DAIRY FARM BUSINESS SUMMARY

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EASTERN NEW YORK RENTER SUMMARY 1987

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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.[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 25 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 129 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 25 farms in Albany, Columbia, Delaware, Rensselaer, Schoharie, Sullivan, and Washington Counties are summarized in this publication. The Eastern New York region consists of these counties plus Greene, Herkimer, Montgomery, Otsego, Schenectady, and Ulster Counties which do not have farms that classify as renters. The 129 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 $150 per tillable acre on the owned dairy farms compared to only $104 on the rented farms. This accounts for a $13,700 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, 1987, A.E. Res. 88-8, July 1988.

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
25 Eastern New York Dairy Farm Renters, 1987

Type of Business	Number
Single proprietorship	17
Partnership	8
Corporation	0

Milking System	Number
Bucket & carry	1
Dumping station	1
Pipeline	18
Herringbone parlor	3
Other parlor	2

Type of Barn	Number
Stanchion	21
Freestall	4

Dairy Records Service	Number
DHIC	20
None	5

Business Record System	Number
Account Book	8
Agrifax (mail-in only)	7
ELFAC	2
Other	7
On-farm computer	1

Labor Force	My Farm	Average
Operator 1.	____ mo.	11.60
Operator 2.	____ mo.	3.36
Operator 3.	____ mo.	0.48
Family paid	____ mo.	2.08
Family unpaid	____ mo.	1.04
Hired	____ mo.	11.04
Total	____ mo.	29.60
Worker equivalent (total ÷ 12)	____	2.47
Operator/Manager Equivalent (Oper. mo. ÷ 12)	____	1.28

Land Use	My Farm	Average
Total acres rented	_____	400
Tillable acres rented	_____	230

Number of Cows	My Farm	Average
Beg. year (owned)	_____	66
End year (owned & leased)	_____	70
Average for year (owned & leased)	_____	70

Predominate business characteristics of the 25 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 10 percent less than the 2.75 worker equivalent on owned farms. The rented farms averaged 230 tillable acres and 70 cows compared to 251 tillable acres and 85 cows on the 129 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
25 Eastern New York Dairy Farm Renters, 1987

Expense Item	Cash Paid +	Change in Inventory or Prepaid Expense +	Change in Accounts Payable	Accrual = Expenses
Hired Labor	$ 11,923	$ 0	$-121	$ 11,802
Feed				
Dairy grain & conc.	33,506	-158	-42	33,306
Dairy roughage	3,358	-92	-159	3,107
Other livestock	33	-4	0	29
Machinery				
Mach. hire, rent/lease	896	0	0	896
Machinery repairs/parts	7,151	-34	-99	7,018
Auto expense (farm share)	396	0	0	396
Fuel, oil & grease	4,293	-54	-29	4,210
Livestock				
Replacement livestock	1,329	0	0	1,329
Breeding	2,541	-252	9	2,298
Vet & medicine	2,493	-13	-31	2,449
Milk marketing	10,513	0	0	10,513
Cattle lease/rent	168	0	0	168
Other livestock expense	6,898	-203	-24	6,671
Crops				
Fertilizer & lime	4,704	-228	108	4,584
Seeds & plants	1,926	-193	0	1,733
Spray, other crop exp.	2,132	-36	0	2,096
Real Estate				
Land/bldg./fence repair	756	11	0	767
Taxes	1,406	0	71	1,477
Insurance	1,954	0	0	1,954
Rent & lease	10,501	0	24	10,525
Other				
Telephone (farm share)	541	0	0	541
Electricity (farm share)	4,019	0	-42	3,977
Interest paid	4,702	0	0	4,702
Miscellaneous	1,693	-100	0	1,593
Total Operating	$119,832	$-1,356	$-335	$118,141
Expansion livestock	$90	$0	$0	90
Machinery depreciation				8,706
Building depreciation				1,236
TOTAL ACCRUAL EXPENSES				$128,173

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. Include any expenses that have been paid for in advance of their use, for example, 1988 rent paid in 1987. 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

Expense Item	Cash Paid +	Change in Inventory or Prepaid Expense +	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 AND ACCRUAL FARM RECEIPTS
25 Eastern New York Dairy Farm Renters, 1987

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	$142,382				$-30		$142,353
Dairy cattle	7,507		$1,508		0		9,014
Dairy calves	2,456				0		2,456
Other livestock	0		65		0		65
Crops	825		-1,414		0		-589
Government receipts	1,900		0*		302		2,202
Custom machine work	562				0		562
Gas tax refund	96				0		96
Other	770				0		770
- Nonfarm noncash capital			(-) 280**			(-)	280
Total Accrual Receipts	$156,497		$-121		$272		$156,649

*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			(-)			(-)	
Total Accrual Receipts	$		$		$		$

Profitability Analysis

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

Net farm income is the total combined return to the farm operator(s) and other unpaid family members for their labor, management, and equity capital. It is the farm family's net annual return from working, managing, financing, and owning the farm business. This is not a measure of cash available from the year's business operation. Cash flow is evaluated later in this report.

