DAIRY FARM BUSINESS SUMMARY

August 1987 A.E. Ext. 87-19

EASTERN NEW YORK RENTER SUMMARY 1986

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1986 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 eight regional summaries and in one statewide summary.[1]

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 3-5. Four measures of farm profits are calculated on pages 6 and 7. The balance sheet and cash flow statement are featured on pages 8-13. The dairy program analysis includes data on the costs of producing milk (pages 16 and 17).

This special Eastern New York Dairy Summary is an average of 22 businesses that are renting substantially all of the farm real estate. The farm income, financial summary, and business analysis sections of this report include comparisons with average data on 139 owned dairy farms in the region. This report is prepared in workbook form for farm renters to use in the systematic study of their farm business operations.

Business records for 22 farms in Albany, Columbia, Delaware, Herkimer, Montgomery, Rensselaer, Schoharie, and Sullivan Counties are summarized in this publication. The Eastern New York region consists of these counties plus Greene, Otsego, Schenectady, Ulster, and Washington Counties which do not have farms that classify as renters. The 139 owned dairy farms summarized in this publication include farms from the entire region.

Use Comparative Profitability Data With Caution

The profitability analysis on pages 6 and 7 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 equity capital averaged $138 per tillable acre on the owned dairy farms compared to only $84 on the rented farms. This accounts for a $12,000 difference in costs between owned and rented farms.

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[1]Smith, Stuart F., Wayne A. Knoblauch, and Linda D. Putnam, Dairy Farm Management Business Summary, New York, 1986, A.E. Res. 87-20, July 1987.

SUMMARY AND ANALYSIS OF THE FARM BUSINESS

Business Characteristics and Resources Used

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

BUSINESS CHARACTERISTICS AND RESOURCES USED
22 Eastern New York Dairy Farm Renters, 1986

Type of Business	Number
Single proprietorship	13
Partnership	7
Corporation	1
Other	1

Milking System	Number
Dumping station	3
Pipeline	15
Herringbone parlor	3
Other parlor	1

Type of Barn	Number
Stanchion	20
Freestall	2

Dairy Records Service	Number
DHIC	18
None	4

Business Record System	Number
Account Book	9
Agrifax (mail-in only)	4
ELFAC	2
Other	7

Labor Force	My Farm	Average
Operator 1.	____ mo.	11.95
Operator 2.	____ mo.	4.32
Operator 3.	____ mo.	0.82
Operator 4.	____ mo.	0.27
Family paid	____ mo.	1.64
Family unpaid	____ mo.	2.55
Hired	____ mo.	11.27
Total	____ mo.	32.82
Worker equivalent (total + 12)	____	2.74
Operator/Manager Equivalent (Oper. mo. + 12)	____	1.45

Land Use	My Farm	Average
Total acres rented	_____	396
Tillable acres rented	_____	229

Number of Cows	My Farm	Average
Beg. year (owned)	_____	65
End year (owned & leased)	_____	73
Average for year (owned & leased)	_____	71

Predominate business characteristics of the 22 rented farms include the single proprietorship, pipeline milking system, stanchion or conventional stall barn, DHIC herd records and an account book business record system. They are very similar to owned dairy farms in this respect.

The average size of the labor force on the rented farms was one percent less than the 2.76 worker equivalent on owned farms. The rented farms averaged 229 tillable acres and 71 cows compared to 244 tillable acres and 83 cows on the 139 owned dairy farms in the same region. Land and labor resources were being used more effeciently by dairy farm owners.

