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**EASTERN NEW YORK
RENTER SUMMARY
1988**

**Linda Putnam
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1988 EASTERN NEW YORK DAIRY FARM RENTER BUSINESS SUMMARY

INTRODUCTION

Dairy farmers throughout New York State submit business records for summarization and analysis through Cornell Cooperative Extension's Farm Business Management Program. Averages from a compilation of the individual farm reports are published in eight regional summaries and in one statewide summary.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 24 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 138 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 24 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 dairy farm business summary participants that classify as renters. The 138 owned dairy farms summarized in this publication include farms from the entire region.

Use Comparative Profitability Data With Caution

The profitability analysis on page 7 where labor and management income is calculated implies that renting a dairy farm is more profitable than owning one. Concessionary rental rates set by some land owners is a major factor. The farm owners are often father and mother and other landlords who are willing to accept a very low return for their investment. Total real estate costs including depreciation and interest on equity capital averaged \$148 per tillable acre on the owned dairy farms compared to only \$111 on the rented farms. This accounts for a \$15,100 difference in costs between owned and rented farms.

¹Smith, Stuart F., Wayne A. Knoblauch, and Linda D. Putnam, Dairy Farm Management Business Summary, New York, 1988, A.E. Res. 89-12, August 1989.

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
24 Eastern New York Dairy Farm Renters, 1988

<u>Type of Business</u>	<u>Number</u>	<u>Labor Force</u>	<u>My Farm</u>	<u>Average</u>
Single proprietorship	17	Operator 1.	_____ mo.	11.58
Partnership	7	Operator 2.	_____ mo.	3.42
		Operator 3.	_____ mo.	0.50
		Family paid	_____ mo.	0.92
		Family unpaid	_____ mo.	1.71
<u>Milking System</u>	<u>Number</u>	Hired	_____ mo.	<u>11.33</u>
Dumping station	1	Total	_____ mo.	29.46
Pipeline	19			
Herringbone parlor	2			
Other parlor	2	Worker equivalent (total + 12)	_____	2.45
<u>Type of Barn</u>	<u>Number</u>	Operator/Manager Equivalent (Oper. mo. + 12)	_____	1.29
Stanchion	21			
Freestall	2			
Combination	1			
<u>Dairy Records Service</u>	<u>Number</u>	<u>Land Use</u>	<u>My Farm</u>	<u>Average</u>
DHIC	29	Total acres rented	_____	383
DHIC Owner-Sampler	2	Tillable acres rented	_____	214
None	3			
<u>Business Record System</u>	<u>Number</u>	<u>Number of Cows</u>	<u>My Farm</u>	<u>Average</u>
Account Book	5	Beg. year (owned)	_____	63
Agrifax (mail-in only)	7	End year (owned & leased)	_____	67
ELFAC	1	Average for year (owned & leased)	_____	66
Other	9			
On-farm computer	2			

Predominate business characteristics of the 24 rented farms include the single proprietorship, pipeline milking system, stanchion or conventional stall barn, DHIC herd records and an "other" 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 11 percent less than the 2.76 worker equivalent on owned farms. The rented farms averaged 214 tillable acres and 66 cows compared to 263 tillable acres and 86 cows on the 138 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
24 Eastern New York Dairy Farm Renters, 1988

