farm Renters and Owners, 1985

Item	20 Dairy Farm Renters	144 Dairy Farm Owners	My Farm
Value beg. of year	\$61,048	\$78,826	\$ _____
Purchases	\$ 7,980	\$10,814	\$ _____
- Sales	200	311	- _____
- Depreciation	<u>10,232</u>	<u>12,262</u>	- _____
= Net investment	-2,452	-1,759	-+ _____
+ Appreciation	<u>3,298</u>	<u>1,861</u>	+ _____
= Value end of year	\$61,893	\$78,929	\$ _____

### Cash Flow Summary and Analysis

Completing an annual cash flow summary and analysis is important to determine how well the cash generated by the business, plus that brought in from outside, met the annual cash needs of the business and the farm family. 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 in the following table is structured to compare all the cash inflows with all the cash outflows for the year. Cash inflows include all the cash farm receipts, receipts from the sale of farm assets, additional funds borrowed, as well as the amount of cash available at the beginning of the year. Cash outflows include all the cash farm expenses, capital purchases, principal payments, money taken out of the business, and the cash balance left at year's end. When all the cash inflows and outflows are correct, the statement will balance. If the imbalance (error) amount is positive, recorded cash inflows exceed outflows by this amount. If it is negative, cash outflows are too high in relation to inflows.

#### ANNUAL CASH FLOW STATEMENT Eastern New York Dairy Farm Renters and Owners, 1985

<u>Item</u>	<u>20 Dairy Farm Renters</u>	<u>144 Dairy Farm Owners</u>	<u>My Farm</u>
<u>Cash Inflows</u>			
Beginning farm cash, checking & savings	\$ 2,605	\$ 3,530	\$ _____
Cash farm receipts	134,560	164,461	_____
Sale of assets: Machinery	200	311	_____
Real estate	0	446	_____
Money borrowed (inter. & long-term)	9,414	22,657	_____
Money borrowed (short-term)	685	1,558	_____
Increase in operating debt	493	0	_____
Nonfarm income	1,993	4,754	_____
Money borrowed - nonfarm	<u>33</u>	<u>301</u>	_____
Total	\$149,984	\$198,018	\$ _____
<u>Cash Outflows</u>			
Cash farm expenses	\$107,729	\$132,264	\$ _____
Capital purchases: Expansion livestock	133	1,752	_____
Machinery	7,980	10,814	_____
Real estate	525	7,389	_____
Principal payments (inter. & long-term)	8,193	18,104	_____
Principal payments (short-term)	150	1,570	_____
Decrease in operating debt	0	208	_____
Nonfarm debt payments	740	349	_____
Personal withdrawals & family exp.	17,214	16,382	_____
Ending farm cash, checking & savings	<u>2,050</u>	<u>3,728</u>	_____
Total	\$144,712	\$192,562	\$ _____
Imbalance (error)	\$5,272	\$5,456	\$ _____

### Repayment Analysis

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

#### FARM DEBT PAYMENTS PLANNED Same 17 Eastern New York Dairy Farm Renters, 1985\*

Debt Payments	Average			My Farm		
	1985 Payments		Planned 1986	1985 Payments		Planned 1986
	Planned	Made		Planned	Made	
Long-term	\$ 1,075	\$ 703	\$ 684	\$ _____	\$ _____	\$ _____
Intermediate-term	12,138	9,543	10,814	_____	_____	_____
Short-term	607	198	638	_____	_____	_____
Operating (net reduction)	0	0	1,431	_____	_____	_____
Accounts payable (net reduction)	1,245	642	1,497	_____	_____	_____
Total	\$15,065	\$11,086	\$15,064	\$ _____	\$ _____	\$ _____
Per cow	\$259	\$191		\$ _____	\$ _____	
Per cwt. 1985 milk	\$1.76	\$1.30		\$ _____	\$ _____	
Percent of total 1985 receipts	12%	9%		_____	_____	
Percent of 1985 milk receipts	13%	10%		_____	_____	

\*Farms that completed Dairy Farm Business Summaries for both 1984 and 1985.

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 this year's planned debt payments.