Income Statement

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

CASH AND ACCRUAL FARM EXPENSES
22 Eastern New York Dairy Farm Renters, 1986

Expense Item	Cash Paid +	Change in Inventory +	Change in Accounts Payable =	Accrual Expenses
Hired Labor	$ 10,597		$ 23	$ 10,620
Feed				
Dairy grain & conc.	32,993	$-147	-348	32,498
Dairy roughage	1,934	-217	36	1,753
Other livestock	179	3	0	182
Machinery				
Mach. hire, rent/lease	1,190		0	1,190
Machinery repairs/parts	6,366	24	-89	6,301
Auto expense (farm share)	560		0	560
Fuel, oil & grease	4,535	-13	-48	4,474
Livestock				
Replacement livestock	1,093		0	1,093
Breeding	2,161	33	-4	2,190
Vet & medicine	2,204	-19	20	2,205
Milk marketing	11,140		0	11,140
Cattle lease/rent	100		0	100
Other livestock expense	6,152	-122	-149	5,881
Crops				
Fertilizer & lime	5,892	160	-136	5,916
Seeds & plants	2,119	-135	0	1,984
Spray, other crop exp.	2,376	40	0	2,416
Real Estate				
Land/bldg./fence repair	2,371	-28	0	2,343
Taxes	1,894		0	1,894
Insurance	2,494		0	2,494
Rent & lease	10,608		109	10,717
Other				
Telephone (farm share)	545		0	545
Electricity (farm share)	4,220		86	4,306
Interest paid	3,681		0	3,681
Miscellaneous	1,716	245	0	1,961
Total Operating	$119,120	$-176	$-500	$118,444
Expansion livestock	$ 1,507		$ 0	1,507
Machinery depreciation				10,466
Building depreciation				1,214
TOTAL ACCRUAL EXPENSES				$131,631

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 =
Hired Labor	$		$	$
Feed				
Dairy grain & conc.		$		
Dairy roughage				
Other livestock				
Machinery				
Mach. hire, rent/lease				
Machinery repairs/parts				
Auto expense (farm share)				
Fuel, oil & grease				
Livestock				
Replacement livestock				
Breeding				
Vet & medicine				
Milk marketing				
Cattle lease/rent				
Other livestock expense				
Crops				
Fertilizer & lime				
Seeds & plants				
Spray, other crop exp.				
Real Estate				
Land/bldg./fence repair				
Taxes				
Insurance				
Rent & lease				
Other				
Telephone (farm share)				
Electricity (farm share)				
Interest paid				
Miscellaneous				
Total Operating	$	$	$	$
Expansion livestock				
Machinery depreciation				
Building depreciation				
TOTAL ACCRUAL EXPENSES				$

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

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
22 Eastern New York Dairy Farm Renters, 1986

Receipt Item	Cash Receipts	+ Change in Inventory	+ Change in Accts. Rec.	- Accrual Receipts
Milk sales	$137,185		$ 987	$138,172
Dairy cattle	7,555	$6,589	0	14,144
Dairy calves	1,758		0	1,758
Other livestock	48	194	0	242
Crops	972	-102	114	984
Government receipts	1,799		0	1,799
Custom machine work	116		0	116
Gas tax refund	90		5	95
Other	981		0	981
- Nonfarm noncash capital		32		32
Total Accrual Receipts	$150,504	$6,649	$1,106	$158,259

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 livestock 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 difference between the January milk check for this December's marketings and the previous January's check, and other delayed payments.

Nonfarm noncash capital are gifts and inheritances of cattle and crops received by the farm owner/operator, and included in inventory or used in the business during the year. They are deducted from growth in inventory and reduce accrual receipts because they came from outside the farm business. Gift and inheritances of machinery are accounted for on page 10.

CASH AND ACCRUAL FARM RECEIPT WORKSHEET

Receipt Item	Cash Receipts	+ Change in Inventory	+ Change in Accts. Rec.	- Accrual Receipts
Milk sales	$_____	$xxxxxxxx	$_____	$_____
Dairy cattle	_____	_____	_____	_____
Dairy calves	_____	_____	_____	_____
Other livestock	_____	_____	_____	_____
Crops	_____	_____	_____	_____
Government receipts	_____	xxxxxxxx	_____	_____
Custom machine work	_____	xxxxxxxx	_____	_____
Gas tax refund	_____	xxxxxxxx	_____	_____
Other	_____	xxxxxxxx	_____	_____
- Nonfarm noncash capital		_____		_____
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. Appreciation is included in crop inventory change, but excluded from livestock categories. 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. The best combination of these resources produces optimum profits. Farm profits can be measured as the return to all family resources or as the return to one or more individual resources such as labor and management.