<u>Expense Item</u>	<u>Cash Paid +</u>	<u>Change in Inventory or Prepaid Expense +</u>	<u>Change in Accounts Payable</u>	<u>= Accrual Expenses</u>
<u>Hired Labor</u>	\$ 10,840	\$ 0*	\$ 4	\$ 10,844
<u>Feed</u>				
Dairy grain & conc.	39,954	-735	156	39,375
Dairy roughage	2,832	188	213	3,233
Other livestock	83	0	0	83
<u>Machinery</u>				
Mach. hire, rent/lease	1,451	0*	0	1,451
Machinery repairs/parts	6,710	-18	237	6,929
Auto expense (farm share)	323	0*	0	323
Fuel, oil & grease	3,509	24	38	3,571
<u>Livestock</u>				
Replacement livestock	2,834	0*	83	2,917
Breeding	2,500	133	6	2,639
Vet & medicine	2,825	-24	-25	2,776
Milk marketing	8,588	0*	-5	8,583
Cattle lease/rent	500	0*	0	500
Other livestock expense	7,318	-60	7	7,265
<u>Crops</u>				
Fertilizer & lime	4,127	111	263	4,501
Seeds & plants	1,799	71	113	1,983
Spray, other crop exp.	1,396	-18	127	1,505
<u>Real Estate</u>				
Land/bldg./fence repair	991	-30	125	1,086
Taxes	1,565	0*	0	1,565
Rent & lease	12,306	0*	25	12,331
<u>Other</u>				
Insurance	2,342	0*	0	2,342
Telephone (farm share)	598	0*	0	598
Electricity (farm share)	4,258	0*	28	4,286
Interest paid	5,102	0*	0	5,102
Miscellaneous	1,730	27	0	1,757
Total Operating	\$126,481	\$-331	\$1,395	\$127,545
Expansion livestock	\$1,509	\$0*	\$0	\$1,509
Machinery depreciation				\$7,146
Building depreciation				\$1,051
TOTAL ACCRUAL EXPENSES				\$137,251

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

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

Changes in prepaid expenses apply to non-inventory categories (noted by * in the tables). Include any expenses that have been paid for in advance of their use, for example, 1989 rent paid in 1988. 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 -
<u>Hired Labor</u>	\$ _____	\$ _____ *	\$ _____	\$ _____
<u>Feed</u>				
Dairy grain & conc.	_____	_____	_____	_____
Dairy roughage	_____	_____	_____	_____
Other livestock	_____	_____	_____	_____
<u>Machinery</u>				
Mach. hire, rent/lease	_____	_____ *	_____	_____
Machinery repairs/parts	_____	_____	_____	_____
Auto expense (farm share)	_____	_____ *	_____	_____
Fuel, oil & grease	_____	_____	_____	_____
<u>Livestock</u>				
Replacement livestock	_____	_____ *	_____	_____
Breeding	_____	_____	_____	_____
Vet & medicine	_____	_____	_____	_____
Milk marketing	_____	_____ *	_____	_____
Cattle lease/rent	_____	_____ *	_____	_____
Other livestock expense	_____	_____	_____	_____
<u>Crops</u>				
Fertilizer & lime	_____	_____	_____	_____
Seeds & plants	_____	_____	_____	_____
Spray, other crop exp.	_____	_____	_____	_____
<u>Real Estate</u>				
Land/bldg./fence repair	_____	_____	_____	_____
Taxes	_____	_____ *	_____	_____
Rent & lease	_____	_____ *	_____	_____
<u>Other</u>				
Insurance	_____	_____ *	_____	_____
Telephone (farm share)	_____	_____ *	_____	_____
Electricity (farm share)	_____	_____ *	_____	_____
Interest paid	_____	_____ *	_____	_____
Miscellaneous	_____	_____	_____	_____
Total Operating	\$ _____	\$ _____	\$ _____	\$ _____
Expansion livestock	_____	_____ *	_____	_____
Machinery depreciation	_____	_____	_____	_____
Building depreciation	_____	_____	_____	_____
TOTAL ACCRUAL EXPENSES				\$ _____

CASH AND ACCRUAL FARM RECEIPTS
24 Eastern New York Dairy Farm Renters, 1988

Receipt Item	Cash Receipts	Change in + Inventory	Change in + Accounts Receivable	Accrual - Receipts
Milk sales	\$141,151		\$161	\$141,312
Dairy cattle	9,100	\$3,601	0	12,701
Dairy calves	2,629		0	2,629
Other livestock	0	107	0	107
Crops	1,279	2,271	0	3,550
Government receipts	1,340	0*	0	1,340
Custom machine work	521		0	521
Gas tax refund	80		0	80
Other	1,469		0	1,469
- Nonfarm noncash capital		(-) 0**		(-) 0
Total Accrual Receipts	\$157,569	\$5,979	\$161	\$163,709

