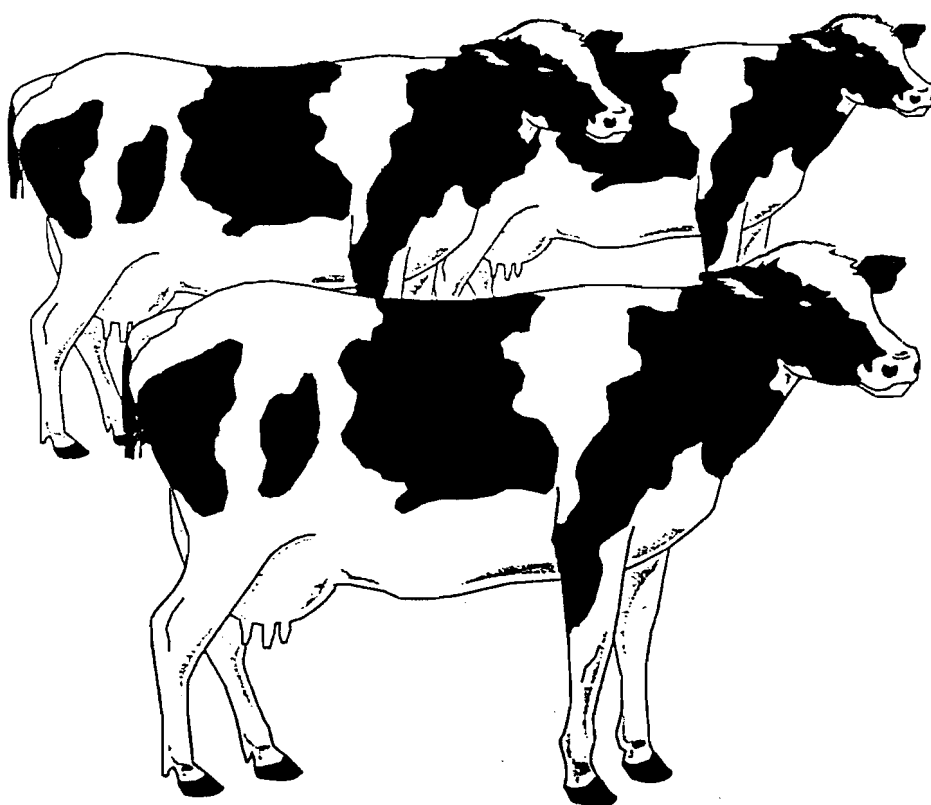


# **DAIRY FARM BUSINESS SUMMARY**

**AUGUST 1995**

**E.B. 95-19**

## **EASTERN NEW YORK RENTER SUMMARY 1994**



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**1994 DAIRY FARM BUSINESS SUMMARY  
EASTERN NEW YORK RENTERS**

**Table of Contents**

	Page
INTRODUCTION.....	1
Use Comparative Profitability Data With Caution.....	1
SUMMARY AND ANALYSIS OF THE FARM BUSINESS.....	3
Business Characteristics and Resources Used.....	3
Income Statement.....	4
Profitability Analysis.....	7
Farm and Family Financial Status.....	9
Statement of Owner Equity.....	12
Cash Flow Statement.....	13
Repayment Analysis.....	15
Cropping Program Analysis.....	17
Dairy Program Analysis.....	19
Capital and Labor Efficiency Analysis.....	21
COMPARATIVE ANALYSIS OF THE FARM BUSINESS.....	22
Progress of the Farm Business.....	22
Regional Farm Business Chart.....	23
Regional Financial Analysis Chart.....	24
IDENTIFY AND SET GOALS.....	25
GLOSSARY AND LOCATION OF COMMON TERMS.....	27
INDEX .....	30

## 1994 EASTERN NEW YORK DAIRY FARM RENTER BUSINESS SUMMARY

### INTRODUCTION

Dairy farmers throughout New York State submit business records for summarization and analysis through Cornell Cooperative Extension's Farm Business Management Program. Averages from a compilation of the individual farm reports are published in eight regional summaries and in one statewide summary.<sup>1</sup>

Accrual procedures have been used to provide the most accurate accounting of farm receipts and farm expenses for measuring farm profits. An explanation of these procedures is found on pages 4-6. Four measures of farm profits are calculated on pages 7 and 8. The balance sheet, statement of owner equity, and cash flow statement are featured on pages 9-16. The dairy program analysis includes data on the costs of producing milk (pages 19 and 20).