#### CASH FLOW COVERAGE RATIO Eastern New York Dairy Farm Renters and Owners, 1985

Item	Same 17 Farm Renters	Same 119 Farm Owners	My Farm
Cash farm receipts	\$121,731	\$169,556	\$ _____
- Cash farm expenses	98,217	136,493	_____
+ Interest paid	3,709	13,447	_____
- Net personal withdrawals from farm*	12,094	11,764	_____
(A) - Amount Available for Debt Service	\$15,129	\$34,746	\$ _____
(B) - Debt Payments Planned for 1985	\$15,065	\$31,160	\$ _____
(A + B) - Cash Flow Coverage Ratio for 1985	1.00	1.12	_____

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

## ANALYSIS OF THE FARM BUSINESS

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

Cropping Program Analysis

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

LAND RESOURCES AND CROP PRODUCTION  
20 Eastern New York Dairy Farm Renters, 1985

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	20	131	2.19 tn DM	_____	_____ tn DM
Corn silage	19	46	13.40 tn	_____	_____ tn
			4.52 tn DM	_____	_____ tn DM
Other forage	2	6	1.27 tn DM	_____	_____ tn DM
Total forage	20	176	2.77 tn DM	_____	_____ tn DM
Corn grain	5	39	119.3 bu	_____	_____ bu
Oats	2	15	46.7 bu	_____	_____ bu
Wheat	0	0	0.0 bu	_____	_____ bu
Other crops	1	40		_____	
Tillable pasture	3	25		_____	
Idle	3	11		_____	
Total Tillable Acres	20	194		_____	

\*1985 average yields for 144 dairy farm owners in Eastern New York included: all hay crops, 2.6 tons dry matter per acre; corn silage, 14.3 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 measure 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, 1985

Item	20 Dairy Farm Renters	144 Dairy Farm Owners	My Farm
Total tillable acres per cow	3.10	3.09	_____
Total forage acres per cow	2.80	2.50	_____
Harvested forage dry matter, tons per cow	7.75	7.92	_____

Cropping Program Analysis (continued)

A number of cooperators have allocated crop expenses to hay crop, corn, and other crop production. This data has been compiled to show crop expenses per acre and per production unit for these crops. Corn production has been converted to corn silage equivalent using 5.88 bushels of dry shell equivalent to equal one ton of corn silage as fed.

CROP RELATED ACCRUAL EXPENSES  
Eastern New York Dairy Farm Renters and Owners, 1985

	Total/ Till.	Hay Crop		Corn	Per Ton	Other
Expense	Acre	Per Acre	Per Ton DM	Per Acre	Corn Sil. Equiv.	Crops Per Acre
<u>20 Dairy Farm Renters:</u>						
Fertilizer & lime	\$32.18	\$11.46	\$5.30	\$ 68.69	\$4.52	\$ 78.43
Seeds & plants	6.25	3.19	1.47	16.56	1.09	8.93
Spray & other crop expense	<u>6.86</u>	<u>2.10</u>	<u>0.97</u>	<u>24.32</u>	<u>1.60</u>	<u>17.07</u>
Total	\$45.29	\$16.75	\$7.74	\$109.56	\$7.20	\$104.43
<u>144 Dairy Farm Owners:</u>						
Fertilizer & lime	\$34.26	\$19.32	\$ 7.63	\$ 62.65	\$4.13	\$16.03
Seeds & plants	10.35	4.84	1.91	20.06	1.32	18.74
Spray & other crop expense	<u>8.36</u>	<u>1.98</u>	<u>0.78</u>	<u>21.27</u>	<u>1.40</u>	<u>6.57</u>
Total	\$52.97	\$26.14	\$10.33	\$103.98	\$6.85	\$41.34
<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.

ACCRUAL MACHINERY EXPENSES  
Eastern New York Dairy Farm Renters and Owners, 1985

Item	Average Per Tillable Acre		My Farm	
	20 Dairy Farm Renters	144 Dairy Farm Owners	Total Expenses	Per Til. Acres
Fuel, oil & grease	\$ 24.03	\$ 24.74	\$_____	\$_____
Machinery repairs & parts	23.82	30.86	_____	_____
Machine hire, rent & lease	7.55	5.98	_____	_____
Auto expense (farm share)	4.16	1.69	_____	_____
Interest (5%)	15.81	17.50	_____	_____
Depreciation	<u>52.63</u>	<u>54.42</u>	_____	_____
Total	\$128.01	\$135.19	\$_____	\$_____



Dairy Program Analysis

Analysis of the dairy enterprise can tell a great deal about the strengths and weaknesses of the dairy farm business. Changes in dairy herd size and market values that occur during the year are identified in the table below. The change in inventory value without appreciation is attributed to physical changes in herd size and quality. This real increase in inventory has been included as an accrual farm receipt on page 5.