Net farm income is the total combined return to the farm 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 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, 1986

Item	22 Dairy Farm Renters	139 Dairy Farm Owners	My Farm
Total accrual receipts	$158,259	$190,940	$
+ Appreciation: Livestock	3,056	1,392	
Machinery	1,309	2,338	
Real Estate	220	18,538	
Other Stock/Cert.	134	211	
= Total Including Appreciation	$162,978	$213,419	$
- Total accrual expenses	131,631	169,590	
= Net Farm Income (with appreciation)	$ 31,347	$ 43,829	$
Net Farm Income (without appreciation)	$ 26,628	$ 21,350	$

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. 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, 1986

Item	22 Dairy Farm Renters	139 Dairy Farm Owners	My Farm
Net farm income (with appreciation)	$31,347	$43,829	$
- Family labor unpaid @ $600 per month	1,530	1,728	
= Return to operator(s') labor, management, & equity (with appreciation)	$29,817	$42,101	$
- Appreciation	4,719	22,479	
= Return to operator(s') labor, management, & equity (without appreciation)	$25,098	$19,622	$

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 one full-time operator's labor and management. A full-time operator provides 12 months of labor and management.

LABOR AND MANAGEMENT INCOME
Eastern New York Dairy Farm Renters and Owners, 1986

Item	22 Dairy Farm Renters	139 Dairy Farm Owners	My Farm
Return to operator(s') labor, management, & equity without appreciation	$25,098	$19,622	$_____
- Real interest @ 5% on equity capital	8,157	16,590	_____
= Labor & Management Income	$16,941	$ 3,032	$_____
Labor & Management Income per Operator	$11,683	$ 2,315	$_____

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, 1986

Item	22 Dairy Farm Renters	139 Dairy Farm Owners	My Farm
Return to operator(s') labor, management, & equity capital with appreciation	$29,817	$42,101	$_____
- Value of operator(s') labor & management	21,596	21,735	_____
= Return on equity capital with appreciation	$ 8,221	$20,366	$_____
Rate of return on equity capital with appreciation	5.0%	6.1%	_____%
Return on equity capital without apprec.	$3,502	$-2,113	$_____
Rate of return without appreciation	2.1%	-0.6%	_____%

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 inventory all the assets, determine all the liabilities, and fill out the balance sheet. The second step is to analyze the completed balance sheet by evaluating the relationships between assets and liabilities and changes made during the year.

1986 FARM BUSINESS & NONFARM BALANCE SHEET
22 Eastern New York Dairy Farm Renters, 1986

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 3,891	$ 5,882	Accounts payable	$1,803	$1,302
Accounts rec.	11,602	12,707	Operating debt	5,259	4,520
Feed & supplies	28,577	28,650	Short-term	1,737	336
Total	$44,070	$47,239	Total	$8,799	$6,159
Intermediate			Intermediate		
Dairy cows:			Structured debt		
owned	$ 48,145	$ 55,323	1-10 years	$29,496	$31,588
leased	0	0			
Heifers	17,533	20,050	Financial lease		
Bulls/other lvstk.	331	475	(cattle/mach.)	619	445
Mach./eq. owned	71,896	71,882	FLB & PCA stock	1,114	731
Mach./eq. leased	619	445	Total	$31,229	$32,764
FLB & PCA stock	1,114	731			
Coop stock & cert.	4,740	4,875	Long-Term		
Total	$144,378	$153,781	Structured debt		
Long-Term			≥10 years	$ 4,597	$ 2,593
Land/buildings:			Financial lease		
owned	$11,800	$11,136	(structures)	0	0
leased	0	0	Total	$ 4,597	$ 2,593
Total	$11,800	$11,136			
			Total Farm Liab.	$44,625	$41,515
Total Farm Assets	$200,248	$212,156			
			FARM NET WORTH	$155,623	$170,641

(Average for 11 farms reporting)

Nonfarm Assets*	Jan. 1	Dec. 31	Nonfarm Liabilities* & Net Worth	Jan. 1	Dec. 31
Personal cash, chkg. & savings	$ 3,690	$ 1,270	Nonfarm Liab.	$5,723	$5,282
Cash value life ins.	2,004	2,117	NONFARM NET WORTH	$29,838	$29,172
Nonfarm real estate	15,182	14,727	FARM & NONFARM*	Jan. 1	Dec. 31
Auto (personal sh.)	2,543	2,155	Total Assets	$235,809	$246,610
Stocks & bonds	2,123	1,611	Total Liabilities	50,348	46,797
Household furn.	5,409	5,500			
All other	4,610	7,074			
Total Nonfarm	$35,561	$34,454	TOTAL FARM & NON-FARM NET WORTH	$185,461	$199,813