This Eastern New York Dairy Farm Renter Business Summary is an average of 31 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 124 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 31 farms in Columbia, Delaware, Madison, Oneida, Orange, Rensselaer, Saratoga, Schoharie, Sullivan, and Washington Counties are summarized in this publication. The Eastern New York region consists of these counties plus Albany, Broome, Chenango, Dutchess, Fulton, Greene, Herkimer, Montgomery, Otsego, Schenectady, and Ulster Counties which do not have dairy farm business summary participants that classify as renters (see Figure 1 on page 2). The 124 owned dairy farms summarized in this publication include farms from the entire region.

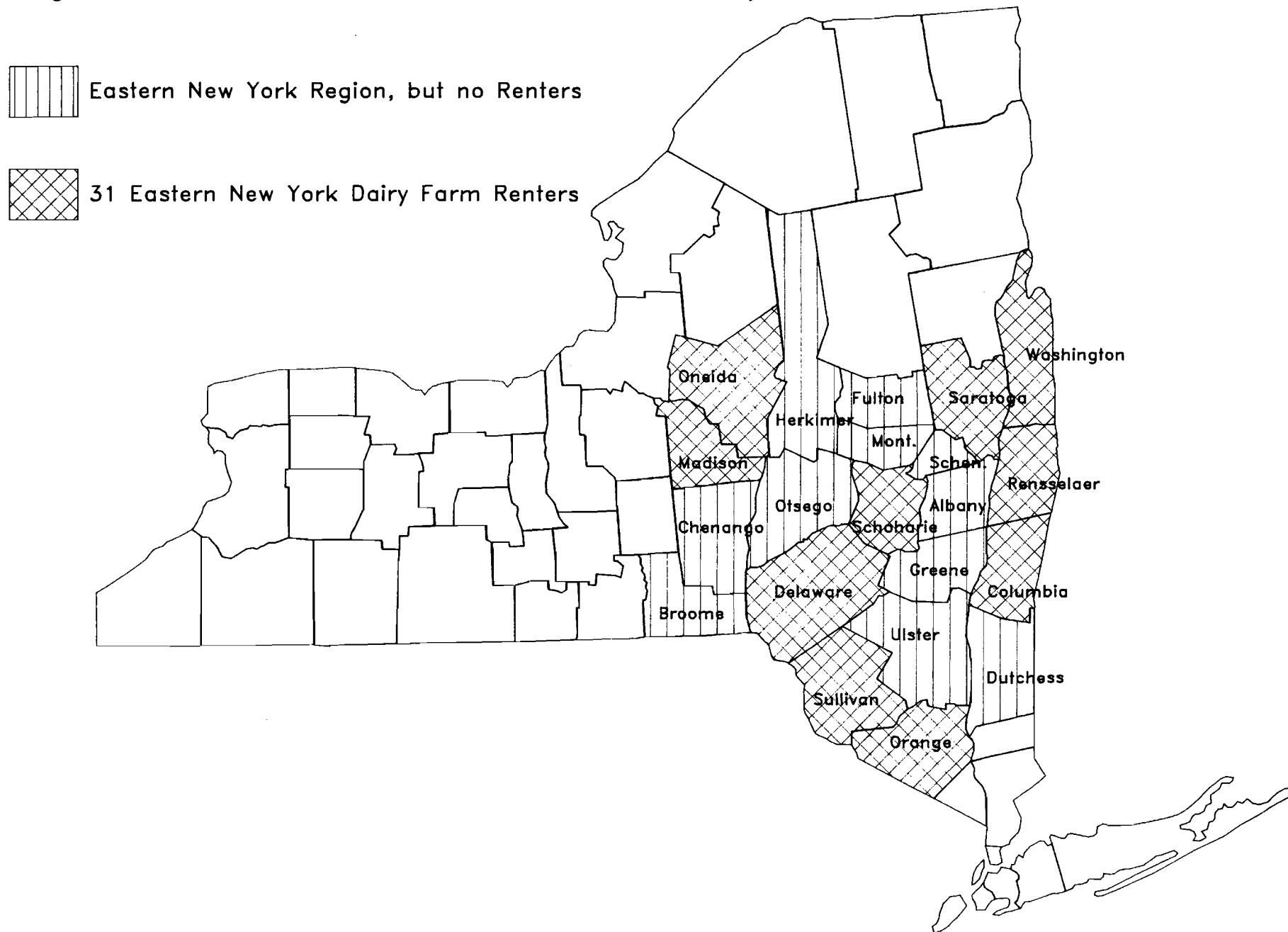
#### Use Comparative Profitability Data With Caution

The profitability analysis on page 8 where labor and management income is calculated implies that renting a dairy farm is more profitable than owning one. Concessionary rental rates set by some land owners is a major factor. The farm owners are often father and mother and other landlords who are willing to accept a very low return for their investment. Total real estate costs including depreciation and interest on real estate investment averaged \$138 per tillable acre on the owned dairy farms compared to only \$105 on the rented farms. This accounts for a \$26,160 difference in costs between owned and rented farms.