*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, 1988

Item	24 Dairy Farm Renters	138 Dairy Farm Owners	My Farm
Total accrual receipts	\$163,709	\$216,913	\$ _____
+ Appreciation: Livestock	3,065	4,504	_____
Machinery	-476	1,105	_____
Real Estate	980	15,884	_____
Other Stock/Cert.	975	299	_____
- Total Including Appreciation	\$168,253	\$238,705	\$ _____
- Total accrual expenses	137,251	185,496	_____
= Net Farm Income (with appreciation)	\$ 31,002	\$ 53,209	\$ _____
Net Farm Income (without appreciation)	\$ 26,458	\$ 31,417	\$ _____

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, 1988

Item	24 Dairy Farm Renters	138 Dairy Farm Owners	My Farm
Net farm income (with appreciation)	\$31,002	\$53,209	\$ _____
- Family labor unpaid @ \$700 per month	1,196	1,872	_____
= Return to operators' labor, management, & equity (with appreciation)	\$29,806	\$51,337	\$ _____
- Appreciation	4,544	21,792	_____
= Return to operators' labor, management, & equity (without appreciation)	\$25,262	\$29,545	\$ _____

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, 1988

Item	24 Dairy Farm Renters	138 Dairy Farm Owners	My Farm
Return to operators' labor, mgmt., & equity without appreciation	\$25,262	\$29,545	\$ _____
- Real interest @ 5% on average equity capital	<u>7,823</u>	<u>20,386</u>	- _____
= Labor & Management Income	\$17,440	\$ 9,159	\$ _____
Labor & Management Income per Operator/Manager	\$13,519	\$ 6,542	\$ _____

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, 1988

Item	24 Dairy Farm Renters	138 Dairy Farm Owners	My Farm
Return to operators' labor, mgmt., & equity capital with apprec.	\$29,806	\$51,337	\$ _____
- Value of operators' labor & mgmt.	<u>23,812</u>	<u>25,285</u>	_____
= Return on equity capital with apprec.	\$ 5,994	\$26,052	\$ _____
+ Interest paid	<u>5,102</u>	<u>13,575</u>	_____
= Return on total capital with apprec.	\$11,096	\$39,627	\$ _____
Return on equity capital without apprec.	\$ 1,450	\$ 4,260	\$ _____
Return on total capital without apprec.	\$ 6,552	\$17,835	\$ _____
Rate of return on average equity capital:			
with appreciation	3.8%	6.4%	_____ %
without appreciation	0.9%	1.0%	_____ %
Rate of return on average total capital:			
with appreciation	5.0%	6.9%	_____ %
without appreciation	2.9%	3.1%	_____ %

Farm and Family Financial Status

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

1988 FARM BUSINESS & NONFARM BALANCE SHEET
24 Eastern New York Dairy Farm Renters, 1988

Farm Assets			Farm Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 5,420	\$ 4,068	Accounts payable	\$ 2,077	\$ 3,472
Accounts rec.	11,615	13,235	Operating debt	3,153	3,679
Prepaid exp.	0	0	Short-term	979	1,454
Feed & supplies	<u>28,075</u>	<u>30,676</u>	Advanced govt. rec.	<u>0</u>	<u>0</u>
Total	\$ 45,110	\$ 47,979	Total	\$ 6,209	\$ 8,605
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows: owned	\$ 56,021	\$ 60,250	Structured debt		
leased	2,434	2,146	1-10 years	\$ 48,208	\$ 49,421
Heifers	19,554	21,933	Financial lease		
Bulls/other lvstk.	240	404	(cattle/mach.)	2,661	2,311
Mach./eq. owned	73,016	74,415	FLB/PCA stock	<u>1,166</u>	<u>1,051</u>
Mach./eq. leased	227	165	Total	\$ 52,035	\$ 52,784
FLB/PCA stock	1,166	1,051			
Other stock/cert.	<u>4,281</u>	<u>5,318</u>	<u>Long Term</u>		
Total	\$156,939	\$165,682	Structured debt		
<u>Long-Term</u>			≥10 years	\$ 5,322	\$ 8,107
Land/buildings:			Financial lease		
owned	\$ 13,358	\$ 16,899	(structures)	<u>0</u>	<u>0</u>
leased	<u>0</u>	<u>0</u>	Total	\$ 5,322	\$ 8,107
Total	\$ 13,358	\$ 16,899	Total Farm Liab.	\$ 63,567	\$ 69,496
Total Farm Assets	\$215,407	\$230,560	FARM NET WORTH	\$151,840	\$161,065
(Average for 12 farms reporting)			<u>Nonfarm Liabilities*</u>		
<u>Nonfarm Assets*</u>			<u>& Net Worth</u>		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
Personal cash, chkg. & savings	\$ 3,051	\$ 3,549	Nonfarm Liab.	\$ 4,567	\$ 4,149
Cash value life ins.	812	1,217	NONFARM NET WORTH	\$30,275	\$35,053
Nonfarm real estate	17,183	21,375	<u>FARM & NONFARM*</u>		
Auto (personal sh.)	2,758	2,121	Total Assets	\$250,249	\$269,761
Stocks & bonds	1,681	2,417	Total Liabilities	<u>68,134</u>	<u>73,645</u>
Household furn.	7,958	7,125	<u>TOTAL FARM & NON-</u>		
All other	<u>1,398</u>	<u>1,397</u>	FARM NET WORTH	\$182,115	\$196,116
Total Nonfarm	\$34,842	\$39,201			