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

1986 FARM BUSINESS & NONFARM BALANCE SHEET

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			**Current**		
Farm cash, checking & savings	$	$	Accounts payable	$	$
Accounts rec.			Operating debt		
Feed & supplies			Short-term:		
Total	$	$	Total	$	$
Intermediate			**Intermediate**		
Dairy cows:				$	$
owned	$	$			
leased					
Heifers					
Bulls/other lvstk.					
Mach./eq. owned					
Mach./eq. leased			Financial lease		
FLB & PCA stock			(cattle/mach.)		
Coop stock & cert.			FLB & PCA stock		
Total	$	$	Total	$	$
Long-Term			**Long-Term**		
Land/buildings:				$	$
owned	$	$			
leased					
Total	$	$	Financial lease (structures)		
			Total	$	$
Total Farm Assets	$	$	Total Farm Liab.	$	$
			FARM NET WORTH	$	$

Nonfarm Assets	Jan. 1	Dec. 31	Nonfarm Liabilities & Net Worth	Jan. 1	Dec. 31
			Nonfarm Liab.:		
Personal cash, chkg. & savings	$	$		$	$
Cash value life ins.					
Nonfarm real est.					
Auto (pers. share)			Total Nonfarm		
Stocks & bonds			Liabilities	$	$
Household furn.					
All other			Nonfarm		
Total Nonfarm	$	$	Net Worth	$	$

TOTAL FARM & NONFARM	Jan. 1	Dec. 31
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, 1986

Item	22 Dairy Farm Renters	139 Dairy Farm Owners	My Farm
Financial Ratios - Farm:			
Percent equity	80%	67%	_____%
Debt/asset ratio: total	0.20	0.33	_____
long-term	0.23	0.36	_____
intermediate/current	0.19	0.29	_____
Change in Net Worth:			
Without appreciation	$10,299	$6,162	$_____
With appreciation	$15,018	$28,641	_____
Farm Debt Analysis:			
Accounts payable as % of total debt	3%	3%	_____%
Long-term liabilities as a % of total debt	6%	56%	_____%
Current & inter. liab. as a % of total debt	94%	44%	_____%
Farm Debt Levels Per Cow:			
Total farm debt	$569	$1,962	$_____
Long-term debt	36	1,101	_____
Intermediate & current debt	533	861	_____

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, 1986

Item	22 Dairy Farm Renters		139 Dairy Farm Owners		My Farm	
Value beg. of year		$71,896		$85,329		$_____
Purchases	$ 9,415		$12,493		$_____	
+ Nonfarm noncash transfer	0		53		+_____	
- Sales	272		807		-_____	
- Depreciation	10,466		12,800		-_____	
= Net investment		-1,323		-1,061		=+_____
+ Appreciation		1,309		2,338		+_____
= Value end of year		$71,882		$86,605		$_____

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, cash used in the business from the sale of nonfarm capital, 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. The positive imbalances indicate that on average these farms had more inflows than were accounted for by outflows.

ANNUAL CASH FLOW STATEMENT
Eastern New York Dairy Farm Renters and Owners, 1986

Item	22 Dairy Farm Renters	139 Dairy Farm Owners	My Farm
Cash Inflows			
Beginning farm cash, checking & savings	$ 3,891	$ 3,303	$
Cash farm receipts	150,504	187,483	
Sale of assets: Machinery	272	807	
Real estate	1,136	798	
Other stock & certificates	0	161	
Money borrowed (inter. & long-term)	13,076	20,484	
Money borrowed (short-term)	343	2,252	
Increase in operating debt	0	637	
Nonfarm income	3,951	4,620	
Cash from nonfarm capital used in business	1,505	2,575	
Money borrowed - nonfarm	112	376	
Total	$174,789	$223,496	$
Cash Outflows			
Cash farm expenses	$119,120	$149,205	$
Capital purchases: Expansion livestock	1,507	1,176	
Machinery	9,415	12,493	
Real estate	2,452	8,967	
Other stock & certificates	1	451	
Principal payments (inter. & long-term)	12,989	21,689	
Principal payments (short-term)	1,743	1,537	
Decrease in operating debt	739	0	
Nonfarm debt payments	552	514	
Personal withdrawals & family exp.	19,249	20,362	
Ending farm cash, checking & savings	5,882	4,083	
Total	$173,649	$220,477	$
Imbalance (error)	$1,141	3,019	$

Repayment Analysis

The second step in 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 a farm's repayment position by using debt payments per unit of production and receipt/debt payment ratios.