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<sup>1</sup>Smith, Stuart F., Wayne A. Knoblauch, and Linda D. Putnam, Dairy Farm Management Business Summary, New York, 1994, R.B. 95-03, August 1995.

Figure 1. Location of Eastern New York Dairy Farm Renters, 1994.



## SUMMARY AND ANALYSIS OF THE FARM BUSINESS

Business Characteristics and Resources Used

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

BUSINESS CHARACTERISTICS AND RESOURCES USED  
31 Eastern New York Dairy Farm Renters, 1994

<u>Type of Business</u>	<u>Number</u>	<u>bST Usage</u>	<u>Number</u>
Single proprietorship	22	Used on <25% of herd	6
Partnership	9	Used on 25-75% of herd	6
		Used on >75% of herd	0
<u>Milking System</u>	<u>Number</u>	Stopped using in 1994	2
Dumping station	1	Not used in 1994	17
Pipeline	26		
Herringbone parlor	4	<u>Labor Force</u>	<u>My Farm</u> <u>Average</u>
Other parlor	0	Operator 1	____mo. 12.13
		Operator 2	____mo. 3.36
<u>Type of Barn</u>	<u>Number</u>	Operator 3	____mo. 0.65
Stanchion	26	Family paid	____mo. 2.33
Freestall	2	Family unpaid	____mo. 4.25
Combination	3	Hired	____mo. 5.43
		Total	____mo. 28.15
<u>Dairy Records Service</u>	<u>Number</u>	Worker equivalent	
DHIC	26	(total + 12)	____ 2.35
DHIC Owner-Sampler	1	Operator/Manager Equiv.	
Other	1	(Oper. mo. + 12)	____ 1.35
None	3		
		<u>Land Use</u>	<u>My Farm</u> <u>Average</u>
<u>Business Record System</u>	<u>Number</u>	Total acres rented	____ 315
Account Book	14	Tillable acres rented	____ 191
Agrifax (mail-in only)	7		
ELFAC	0	<u>Number of Cows</u>	<u>My Farm</u> <u>Average</u>
Other	5	Beg. year (owned)	____ 67
On-farm computer	5	End year (owned & leased)	____ 70
		Average for year	
		(owned & leased)	____ 69

Predominate business characteristics of the 31 rented farms include the single proprietorship, pipeline milking system, stanchion or conventional stall barn, DHIC herd records and an account book record system. Only 16 percent of the renters were using on-farm computers compared to 26 percent of the owners.

The average size of the labor force on the rented farms was 29 percent less than the 3.33 worker equivalent on owned farms. The rented farms averaged 191 tillable acres and 69 cows compared to 336 tillable acres and 112 cows on the 124 owned dairy farms in the same region. The owned farms averaged 34 cows per worker compared to 29 on the rented farms. In 1994, the rented farms did not use land and labor resources as efficiently as the owned farms.

Income Statement

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

CASH AND ACCRUAL FARM EXPENSES  
31 Eastern New York Dairy Farm Renters, 1994

Expense Item	Cash Paid	Inventory or Prepaid Expense	Change in Accounts Payable	Accrual Expenses	Percent of Total
<u>Hired Labor</u>	\$ 11,225	\$ 0 <<	7	\$ 11,232	7
<u>Feed</u>					
Dairy grain & conc.	49,137	-255	157	49,039	31
Dairy roughage	2,897	-91	85	2,891	2
Other livestock	0	0	0	0	0
<u>Machinery</u>					
Mach. hire, rent/lease	2,588	0 <<	-8	2,580	2
Machinery repairs/parts	9,488	-26	-1	9,461	6
Auto expense (farm share)	877	0 <<	0	877	1
Fuel, oil & grease	4,254	-21	-5	4,228	3
<u>Livestock</u>					
Replacement livestock	3,103	0	-90	3,013	2
Breeding	2,698	-84	26	2,640	2
Vet & medicine	4,848	-14	39	4,873	3
Milk marketing	12,640	0 <<	0	12,640	8
Cattle lease/rent	31	0 <<	0	31	<1
Other livestock expense	9,924	-7	40	9,957	6
<u>Crops</u>					
Fertilizer & lime	3,625	-21	161	3,765	2
Seeds & plants	2,046	403	-6	2,443	2
Spray, other crop exp.	2,962	35	-175	2,822	2
<u>Real Estate</u>					
Land/bldg./fence repair	2,273	-17	0	2,256	1
Taxes	1,522	0 <<	152	1,674	1
Rent & lease	14,065	0 <<	146	14,211	9
<u>Other</u>					
Insurance	2,192	15 <<	0	2,207	1
Telephone (farm share)	532	0 <<	0	532	<1
Electricity (farm share)	5,411	0 <<	43	5,454	4
Interest paid	5,389	0 <<	0	5,389	3
Miscellaneous	<u>1,954</u>	<u>-16</u>	<u>0</u>	<u>1,938</u>	<u>1</u>
Total Operating	\$155,681	\$-99	\$571	\$156,153	100
Expansion livestock	\$1,253	\$0 <<	\$0	\$1,253	
Machinery depreciation				8,775	
Building depreciation				<u>1,209</u>	
TOTAL ACCRUAL EXPENSES				\$167,390	