Net farm income is computed with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than FLB and PCA). 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, 1987

Item	25 Dairy Farm Renters	129 Dairy Farm Owners	My Farm
Total accrual receipts	$156,649	$200,105	$_____
+ Appreciation: Livestock	4,638	5,886	_____
Machinery	540	1,847	_____
Real Estate	948	16,779	_____
Other Stock/Cert.	179	297	_____
= Total Including Appreciation	$162,954	$224,914	$_____
- Total accrual expenses	128,173	172,296	_____
= Net Farm Income (with appreciation)	$ 34,781	$ 52,618	$_____
Net Farm Income (without appreciation)	$ 28,476	$ 27,809	$_____

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, 1987

Item	25 Dairy Farm Renters	129 Dairy Farm Owners	My Farm
Net farm income (with appreciation)	$34,781	$52,618	$_____
- Family labor unpaid @ $650 per month	676	1,350	_____
= Return to operators' labor, management, & equity (with appreciation)	$34,105	$51,268	$_____
- Appreciation	6,305	24,809	_____
= Return to operators' labor, management, & equity (without appreciation)	$27,800	$26,459	$_____

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, 1987

Item	25 Dairy Farm Renters	129 Dairy Farm Owners	My Farm
Return to operators' labor, mgmt., & equity without appreciation	$27,800	$26,459	$_____
- Real interest @ 5% on average equity capital	7,927	18,227	-_____
= Labor & Management Income	$19,873	$ 8,232	$_____
Labor & Management Income per Operator/Manager	$15,526	$ 6,236	$_____

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, 1987

Item	25 Dairy Farm Renters	129 Dairy Farm Owners	My Farm
Return to operators' labor, mgmt., & equity capital with apprec.	$34,105	$51,268	$_____
- Value of operators' labor & mgmt.	21,979	22,705	_____
= Return on equity capital with apprec.	$12,126	$28,563	$_____
+ Interest paid	4,702	13,284	_____
= Return on total capital with apprec.	$16,828	$41,847	$_____
Return on equity capital without apprec.	$5,821	$3,754	$_____
Return on total capital without apprec.	$10,523	$17,038	$_____
Rate of return on average equity capital:			
with appreciation	7.6%	7.8%	_____%
without appreciation	3.7%	1.0%	_____%
Rate of return on average total capital:			
with appreciation	7.5%	7.9%	_____%
without appreciation	4.7%	3.2%	_____%

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.

1987 FARM BUSINESS & NONFARM BALANCE SHEET
25 Eastern New York Dairy Farm Renters, 1987

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 4,839	$ 6,646	Accounts payable	$ 2,322	$ 1,986
Accounts rec.	12,298	12,571	Operating debt	4,987	4,022
Prepaid exp.	0	0	Short-term	1,082	715
Feed & supplies	29,292	29,232	Advanced govt. rec.	0	0
Total	$ 46,429	$ 48,449	Total	$ 8,391	$ 6,722
Intermediate			Intermediate		
Dairy cows: owned	$ 55,054	$ 58,502	Structured debt		
leased	792	732	1-10 years	$ 45,686	$ 47,287
Heifers	19,035	21,714	Financial lease		
Bulls/other lvstk.	246	330	(cattle/mach.)	1,458	1,205
Mach./eq. owned	74,909	78,406	FLB/PCA stock	1,267	1,190
Mach./eq. leased	666	473			
FLB/PCA stock	1,267	1,190	Total	$ 48,411	$ 49,682
Other stock/cert.	4,727	4,932			
Total	$156,696	$166,279	Long Term		
Long-Term			Structured debt		
Land/buildings:			≥10 years	$ 6,498	$ 5,464
owned	$ 11,970	$ 12,424	Financial lease		
leased	1,884	1,741	(structures)	1,884	1,741
Total	$ 13,854	$ 14,165	Total	$ 8,382	$ 7,205
Total Farm Assets	$216,979	$228,893	Total Farm Liab.	$ 65,184	$ 63,609
			FARM NET WORTH	$151,795	$165,284