DAIRY HERD INVENTORY  
Eastern New York Dairy Farm Renters and Owners, 1985

Item	Dairy Cows		Heifers	
	Number	Value	Number	Value
<u>20 Dairy Farm Renters:</u>				
Beginning of year (owned)	61	\$50,727	45	\$18,521
+ Change without appreciation		1,957		-271
+ Appreciation		<u>-5,498</u>		<u>-2,200</u>
End of year (owned)	62	\$47,186	45	\$16,050
End including leased	64			
Average number	63		47	
<u>144 Dairy Farm Owners:</u>				
Beginning of year (owned)	71	\$61,204	58	\$26,394
+ Change without appreciation		2,533		156
+ Appreciation		<u>-5,229</u>		<u>-2,535</u>
End of year (owned)	74	\$58,508	59	\$24,015
End including leased	74			
Average number	73		58	
<u>My Farm:</u>				
Beginning of year (owned)	_____	\$ _____	_____	\$ _____
+ Change without appreciation	_____	_____	_____	_____
+ Appreciation	_____	_____	_____	_____
End of year (owned)	_____	_____	_____	_____
End including leased	_____	_____	_____	_____
Average number	_____	\$ _____	_____	\$ _____

Total milk sold and milk sold per cow are extremely valuable measures of productivity on the dairy farm. These measures of milk output are based on pounds of milk marketed during the year.

MILK PRODUCTION  
Eastern New York Dairy Farm Renters and Owners, 1985

Item	20 Dairy Farm Renters	144 Dairy Farm Owners	My Farm
Total milk sold, lbs.	942,341	1,089,331	_____
Milk sold per cow, lbs.	15,017	14,941	_____
Average milk plant test, percent butterfat	3.57	3.65	_____

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

ACCRUAL RECEIPTS FROM DAIRY AND COST OF PRODUCING MILK  
Eastern New York Dairy Farm Renters and Owners, 1985

Item	20 Renters		144 Owners		My Farm	
	Total	Per Cwt.	Total	Per Cwt.	Total	Per Cwt.
Milk	\$126,233	\$13.40	\$146,401	\$13.44	\$	\$
Dairy cattle	7,760	0.82	11,875	1.09		
Dairy calves	1,561	0.17	1,581	0.15		
Total	\$135,554	\$14.39	\$159,857	\$14.68	\$	\$
<u>Accrual Costs of Producing Milk</u>						
Operating costs	\$ 94,513	\$10.03	\$112,922	\$10.37	\$	\$
Total costs without op(s') labor, mgmt. & capital	\$106,997	\$11.35	\$134,035	\$12.30	\$	\$
Total Costs	\$134,989	\$14.32	\$169,098	\$15.52	\$	\$

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

DAIRY RELATED ACCRUAL EXPENSES  
Eastern New York Dairy Farm Renters and Owners, 1985

Item	Average Per Cwt. Milk		My Farm Per Cwt.
	20 Renters	144 Owners	
Purchased dairy grain & conc.	\$3.52	\$3.32	\$
Purchased dairy roughage	0.19	0.15	
Total Purchased Dairy Feed	\$3.71	\$3.47	\$
Purchased grain & conc. as % of milk receipts	26%	25%	%
Purchased feed & crop exp.	\$4.64	\$4.56	\$
Purchased feed & crop exp. as % of milk receipts	35%	34%	%
Breeding	\$0.20	\$0.21	\$
Veterinary & medicine	0.23	0.24	
Milk marketing	0.99	1.12	
Cattle lease	0.01	0.00	
Other livestock expense	0.62	0.49	

Capital and Labor Efficiency Analysis

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

**CAPITAL EFFICIENCY**  
 Eastern New York Dairy Farm Renters and Owners, 1985

Item	Per Worker	Per Cow	Per Tillable Acre
<u>20 Dairy Farm Renters:</u>			
Farm capital	\$74,609	\$2,873	\$927
Machinery & equipment	25,436	980	316
Capital turnover, years	1.29		
<u>144 Dairy Farm Owners:</u>			
Farm capital	\$165,165	\$6,041	\$1,955
Machinery & equipment	29,857	1,092	353
Capital turnover, years	2.65		
<u>My Farm:</u>			
Farm capital	\$ _____	\$ _____	\$ _____
Machinery & equipment	_____	_____	_____
Capital turnover, years	_____		