FARM DEBT PAYMENTS PLANNED
Same 13 Eastern New York Dairy Farm Renters, 1986*

	Average			My Farm		
	1986 Payments		Planned	1986 Payments		Planned
Debt Payments	Planned	Made	1987	Planned	Made	1987
Long-term	$ 1,328	$ 3,712	$ 1,467	$_____	$_____	$_____
Intermediate-term	9,189	13,299	12,039	_____	_____	_____
Short-term	955	2,935	124	_____	_____	_____
Operating (net reduction)	2,923	1,250	1,689	_____	_____	_____
Accounts payable (net reduction)	862	1,502	869	_____	_____	_____
Total	$15,257	$22,698	$16,188	$_____	$_____	$_____
Per cow	$205	$305		$_____	$_____	
Per cwt. 1986 milk	$1.38	$2.06		$_____	$_____	
Percent of total 1986 receipts	9%	14%		_____%	_____%	
Percent of 1986 milk receipts	11%	16%		_____%	_____%	

*Farms that completed Dairy Farm Business Summaries for both 1985 and 1986.

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 last year's 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, 1986

Item	Same 13 Farm Renters	Same 113 Farm Owners	My Farm
Cash farm receipts	$156,721	$186,495	$_____
- Cash farm expenses	120,137	148,572	_____
+ Interest paid	3,313	13,456	_____
- Net personal withdrawals from farm*	18,111	15,407	_____
(A) = Amount Available for Debt Service	$21,786	$35,972	$_____
(B) = Debt Payments Planned for 1986	$15,257	$31,659	$_____
(A + B) = Cash Flow Coverage Ratio for 1986	1.43	1.14	_____

*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 WORKSHEEET

Item	22 Dairy Farm Renters (per cow)	My Farm Total	My Farm Per Cow	Expected Change	1987 Projection
Average number of cows	71				
Accrual Oper. Receipts					
Milk	$1,940	$	$		$
Dairy cattle	198				
Dairy calves	25				
Other livestock	3				
Crops	14				
Misc. receipts	42				
Total	$2,222	$	$		$
Accrual Oper. Expenses					
Hired labor	$ 149	$	$		$
Dairy grain & conc.	456				
Dairy roughage	25				
Other lvstk. feed	3				
Mach. hire/rent/lease	17				
Mach. rpr./parts & auto	96				
Fuel, oil & grease	63				
Replacement lvstk.	15				
Breeding	31				
Vet & medicine	31				
Milk marketing	156				
Cattle lease	1				
Other lvstk. exp.	83				
Fertilizer & lime	83				
Seeds & plants	28				
Spray/other crop exp.	34				
Land, bldg.,fence repair	33				
Taxes	27				
Insurance	35				
Real est. rent/lease	150				
Utilities	68				
Miscellaneous	27				
Total Less Int. Paid	$1,611				$
Net Accrual Operating Income (without interest paid)	(total) $43,528	$			$
- Change in lvstk./crop inv.	6,649				
- Change in accts. rec.	1,106				
+ Change in feed/supply inv.	-176				
+ Change in accts. payable*	-500				
NET CASH FLOW	$35,096	$			$
- Net personal withdrawals & family expenditures	15,187				
Available for Farm Debt Payments & Investments	$19,910	$			$
- Farm debt payments	19,513				
Available for Farm Investments	$ 397	$			$
- Capital purchases: cattle, machinery & improvements	$13,375				
Additional Capital Needed		$			$

*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
22 Eastern New York Dairy Farm Renters, 1986

Item	Average of Farms Reporting			My Farm	
Crop Yields	Farms	Acres	Prod/Acre*	Acres	Prod/Acre
Hay crop	21	151	2.62 tn DM	_____	_____ tn DM
Corn silage	20	52	12.50 tn	_____	_____ tn
			4.22 tn DM	_____	_____ tn DM
Other forage	4	23	2.40 tn DM	_____	_____ tn DM
Total forage	21	206	2.92 tn DM	_____	_____ tn DM
Corn grain	9	40	100.72 bu	_____	_____ bu
Oats	3	11	69.91 bu	_____	_____ bu
Wheat	0	0	0.0 bu	_____	_____ bu
Other crops	1	56		_____	
Tillable pasture	4	26		_____	
Idle	3	58		_____	
Total Tillable Acres	22	229		_____	

*1986 average yields for 139 dairy farm owners in Eastern New York included: all hay crops, 2.6 tons dry matter per acre; corn silage, 14.2 tons per acre.