*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.

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, 1988

Item	24 Dairy Farm Renters	138 Dairy Farm Owners	My Farm
<u>Financial Ratios - Farm:</u>			
Percent equity	70%	72%	_____ %
Debt/asset ratio: total	0.30	0.28	_____
long-term	0.48	0.30	_____
intermediate/current	0.29	0.26	_____
<u>Change in Net Worth:</u>			
Without appreciation	\$4,680	\$9,930	\$ _____
With appreciation	\$9,224	\$31,722	_____
<u>Farm Debt Analysis:</u>			
Accounts payable as % of total debt	5%	3%	_____ %
Long-term liabilities as a % of total debt	12%	55%	_____ %
Current & inter. liab. as a % of total debt	88%	45%	_____ %
<u>Farm Debt Levels Per Cow:</u>			
Total farm debt	\$1,037	\$1,917	\$ _____
Long-term debt	121	1,054	_____
Intermediate & current debt	916	864	_____

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, 1988

Item	24 Dairy Farm Renters	138 Dairy Farm Owners	My Farm
Value beg. of year	\$73,016	\$94,580	\$ _____
Purchases	\$8,562	\$13,729	\$ _____
+ Nonfarm noncash transfer	458	0	+ _____
- Sales	0	331	- _____
- Depreciation	<u>7,146</u>	<u>10,971</u>	- _____
= Net investment	1,874	2,427	=+ _____
+ Appreciation	<u>-476</u>	<u>1,105</u>	+ _____
= Value end of year	\$74,415	\$98,113	\$ _____

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, 1988

Item	24 Dairy Farm Renters	138 Dairy Farm Owners	My Farm
<u>Cash Inflows</u>			
Beg. farm cash, checking & savings	\$ 5,420	\$ 6,123	\$ _____
Cash farm receipts	157,569	210,821	_____
Sale of assets: Machinery	0	331	_____
Real estate	0	3,102	_____
Other stock & cert.	0	129	_____
Money borrowed (inter. & long-term)	20,877	19,597	_____
Money borrowed (short-term)	1,571	1,543	_____
Increase in operating debt	525	1,021	_____
Nonfarm income	2,667	3,771	_____
Cash from nonfarm cap. used in the business	3,353	2,832	_____
Money borrowed - nonfarm	<u>0</u>	<u>1,027</u>	_____
Total	\$191,982	\$250,297	\$ _____
<u>Cash Outflows</u>			
Cash farm expenses	\$126,477	\$166,888	\$ _____
Capital purchases: Expansion livestock	1,509	1,208	_____
Machinery	8,562	13,729	_____
Real estate	4,160	7,721	_____
Other stock & cert.	62	621	_____
Principal payments (inter. & long-term)	16,879	24,371	_____
Principal payments (short-term)	1,096	1,303	_____
Decrease in operating debt	0	0	_____
Personal withdrawals & family expenditures,			_____
including nonfarm debt payments	27,301	26,947	_____
Ending farm cash, checking & savings	<u>4,068</u>	<u>6,788</u>	_____
Total	\$190,114	\$249,576	\$ _____
Imbalance (error)	\$ 1,868	\$ 721	\$ _____

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 1989. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 1989 debt payments shown below.