**LABOR FORCE ANALYSIS**  
 Eastern New York Dairy Farm Renters and Owners, 1985

Efficiency	<u>20 Renters</u>		<u>144 Owners</u>		<u>My Farm</u>	
	Total	Per Worker	Total	Per Worker	Total	Per Worker
Cows, average number	63	26	73	27	_____	_____
Milk sold, pounds	942,341	389,934	1,089,331	408,499	_____	_____
Tillable acres	194	80	225	84	_____	_____
Work units	658	272	770	289	_____	_____
Labor Costs	<u>20 Renters</u>		<u>144 Owners</u>		<u>My Farm</u>	
	Total	Per Cow	Total	Per Cow	Total	Per Cow
Value of operator(s)						
labor (\$800/month)	\$14,400	\$229	\$12,800	\$176	\$ _____	\$ _____
Family unpd. (\$550/mo.)	1,650	26	1,100	15	_____	_____
Hired	7,800	124	14,431	198	_____	_____
Total Labor	\$23,850	\$379	\$28,331	\$389	\$ _____	\$ _____
Machinery Cost	\$24,886	\$397	\$30,463	\$418	\$ _____	\$ _____
Total Labor & Mach.	\$48,736	\$777	\$58,794	\$806	\$ _____	\$ _____

## ANNUAL CASH FLOW WORKSHEET

Item	20 Dairy	My Farm		Expected Change	1986 Projection
	Farm Renters (per cow)	Total	Per Cow		
Average number of cows	63				
<u>Accrual Oper. Receipts</u>					
Milk	\$2,012	\$	\$		\$
Dairy cattle	124				
Dairy calves	25				
Other livestock	8				
Crops	50				
Misc. receipts	13				
Total	\$2,232	\$	\$		\$
<u>Accrual Oper. Expenses</u>					
Hired labor	\$ 124	\$	\$		\$
Dairy grain & conc.	528				
Dairy roughage	28				
Other lvstk. feed	1				
Mach. hire/rent/lease	23				
Mach. rpr./parts & auto	86				
Fuel, oil & grease	74				
Replacement lvstk.	26				
Breeding	31				
Vet & medicine	35				
Milk marketing	149				
Cattle lease	2				
Other lvstk. exp.	93				
Fertilizer & lime	99				
Seeds & plants	19				
Spray/other crop exp.	21				
Land, bldg., fence repair	20				
Taxes	12				
Insurance	28				
Real est. rent/lease	169				
Utilities	64				
Miscellaneous	22				
Total Less Int. Paid	\$1,652				\$
<u>Net Accrual Operating Income</u>	(total)				
(without interest paid)	\$35,969	\$			\$
- Change in lvstk./crop inv.	4,558				
- Change in accts. rec.	938				
+ Change in feed/supply inv.	534				
+ Change in accts. payable	72				
NET CASH FLOW	\$31,081	\$			\$
- Personal withdrawals & family expenditures	17,214				
Available for Debt Payments, Investments & Savings	\$13,867	\$			\$
- Farm Debt Payments	12,837				
Available for Investment & Savings	\$ 1,031	\$			\$
- Capital Purchases: cattle, machinery & improvements	\$ 8,638				
Additional Capital Needed		\$			\$

# 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 17 Eastern New York Dairy Farm Renters, 1984 and 1985

Selected Factors	Average		My Farm		Goal
	1984	1985	1984	1985	
<u>Size of Business</u>					
Average number of cows	57	58			
Average number of heifers	39	42			
Milk sold, lbs.	812,306	853,786			
Worker equivalent	2.15	2.25			
Total tillable acres	174	183			
<u>Rates of Production</u>					
Milk sold per cow, lbs.	14,178	14,676			
Hay DM per acre, tons	2.1	2.2			
Corn silage per acre, tons	11	13			
<u>Labor Efficiency</u>					
Cows per worker	27	26			
Milk sold per worker, lbs.	377,472	379,460			
<u>Cost Control</u>					
Grain & conc. purchased as % of milk sales	29%	26%	%	%	%
Dairy feed & crop exp. per cwt. milk	\$4.99	\$4.62	\$	\$	\$
Labor & mach. costs/cow	\$694	\$726	\$	\$	\$
<u>Capital Efficiency*</u>					
Farm capital per cow	\$3,367	\$2,697	\$	\$	\$
Real estate per cow	\$829	\$206	\$	\$	\$
Mach. & equip. per cow	\$831	\$801	\$	\$	\$
Capital turnover, years	1.6	1.2			
<u>Profitability</u>					
Net farm inc. w/o apprec.	\$15,222	\$20,749	\$	\$	\$
Net farm inc. w/apprec.	\$16,198	\$15,273	\$	\$	\$
Labor & mgmt. income	\$6,778	\$13,763	\$	\$	\$
Rate of return on eq. capital w/apprec.	-1.6%	-4.8%	%	%	%
<u>Financial Summary</u>					
Farm net worth	\$144,767	\$106,723	\$	\$	\$
Debt to asset ratio	0.25	0.31			
Farm debt per cow	\$845	\$844	\$	\$	\$

\*Average for the year.