Crop acres and yields compiled for the regional average represent only 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.

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, 1986

Item	22 Dairy Farm Renters	139 Dairy Farm Owners	My Farm
Total tillable acres per cow	3.22	2.95	_____
Total forage acres per cow	2.76	2.40	_____
Harvested forage dry matter, tons per cow	8.03	7.67	_____

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, 1986

Expense	Total/ Till. Acre	Hay Crop Per Acre	Hay Crop Per Ton DM	Corn Per Acre	Per Ton Corn Sil. Equiv.	Other Crops Per Acre
22 Dairy Farm Renters:		Average 10 Farms Reporting			Individual Crop Costs	
Fertilizer & lime	$25.81	$13.36	$5.11	$ 45.87	$3.07	$43.24
Seeds & plants	8.66	2.86	1.10	23.09	1.55	9.91
Spray & other crop expense	10.54	3.63	1.39	33.69	2.26	37.93
Total	$45.01	$19.85	$7.60	$102.65	$6.88	$91.08
139 Dairy Farm Owners:		Average 82 Farms Reporting			Individual Crop Costs	
Fertilizer & lime	$27.77	$15.17	$5.71	$53.61	$3.47	$19.42
Seeds & plants	10.56	5.20	1.96	20.42	1.32	11.73
Spray & other crop expense	10.07	3.88	1.46	24.67	1.60	9.92
Total	$48.40	$24.25	$9.13	$98.70	$6.39	$41.07
My Farm:						
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, 1986

Item	Average Per Tillable Acre 22 Dairy Farm Renters	Average Per Tillable Acre 139 Dairy Farm Owners	My Farm Total Expenses	My Farm Per Til. Acres
Fuel, oil & grease	$ 19.53	$ 19.12	$_____	$_____
Machinery repairs & parts	27.50	32.05	_____	_____
Machine hire, rent & lease	5.19	5.67	_____	_____
Auto expense (farm share)	2.44	2.00	_____	_____
Interest (5%)	15.69	17.65	_____	_____
Depreciation	45.68	52.55	_____	_____
Total	$116.03	$129.03	$_____	$_____

Dairy Program Analysis

An analysis of the dairy enterprise can identify and explain the strengths and weaknesses of the dairy farm business. Changes in dairy herd size and market values that occurred 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 for the profitability calculations shown on page 6.

DAIRY HERD INVENTORY
Eastern New York Dairy Farm Renters and Owners, 1986

Item	Dairy Cows		Heifers	
	Number	Value	Number	Value
22 Dairy Farm Renters:				
Beginning of year (owned)	65	$48,145	52	$17,533
+ Change without appreciation		4,685		1,904
+ Appreciation		2,493		613
End of year (owned)	69	$55,323	56	$20,050
End including leased	73			
Average number	71		56	
139 Dairy Farm Owners:				
Beginning of year (owned)	80	$65,871	66	$27,198
+ Change without appreciation		2,746		-275
+ Appreciation		778		553
End of year (owned)	84	$69,395	65	$27,476
End including leased	85			
Average number	83		65	
My Farm:				
Beginning of year (owned)		$		$
+ Change without appreciation				
+ Appreciation				
End of year (owned)		$		$
End including leased				
Average number				

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

MILK PRODUCTION
Eastern New York Dairy Farm Renters and Owners, 1986

Item	22 Dairy Farm Renters	139 Dairy Farm Owners	My Farm
Total milk sold, lbs.	1,069,978	1,288,762	
Milk sold per cow, lbs.	15,022	15,621	
Average milk plant test, percent butterfat	3.56	3.73	

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. 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 an 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, 1986

Item	22 Renters Total	22 Renters Per Cwt.	139 Owners Total	139 Owners Per Cwt.	My Farm Total	My Farm Per Cwt.
Accrual Costs of Producing Milk						
Operating costs	$ 98,357	$9.19	$127,924	$9.93	$_____	$_____
Total costs without op(s') labor, mgmt. & capital	$113,071	$10.57	$150,433	$11.67	$_____	$_____
Total Costs	$142,824	$13.35	$188,758	$14.65	$_____	$_____
Accrual Receipts from Milk	$138,172	$12.91	$170,052	$13.19	$_____	$_____