FARM DEBT PAYMENTS PLANNED
Same 20 Eastern New York Dairy Farm Renters, 1988*

Debt Payments	Average			My Farm		
	1988 Payments Planned	Made	Planned 1989	1988 Payments Planned	Made	Planned 1989
Long-term	\$ 788	\$ 1,261	\$ 1,969	\$ _____	\$ _____	\$ _____
Intermediate-term	13,850	20,567	15,435	_____	_____	_____
Short-term	468	1,175	438	_____	_____	_____
Operating (net red.)	727	0	933	_____	_____	_____
Accounts payable (net reduction)	810	0	840	_____	_____	_____
Total	\$16,643	\$23,003	\$19,614	\$ _____	\$ _____	\$ _____
Per cow	\$234	\$323		\$ _____	\$ _____	
Per cwt. 1988 milk	\$1.43	\$1.98		\$ _____	\$ _____	
Percent of total						
1988 receipts	10%	13%		_____	_____	
Percent of 1988						
milk receipts	11%	15%		_____	_____	

*Farms that completed Dairy Farm Business Summaries for both 1987 and 1988.

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 1989.

CASH FLOW COVERAGE RATIO
Eastern New York Dairy Farm Renters and Owners, 1988

Item	Same 20	Same 104	My Farm
	Farm Renters	Farm Owners	
Cash farm receipts	\$169,558	\$215,512	\$ _____
- Cash farm expenses	135,489	170,073	_____
+ Interest paid	5,419	13,080	_____
- Net personal withdrawals from farm*	28,005	23,039	_____
(A) = Amount Available for Debt Service	\$ 11,483	\$ 35,480	\$ _____
(B) = Debt Payments Planned for 1988 (as of December 31, 1987)	\$16,643	\$32,718	\$ _____
(A + B) = Cash Flow Coverage Ratio for 1988	0.69	1.08	_____

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

ANNUAL CASH FLOW WORKSHEET

Item	24 Dairy	My Farm		Expected Change	1989 Projection
	Farm Renters (per cow)	Total	Per Cow		
Average number of cows	66				
<u>Accrual Oper. Receipts</u>					
Milk	\$2,132	\$	\$		\$
Dairy cattle	192				
Dairy calves	40				
Other livestock	2				
Crops	53				
Misc. receipts	51				
Total	\$2,470	\$	\$		\$
<u>Accrual Oper. Expenses</u>					
Hired labor	\$ 164	\$	\$		\$
Dairy grain & conc.	594				
Dairy roughage	49				
Other lvstk. feed	1				
Mach. hire/rent/lease	22				
Mach. rpr./parts & auto	109				
Fuel, oil & grease	54				
Replacement lvstk.	44				
Breeding	40				
Vet & medicine	42				
Milk marketing	129				
Cattle lease	8				
Other lvstk. exp.	110				
Fertilizer & lime	68				
Seeds & plants	30				
Spray/other crop exp.	23				
Land, bldg., fence repair	16				
Taxes	24				
Real est. rent/lease	186				
Insurance	35				
Utilities	74				
Miscellaneous	26				
Total Less Int. Paid	\$1,847				\$
<u>Net Accrual Operating Income</u>	(total)				
(without interest paid)	\$41,266	\$			\$
- Change in lvstk./crop inv.	5,979				
- Change in accts. rec.	161				
+ Change in feed/supply inv.	-331				
+ Change in accts. payable*	1,395				
NET CASH FLOW	\$36,190	\$			\$
- Net personal withdrawals & family expenditures	24,634				
Available for Farm Debt Payments & Investments	\$11,556	\$			\$
- Farm debt payments	22,695				
Available for Farm Investments	\$-11,139	\$			\$
- Capital purchases: cattle, machinery & improvements	\$14,293				
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
24 Eastern New York Dairy Farm Renters, 1988