(Average for 13 farms reporting) Nonfarm Assets*	Jan. 1	Dec. 31	Nonfarm Liabilities* & Net Worth	Jan. 1	Dec. 31
Personal cash, chkg. & savings	$ 1,622	$ 2,816	Nonfarm Liab.	$ 4,956	$ 5,865
Cash value life ins.	729	665	NONFARM NET WORTH	$23,525	$33,674
Nonfarm real estate	14,769	18,708			
Auto (personal sh.)	1,785	1,473	FARM & NONFARM*	Jan. 1	Dec. 31
Stocks & bonds	1,440	1,640	Total Assets	$245,460	$268,432
Household furn.	6,885	6,592	Total Liabilities	70,140	69,474
All other	1,251	7,644			
Total Nonfarm	$28,481	$39,539	TOTAL FARM & NON-FARM NET WORTH	$175,320	$198,958

*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.

Advanced government receipts are included as current liabilities. Government payments received in 1987 that are for participation in the 1988 program are the end year balance and payments received in 1986 for participation in the 1987 program are the beginning year balance.

Date _____

1987 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:		
Prepaid expense					
Feed & supplies					
Total			Short Term:		
Intermediate					
Dairy cows:			Adv. govt. rec.		
owned			Total		
leased			Intermediate		
Heifers					
Bulls/other lvstk.					
Mach./eq. owned					
Mach./eq. leased					
FLB/PCA stock					
Other stock/cert.			Financial lease (cattle/mach.)		
Total			FLB/PCA stock		
			Total		
			Long-Term		
Long-Term					
Land/buildings:					
owned					
leased					
			Financial lease		
Total			(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
Personal cash, chkg. & savings			Nonfarm Liab.:		
Cash val. life ins.					
Nonfarm real est.					
Auto (pres. share)					
Stocks & bonds			Total Nonfarm		
Household furn.			Liabilities		
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 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, 1987

Item	25 Dairy Farm Renters	129 Dairy Farm Owners	My Farm
Financial Ratios - Farm:			
Percent equity	72%	70%	_____%
Debt/asset ratio: total	0.28	0.30	_____
long-term	0.51	0.32	_____
intermediate/current	0.26	0.28	_____
Change in Net Worth:			
Without appreciation	$7,184	$8,324	$_____
With appreciation	$13,489	$33,133	_____
Farm Debt Analysis:			
Accounts payable as % of total debt	3%	4%	_____%
Long-term liabilities as a % of total debt	11%	55%	_____%
Current & inter. liab. as a % of total debt	89%	45%	_____%
Farm Debt Levels Per Cow:			
Total farm debt	$909	$1,883	$_____
Long-term debt	103	1,031	_____
Intermediate & current debt	806	852	_____

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, 1987

Item	25 Dairy Farm Renters		129 Dairy Farm Owners		My Farm	
Value beg. of year		$74,909		$86,870		$_____
Purchases	$11,952		$15,358		$_____	
+ Nonfarm noncash transfer	0		0		+_____	
- Sales	289		204		-_____	
- Depreciation	8,706		11,098		-_____	
= Net investment		2,957		4,056		=+_____
+ Appreciation		540		1,847		+_____
= Value end of year		$78,406		$92,773		$_____

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 compare all the cash inflows with all the cash outflows for the year. A complete list of cash inflows and cash outflows are identified in the following table. By definition, total cash inflows must equal total cash outflows when beginning and ending balances are included. Any imbalance is, therefore, the error from incorrect accounting of cash inflows and cash outflows.

ANNUAL CASH FLOW STATEMENT
Eastern New York Dairy Farm Renters and Owners, 1987

Item	25 Dairy Farm Renters	129 Dairy Farm Owners	My Farm
Cash Inflows			
Beg. farm cash, checking & savings	$ 4,839	$ 4,219	$
Cash farm receipts	156,497	200,504	
Sale of assets: Machinery	289	204	
Real estate	0	1,474	
Other stock & cert.	0	114	
Money borrowed (inter. & long-term)	14,206	25,083	
Money borrowed (short-term)	368	1,654	
Increase in operating debt	0	0	
Nonfarm income	2,548	4,297	
Cash from nonfarm cap. used in the business	1,883	2,627	
Money borrowed - nonfarm	800	466	
Total	$181,429	$240,642	$
Cash Outflows			
Cash farm expenses	$119,831	$155,315	$
Capital purchases: Expansion livestock	90	1,393	
Machinery	11,952	15,358	
Real estate	1,025	8,079	
Other stock & cert.	26	643	
Principal payments (inter. & long-term)	13,639	26,191	
Principal payments (short-term)	734	1,747	
Decrease in operating debt	966	97	
Nonfarm debt payments	517	605	
Personal withdrawals & family exp.	22,373	23,868	
Ending farm cash, checking & savings	6,646	6,166	
Total	$177,799	$239,461	$
Imbalance (error)	$ 3,630	$ 1,180	$

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 1988. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 1988 debt payments shown below.