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, 1986

Item	Average Per Cwt. Milk 22 Renters	Average Per Cwt. Milk 139 Owners	My Farm Per Cwt.
Purchased dairy grain & conc.	$3.04	$3.28	$_____
Purchased dairy roughage	0.16	0.16	_____
Total Purchased Dairy Feed	$3.20	$3.44	$_____
Purchased grain & conc. as % of milk receipts	24%	25%	_____%
Purchased feed & crop exp.	$4.17	$4.35	$_____
Purchased feed & crop exp. as % of milk receipts	32%	33%	_____%
Breeding	$0.20	$0.19	$_____
Veterinary & medicine	0.21	0.22	_____
Milk marketing	1.04	1.17	_____
Cattle lease	0.01	0.00	_____
Other livestock expense	0.55	0.50	_____

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 the amount of work each worker has accomplished.

CAPITAL EFFICIENCY
Eastern New York Dairy Farm Renters and Owners, 1986

Item	Per Worker	Per Cow	Per Tillable Acre
22 Dairy Farm Renters:			
Farm capital	$75,256	$2,895	$900
Machinery & equipment	26,431	1,017	316
Capital turnover, years	1.27		
139 Dairy Farm Owners:			
Farm capital	$180,539	$6,040	$2,046
Machinery & equipment	31,279	1,046	354
Capital turnover, years	2.33		
My Farm:			
Farm capital	$_____	$_____	$_____
Machinery & equipment	_____	_____	_____
Capital turnover, years	_____		

LABOR FORCE ANALYSIS
Eastern New York Dairy Farm Renters and Owners, 1986

	22 Renters		139 Owners		My Farm	
Efficiency	Total	Per Worker	Total	Per Worker	Total	Per Worker
Cows, average number	71	26	83	30	_____	_____
Milk sold, pounds	1,069,978	390,503	1,288,762	466,943	_____	_____
Tillable acres	229	84	244	88	_____	_____
Work units	750	274	862	312	_____	_____

	22 Renters		139 Owners		My Farm	
Labor Costs	Total	Per Cow	Total	Per Cow	Total	Per Cow
Value of operator(s) labor ($850/month)	$14,756	$207	$13,413	$163	$_____	$_____
Family unpd. ($600/mo.)	1,530	21	1,728	21	_____	_____
Hired	10,620	149	15,497	188	_____	_____
Total Labor	$26,906	$377	$30,638	$372	$_____	$_____
Machinery Cost	$26,586	$373	$31,430	$381	$_____	$_____
Total Labor & Mach.	$53,492	$751	$62,068	$752	$_____	$_____

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 13 Eastern New York Dairy Farm Renters, 1985 and 1986

	Average		My Farm		
Selected Factors	1985	1986	1985	1986	Goal
Size of Business					
Average number of cows	71	74			
Average number of heifers	57	60			
Milk sold, lbs.	1,015,660	1,101,760			
Worker equivalent	2.54	2.55			
Total tillable acres	230	237			
Rates of Production					
Milk sold per cow, lbs.	14,367	14,812			
Hay DM per acre, tons	2.6	2.5			
Corn silage per acre, tons	15	13			
Labor Efficiency					
Cows per worker	28	29			
Milk sold per worker, lbs.	400,109	431,846			
Cost Control					
Grain & conc. purchased as % of milk sales	23%	21%	%	%	%
Dairy feed & crop exp. per cwt. milk	$4.39	$3.95	$	$	$
Labor & mach. costs/cow	$791	$728	$	$	$
Capital Efficiency*					
Farm capital per cow	$3,505	$2,984	$	$	$
Real estate per cow	$641	$157	$	$	$
Mach. & equip. per cow	$1,111	$1,083	$	$	$
Capital turnover, years	1.6	1.3			
Profitability					
Net farm inc. w/o apprec.	$25,902	$29,767	$	$	$
Net farm inc. w/apprec.	$21,203	$34,489	$	$	$
Labor & mgmt. income	$14,469	$19,742	$	$	$
Rate of return on eq. capital w/apprec.	0.4%	7.3%	%	%	%
Financial Summary					
Farm net worth	$205,828	$186,408	$	$	$
Debt to asset ratio	0.17	0.17			
Farm debt per cow	$570	$526	$	$	$

*Average for the year.