<u>Item</u>	<u>Average of Farms Reporting</u>			<u>My Farm</u>	
<u>Crop Yields</u>	<u>Farms</u>	<u>Acres</u>	<u>Prod/Acre*</u>	<u>Acres</u>	<u>Prod/Acre</u>
Hay crop	23	140	2.52 tn DM	_____	_____ tn DM
Corn silage	23	43	12.84 tn 4.40 tn DM	_____	_____ tn _____ tn DM
Other forage	3	24	1.49 tn DM	_____	_____ tn DM
Total forage	23	186	2.86 tn DM	_____	_____ tn DM
Corn grain	9	42	103.50 bu	_____	_____ bu
Oats	3	10	44.83 bu	_____	_____ bu
Wheat	0	0	0.0 bu	_____	_____ bu
Other crops	2	25		_____	
Tillable pasture	4	61		_____	
Idle	6	23		_____	
Total Tillable Acres	24	214		_____	

*1988 average yields for 138 dairy farm owners in Eastern New York included: all hay crops, 2.6 tons dry matter per acre; corn silage, 13.9 tons per acre.

Average crop acres and yields compiled for the region are for the number of farms reporting each crop. Yields of forage crops have been converted to tons of dry matter using dry matter coefficients reported by the farmers. Grain production has been converted to bushels of dry grain equivalent based on dry matter information provided.

The following measures of crop management indicate how efficiently the land resource is being used and how well total forage requirements are being met.

CROP MANAGEMENT FACTORS
Eastern New York Dairy Farm Renters and Owners, 1988

<u>Item</u>	<u>24 Dairy Farm Renters</u>	<u>138 Dairy Farm Owners</u>	<u>My Farm</u>
Total tillable acres per cow	3.22	3.04	_____
Total forage acres per cow	2.69	2.49	_____
Harvested forage dry matter, tons per cow	7.71	7.81	_____

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, 1988

Expense	Total/ Till. Acre	Hay Crop		All Corn Per Acre	Corn Sil. Per Ton DM	Corn Grain Per Dry Shell Bu.
		Per Acre	Per Ton DM			
24 Dairy Farm Renters: Average 13 Farms Reporting Individual Crop Costs						
Fertilizer & lime	\$21.07	\$ 9.50	\$3.93	\$30.83	\$ 7.01	\$0.30
Seeds & plants	9.28	2.81	1.16	11.50	2.62	0.11
Spray & other crop expense	<u>7.05</u>	<u>1.86</u>	<u>0.77</u>	<u>9.92</u>	<u>2.26</u>	<u>0.10</u>
Total	\$37.40	\$14.17	\$5.86	\$52.25	\$11.89	\$0.51
138 Dairy Farm Owners: Average 83 Farms Reporting Individual Crop Costs						
Fertilizer & lime	\$27.60	\$10.19	\$3.97	\$26.31	\$ 5.68	\$0.26
Seeds & plants	9.90	3.74	1.46	10.72	2.31	0.11
Spray & other crop expense	<u>9.19</u>	<u>2.75</u>	<u>1.07</u>	<u>12.02</u>	<u>2.59</u>	<u>0.12</u>
Total	\$46.69	\$16.68	\$6.50	\$49.05	\$10.58	\$0.49
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, 1988

Item	Average Per Tillable Acre		My Farm	
	24 Dairy Farm Renters	138 Dairy Farm Owners	Total Expenses	Per Til. Acres
Fuel, oil & grease	\$ 16.72	\$ 19.17	\$ _____	\$ _____
Machinery repairs & parts	32.44	37.01	_____	_____
Machine hire, rent & lease	6.79	6.96	_____	_____
Auto expense (farm share)	1.51	2.07	_____	_____
Interest (5%)	17.25	18.33	_____	_____
Depreciation	<u>33.45</u>	<u>41.74</u>	_____	_____
Total	\$108.16	\$125.29	\$ _____	\$ _____