FARM DEBT PAYMENTS PLANNED
Same 15 Eastern New York Dairy Farm Renters, 1987*

	Average			My Farm		
	1987 Payments		Planned	1987 Payments		Planned
Debt Payments	Planned	Made	1988	Planned	Made	1988
Long-term	$ 1,271	$ 1,734	$ 1,466	$_____	$_____	$_____
Intermediate-term	10,372	12,682	10,967	_____	_____	_____
Short-term	240	337	133	_____	_____	_____
Operating (net red.)	1,464	1,169	800	_____	_____	_____
Accounts payable (net reduction)	420	136	197	_____	_____	_____
Total	$13,767	$16,059	$13,562	$_____	$_____	$_____
Per cow	$187	$218		$_____	$_____	
Per cwt. 1987 milk	$1.20	$1.40		$_____	$_____	
Percent of total 1987 receipts	8%	10%		_____	_____	
Percent of 1987 milk receipts	9%	11%		_____	_____	

*Farms that completed Dairy Farm Business Summaries for both 1986 and 1987.

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 1988.

CASH FLOW COVERAGE RATIO
Eastern New York Dairy Farm Renters and Owners, 1987

Item	Same 15 Farm Renters	Same 100 Farm Owners	My Farm
Cash farm receipts	$167,658	$206,528	$_____
- Cash farm expenses	128,137	159,037	_____
+ Interest paid	4,638	13,346	_____
- Net personal withdrawals from farm*	21,916	18,776	_____
(A) = Amount Available for Debt Service	$ 22,243	$ 42,061	$_____
(B) = Debt Payments Planned for 1987 (as of December 31, 1986)	$13,767	$31,473	$_____
(A + B) = Cash Flow Coverage Ratio for 1987	1.62	1.34	_____

*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	25 Dairy Farm Renters (per cow)	My Farm Total	My Farm Per Cow	Expected Change	1987 Projection
Average number of cows	70				
Accrual Oper. Receipts					
Milk	$2,042	$	$		$
Dairy cattle	129				
Dairy calves	35				
Other livestock	1				
Crops	-8				
Misc. receipts	52				
Total	$2,251	$	$		$
Accrual Oper. Expenses					
Hired labor	$ 169	$	$		$
Dairy grain & conc.	478				
Dairy roughage	45				
Other lvstk. feed	0				
Mach. hire/rent/lease	13				
Mach. rpr./parts & auto	106				
Fuel, oil & grease	60				
Replacement lvstk.	19				
Breeding	33				
Vet & medicine	35				
Milk marketing	151				
Cattle lease	2				
Other lvstk. exp.	96				
Fertilizer & lime	66				
Seeds & plants	25				
Spray/other crop exp.	30				
Land, bldg.,fence repair	11				
Taxes	21				
Insurance	28				
Real est. rent/lease	151				
Utilities	65				
Miscellaneous	23				
Total Less Int. Paid	$1,627				$
Net Accrual Operating Income (without interest paid)	(total) $43,490	$			$
- Change in lvstk./crop inv.	-121				
- Change in accts. rec.	272				
+ Change in feed/supply inv.	-1,355				
+ Change in accts. payable*	-336				
NET CASH FLOW	$41,648	$			$
- Net personal withdrawals & family expenditures	19,025				
Available for Farm Debt Payments & Investments	$22,623	$			$
- Farm debt payments	19,917				
Available for Farm Investments	$ 2,706	$			$
- Capital purchases: cattle, machinery & improvements	$13,093				
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
25 Eastern New York Dairy Farm Renters, 1987

Item	Average of Farms Reporting			My Farm	
Crop Yields	Farms	Acres	Prod/Acre*	Acres	Prod/Acre
Hay crop	23	157	2.69 tn DM	_____	_____ tn DM
Corn silage	21	43	14.55 tn	_____	_____ tn
			5.01 tn DM	_____	_____ tn DM
Other forage	2	15	3.97 tn DM	_____	_____ tn DM
Total forage	23	198	2.98 tn DM	_____	_____ tn DM
Corn grain	10	55	94.39 bu	_____	_____ bu
Oats	5	11	34.82 bu	_____	_____ bu
Wheat	0	0	0.0 bu	_____	_____ bu
Other crops	0	0		_____	
Tillable pasture	6	50		_____	
Idle	8	39		_____	
Total Tillable Acres	25	230		_____	

*1987 average yields for 129 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.