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, 1988

Item	Dairy Cows		Bred		Heifers		Calves	
	No.	Value	No.	Value	No.	Value	No.	Value
<u>24 Dairy Farm Renters:</u>								
Beg. year (owned)	63	\$56,021	15	\$10,196	16	\$6,346	18	\$3,013
+ Change w/o apprec.		2,205		1,160		54		181
+ Appreciation		<u>2,024</u>		<u>415</u>		<u>242</u>		<u>327</u>
End year (owned)	66	\$60,250	16	\$11,771	16	\$6,642	19	\$3,521
End incl. leased	67							
Average number	66		50 (all age groups)					
<u>138 Dairy Farm Owners:</u>								
Beg. year (owned)	87	\$75,778	24	\$15,924	21	\$8,223	21	\$3,906
+ Change w/o apprec.		227		330		538		312
+ Appreciation		<u>2,832</u>		<u>652</u>		<u>540</u>		<u>405</u>
End year (owned)	87	\$78,837	24	\$16,906	21	\$9,301	22	\$4,623
End incl. leased	87							
Average number	86		66 (all age groups)					
<u>My Farm:</u>								
Beg. of year (owned)	___	\$___	___	\$___	___	\$___	___	\$___
+ Change w/o apprec.		___		___		___		___
+ Appreciation		___		___		___		___
End of year (owned)	___	\$___	___	\$___	___	\$___	___	\$___
End including leased	___							
Average number	___		___ (all age groups)					

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

MILK PRODUCTION
Eastern New York Dairy Farm Renters and Owners, 1988

Item	24 Dairy Farm Renters	138 Dairy Farm Owners	My Farm
Total milk sold, lbs.	1,078,132	1,382,557	_____
Milk sold per cow, lbs.	16,263	16,010	_____
Average milk plant test, % butterfat	3.69	3.66	_____

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, 1988

Item	24 Renters		138 Owners		My Farm	
	Total	Per Cwt.	Total	Per Cwt.	Total	Per Cwt.
<u>Accrual Costs of Producing Milk</u>						
Operating costs	\$106,657	\$9.89	\$137,977	\$9.98	\$ _____	\$ _____
Total costs without op(s') labor, mgmt. & capital	\$116,050	\$10.76	\$157,062	\$11.36	\$ _____	\$ _____
Total Costs	\$147,684	\$13.70	\$202,733	\$14.66	\$ _____	\$ _____
<u>Accrual Receipts from Milk</u>						
	\$141,312	\$13.11	\$186,607	\$13.50	\$ _____	\$ _____

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, 1988

Item	Average Per Cwt. Milk		My Farm Per Cwt.
	24 Renters	138 Owners	
Purchased dairy grain & conc.	\$3.65	\$3.89	\$ _____
Purchased dairy roughage	0.30	0.13	_____
Total Purchased Dairy Feed	\$3.95	\$4.02	\$ _____
Purchased grain & conc. as % of milk receipts	28%	29%	_____%
Purchased feed & crop exp.	\$4.69	\$4.91	\$ _____
Purchased feed & crop exp. as % of milk receipts	36%	36%	_____%
Breeding	\$0.24	\$0.20	\$ _____
Veterinary & medicine	0.26	0.26	_____
Milk marketing	0.80	0.83	_____
Cattle lease	0.05	0.00	_____
Other livestock expense	0.67	0.59	_____

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, 1988

Item	Per Worker	Per Cow	Per Tillable Acre
<u>24 Dairy Farm Renters:</u>			
Farm capital	\$90,834	\$3,364	\$1,044
Machinery & equipment	30,108	1,115	346
Capital turnover, years	1.33		
<u>138 Dairy Farm Owners:</u>			
Farm capital	\$208,494	\$6,670	\$2,191
Machinery & equipment	35,156	1,125	370
Capital turnover, years	2.41		
<u>My Farm:</u>			
Farm capital	\$ _____	\$ _____	\$ _____
Machinery & equipment	_____	_____	_____
Capital turnover, years	_____	_____	_____

LABOR FORCE ANALYSIS
Eastern New York Dairy Farm Renters and Owners, 1988

Efficiency	24 Renters		138 Owners		My Farm	
	Total	Per Worker	Total	Per Worker	Total	Per Worker
Cows, average number	66	27	86	31	_____	_____
Milk sold, pounds	1,078,132	439,182	1,382,557	500,440	_____	_____
Tillable acres	214	87	263	95	_____	_____
Work units	692	282	900	326	_____	_____
<hr/>						
Labor Costs	24 Renters		138 Owners		My Farm	
	Total	Per Cow	Total	Per Cow	Total	Per Cow
Value of operator(s)						
labor (\$1,000/month)	\$15,500	\$234	\$16,848	\$195	\$ _____	\$ _____
Family unpd. (\$700/mo.)	1,196	18	1,872	22	_____	_____
Hired	10,844	164	16,772	194	_____	_____
Total Labor	\$27,540	\$415	\$35,492	\$411	\$ _____	\$ _____
Machinery Cost	\$23,106	\$349	\$32,931	\$381	\$ _____	\$ _____
Total Labor & Mach.	\$50,646	\$764	\$68,423	\$792	\$ _____	\$ _____