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, 1987

Item	25 Dairy Farm Renters	129 Dairy Farm Owners	My Farm
Total tillable acres per cow	3.30	2.96	_____
Total forage acres per cow	2.61	2.34	_____
Harvested forage dry matter, tons per cow	7.77	7.53	_____

A substantial number of cooperators have allocated crop expenses to hay crop, corn, and other crop production. Fertilizer and lime, seeds and plants, and spray and other crop expenses have been computed per acre and per production unit for hay and corn. 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, 1987

Expense	Total/ Till. Acre	Hay Crop Per Acre	Hay Crop Per Ton DM	All Corn Per Acre	Corn Sil. Per Ton DM	Corn Grain Per Dry Shell Bu.
25 Dairy Farm Renters:		Average 19 Farms Reporting			Individual Crop Costs	
Fertilizer & lime	$19.91	$ 9.09	$3.68	$39.11	$7.81	$0.41
Seeds & plants	7.53	3.68	1.49	16.87	3.37	0.18
Spray & other crop expense	9.11	2.60	1.05	19.24	3.84	0.20
Total	$36.55	$15.37	$6.22	$75.22	$15.02	$0.79
129 Dairy Farm Owners:		Average 76 Farms Reporting			Individual Crop Costs	
Fertilizer & lime	$26.33	$ 9.32	$3.58	$29.63	$ 6.05	$0.31
Seeds & plants	9.55	3.15	1.21	12.07	2.46	0.12
Spray & other crop expense	8.43	1.60	0.62	12.73	2.60	0.13
Total	$44.31	$14.07	$5.41	$54.43	$11.11	$0.56
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. 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, 1987

Item	Average Per Tillable Acre: 25 Dairy Farm Renters	Average Per Tillable Acre: 129 Dairy Farm Owners	My Farm: Total Expenses	My Farm: Per Til. Acres
Fuel, oil & grease	$ 18.29	$ 17.81	$_____	$_____
Machinery repairs & parts	30.48	37.79	_____	_____
Machine hire, rent & lease	3.89	7.53	_____	_____
Auto expense (farm share)	1.72	2.46	_____	_____
Interest (5%)	16.65	17.91	_____	_____
Depreciation	37.81	44.25	_____	_____
Total	$108.83	$127.75	$_____	$_____

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, 1987

	Dairy Cows		Heifers					
			Bred		Open		Calves	
Item	No.	Value	No.	Value	No.	Value	No.	Value
25 Dairy Farm Renters:								
Beg. year (owned)	66	$55,054	18	$10,824	15	$5,701	18	$2,510
+ Change w/o apprec.		939		-337		838		68
+ Appreciation		2,509		893		825		392
End year (owned)	67	$58,502	17	$11,380	18	$7,364	18	$2,970
End incl. leased	70							
Average number	70		54 (all age groups)					
129 Dairy Farm Owners:								
Beg. year (owned)	83	$67,678	23	$14,119	19	$7,932	20	$3,644
+ Change w/o apprec.		1,244		-841		-141		72
+ Appreciation		4,332		916		444		171
End year (owned)	85	$73,254	22	$14,194	20	$8,235	20	$3,887
End incl. leased	86							
Average number	85		62 (all age groups)					
My Farm:								
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, 1987

Item	25 Dairy Farm Renters	129 Dairy Farm Owners	My Farm
Total milk sold, lbs.	1,067,677	1,325,579	_____
Milk sold per cow, lbs.	15,314	15,654	_____
Average milk plant test, % butterfat	3.40	3.52	_____

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. Total costs of producing milk include the operating costs plus 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, 1987

Item	25 Renters Total	25 Renters Per Cwt.	129 Owners Total	129 Owners Per Cwt.	My Farm Total	My Farm Per Cwt.
Accrual Costs of Producing Milk						
Operating costs	$103,935	$9.73	$133,553	$10.08	$_____	$_____
Total costs without op(s') labor, mgmt. & capital	$114,553	$10.73	$151,713	$11.45	$_____	$_____
Total Costs	$$144,459	$13.53	$192,645	$14.53	$_____	$_____
Accrual Receipts from Milk	$142,353	$13.33	$178,172	$13.44	$_____	$_____