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 20 Eastern New York Dairy Farm Renters, 1987 and 1988

Selected Factors	Average		My Farm		
	1987	1988	1987	1988	Goal
<u>Size of Business</u>					
Average number of cows	71	71	_____	_____	_____
Average number of heifers	54	55	_____	_____	_____
Milk sold, lbs.	1,132,406	1,163,566	_____	_____	_____
Worker equivalent	2.61	2.65	_____	_____	_____
Total tillable acres	227	232	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, lbs.	15,994	16,342	_____	_____	_____
Hay DM per acre, tons	2.5	2.5	_____	_____	_____
Corn silage per acre, tons	15	13	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	27	27	_____	_____	_____
Milk sold per worker, lbs.	433,457	439,082	_____	_____	_____
<u>Cost Control</u>					
Grain & conc. purchased as % of milk sales	23%	28%	_____ %	_____ %	_____ %
Dairy feed & crop exp. per cwt. milk	\$4.18	\$4.69	\$ _____	\$ _____	\$ _____
Labor & mach. costs/cow	\$761	\$780	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency*</u>					
Farm capital per cow	\$3,300	\$3,504	\$ _____	\$ _____	\$ _____
Mach. & equip. per cow	\$1,149	\$1,183	\$ _____	\$ _____	\$ _____
Capital turnover, years	1.3	1.4	_____	_____	_____
<u>Profitability</u>					
Net farm inc. w/o apprec.	\$32,163	\$26,331	\$ _____	\$ _____	\$ _____
Net farm inc. w/apprec.	\$39,503	\$31,628	\$ _____	\$ _____	\$ _____
Labor & mgmt. income per operator/manager	\$23,286	\$16,266	\$ _____	\$ _____	\$ _____
Rate of return on eq. capital w/apprec.	8.8%	3.4%	_____ %	_____ %	_____ %
Rate of return on all capital w/apprec.	8.6%	4.6%	_____ %	_____ %	_____ %
<u>Financial Summary</u>					
Farm net worth	\$175,055	\$181,039	\$ _____	\$ _____	\$ _____
Debt to asset ratio	0.28	0.29	_____	_____	_____
Farm debt per cow	\$940	\$1,045	\$ _____	\$ _____	\$ _____

*Average for the year.

Other Agricultural Economics Extension Publications

No. 89-7	National Dairy Markets and Policy and Some Implications for New York	A. Novakovic
No. 89-8	Dairy Farm Business Summary, Northern New York, 1988	S. Smith L. Putnam
No. 89-9	Dairy Farm Business Summary, Western Plain Region, 1988	S. Smith L. Putnam
No. 89-10	Dairy Farm Business Summary, Northern Hudson Region, 1988	S. Smith L. Putnam
No. 89-11	Dairy Farm Business Summary, Eastern Plateau Region, 1988	R. Milligan L. Putnam C. Crispell J. Mierek G. LeClar
No. 89-12	Dairy Farm Business Summary, Oneida-Mohawk Region, 1988	E. LaDue G. Andrew B. Aldrich
No. 89-13	Dairy Farm Business Summary, Central New York and Central Plain Regions, 1988	W. Knoblauch L. Putnam
No. 89-14	Dairy Farm Business Summary, Western Plateau Region, 1988	G. Casler
No. 89-15	Dairy Farm Business Summary, Southeastern New York, 1988	S. Smith L. Putnam
No. 89-16	Income Tax Consequences of Farm Debt Cancellation and Bankruptcy	G. Casler
No. 89-17	Factors Affecting Profitability on Limited Resource Dairy Farms, New York, 1986	B. Stanton
No. 89-18	Staying Competitive Into the 21st Century: Issues and Challenges Facing the New York State Dairy Industry	O. Forker A. Novakovic