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, 1987

Item	Average Per Cwt. Milk 25 Renters	Average Per Cwt. Milk 129 Owners	My Farm Per Cwt.
Purchased dairy grain & conc.	$3.12	$3.30	$_____
Purchased dairy roughage	0.29	0.08	_____
Total Purchased Dairy Feed	$3.41	$3.38	$_____
Purchased grain & conc. as % of milk receipts	23%	25%	_____%
Purchased feed & crop exp.	$4.20	$4.22	$_____
Purchased feed & crop exp. as % of milk receipts	31%	31%	_____%
Breeding	$0.22	$0.20	$_____
Veterinary & medicine	0.23	0.24	_____
Milk marketing	0.98	1.07	_____
Cattle lease	0.02	0.01	_____
Other livestock expense	0.62	0.53	_____

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 in generating products per unit of labor input.

CAPITAL EFFICIENCY
Eastern New York Dairy Farm Renters and Owners, 1987

Item	Per Worker		Per Cow	Per Tillable Acre
25 Dairy Farm Renters:				
Farm capital	$90,380		$3,198	$968
Machinery & equipment	31,308		1,108	335
Capital turnover, years		1.37		
129 Dairy Farm Owners:				
Farm capital	$191,871		$6,224	$2,101
Machinery & equipment	32,893		1,067	360
Capital turnover, years		2.34		
My Farm:				
Farm capital	$_____		$_____	$_____
Machinery & equipment	_____		_____	_____
Capital turnover, years		_____		

LABOR FORCE ANALYSIS
Eastern New York Dairy Farm Renters and Owners, 1987

	25 Renters		129 Owners		My Farm	
Efficiency	Total	Per Worker	Total	Per Worker	Total	Per Worker
Cows, average number	70	28	85	31	_____	_____
Milk sold, pounds	1,067,677	432,842	1,325,579	482,596	_____	_____
Tillable acres	230	93	251	91	_____	_____
Work units	728	295	870	317	_____	_____

	25 Renters		129 Owners		My Farm	
Labor Costs	Total	Per Cow	Total	Per Cow	Total	Per Cow
Value of operator(s) labor ($900/month)	$13,896	$199	$14,295	$169	$_____	$_____
Family unpd. ($650/mo.)	676	10	1,350	16	_____	_____
Hired	11,802	169	16,819	199	_____	_____
Total Labor	$26,374	$378	$32,464	$383	$_____	$_____
Machinery Cost	$25,058	$359	$32,040	$378	$_____	$_____
Total Labor & Mach.	$51,432	$738	$64,504	$762	$_____	$_____

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 15 Eastern New York Dairy Farm Renters, 1986 and 1987

	Average		My Farm		
Selected Factors	1986	1987	1986	1987	Goal
Size of Business					
Average number of cows	72	74			
Average number of heifers	57	61			
Milk sold, lbs.	1,099,403	1,143,658			
Worker equivalent	2.74	2.85			
Total tillable acres	242	243			
Rates of Production					
Milk sold per cow, lbs.	15,355	15,497			
Hay DM per acre, tons	2.6	2.6			
Corn silage per acre, tons	13	14			
Labor Efficiency					
Cows per worker	26	26			
Milk sold per worker, lbs.	401,405	401,284			
Cost Control					
Grain & conc. purchased as % of milk sales	23%	23%	%	%	%
Dairy feed & crop exp. per cwt. milk	$4.15	$4.16	$	$	$
Labor & mach. costs/cow	$759	$759	$	$	$
Capital Efficiency*					
Farm capital per cow	$3,083	$3,254	$	$	$
Mach. & equip. per cow	$1,074	$1,054	$	$	$
Capital turnover, years	1.3	1.4			
Profitability					
Net farm inc. w/o apprec.	$30,126	$29,796	$	$	$
Net farm inc. w/apprec.	$34,391	$36,285	$	$	$
Labor & mgmt. income	$20,465	$19,539	$	$	$
Rate of return on eq. capital w/apprec.	5.8%	5.6%	%	%	%
Rate of return on all capital w/apprec.	5.2%	6.3%	%	%	%
Financial Summary					
Farm net worth	$180,802	$191,273	$	$	$
Debt to asset ratio	0.21	0.21			
Farm debt per cow	$658	$735	$	$	$

*Average for the year.