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, 1995 rent paid in 1994. 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  
31 Eastern New York Dairy Farm Renters, 1994

Receipt Item	Cash Receipts	Change in Inventory	Change in Accounts Receivable	Accrual Receipts
Milk sales	\$172,744		\$-259	\$172,485
Dairy cattle	7,273	\$ 6,076	81	13,430
Dairy calves	2,836		0	2,836
Other livestock	155	284	53	492
Crops	1,069	3,545	198	4,812
Government receipts	1,715	0*	0	1,715
Custom machine work	646		8	654
Gas tax refund	53		0	53
Other	1,063		0	1,063
- Nonfarm noncash capital**		(-) 0		(-) 0
Total Accrual Receipts	\$187,554	\$ 9,905	\$81	\$197,540

\*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 Farm Credit stock). Appreciation is a major factor contributing to changes in farm net worth and must be included for a complete profitability analysis.

### NET FARM INCOME Eastern New York Dairy Farm Renters and Owners, 1994

Item	31 Dairy Farm Renters	124 Dairy Farm Owners	My Farm
Total accrual receipts	\$197,540	\$345,757	\$_____
+ Appreciation: Livestock	-78	203	_____
Machinery	1,045	1,362	_____
Real Estate	300	5,222	_____
Other Stock/Cert.	247	237	_____
= Total Including Appreciation	\$199,054	\$352,781	\$_____
- Total accrual expenses	167,390	304,457	_____
= Net Farm Income (with appreciation)	\$31,664	\$ 48,324	\$_____
Per cow	\$460	\$431	
Net Farm Income (without appreciation)	\$30,150	\$ 41,300	\$_____
Per cow	\$438	\$368	

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, 1994

Item	31 Dairy Farm Renters	124 Dairy Farm Owners	My Farm
Net farm income (with appreciation)	\$31,664	\$48,324	\$_____
- Family labor unpaid @ \$1,450 per month	6,163	4,234	_____
= Return to operators' labor, management, & equity (with appreciation)	\$25,501	\$44,090	\$_____
- Appreciation	1,514	7,024	_____
= Return to operators' labor, management, & equity (without appreciation)	\$23,987	\$37,066	\$_____

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, 1994

Item	31 Dairy Farm Renters	124 Dairy Farm Owners	My Farm
Return to operators' labor, mgmt., & equity without appreciation	\$23,987	\$37,066	\$_____
- Real interest @ 5% on average equity capital	<u>9.016</u>	<u>28.740</u>	-_____
= Labor & Management Income	\$14,971	\$ 8,326	\$_____
Labor & Management Income per Operator/Manager	\$11,090	\$ 5,664	\$_____

Return to 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 to 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 to all capital is calculated by adding interest paid to the return to equity capital and then dividing by average farm assets to calculate the rate of return on average total capital.

**RETURN TO EQUITY CAPITAL AND RETURN TO ALL CAPITAL**  
Eastern New York Dairy Farm Renters and Owners, 1994

Item	31 Dairy Farm Renters	124 Dairy Farm Owners	My Farm
Return to operators' labor, mgmt., & equity capital with apprec.	\$25,501	\$44,090	
- Value of operators' labor & mgmt.	<u>25,493</u>	<u>30,794</u>	_____
= Return to equity capital with apprec.	\$ 8	\$13,296	\$_____
+ Interest paid	<u>5,389</u>	<u>16,448</u>	_____
= Return to all capital with apprec.	\$ 5,397	\$29,744	\$_____
Return to equity capital without apprec.	\$-1,506	\$ 6,272	\$_____
Return to all capital without apprec.	\$ 3,883	\$22,720	\$_____
Rate of return on average equity capital:			
with appreciation	0.0%	2.3%	_____%
without appreciation	-0.8%	1.1%	_____%
Rate of return on all capital:			
with appreciation	2.1%	3.6%	_____%
without appreciation	1.5%	2.8%	_____%

# 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.

## 1994 FARM BUSINESS & NONFARM BALANCE SHEET 31 Eastern New York Dairy Farm Renters

Farm Assets			Farm Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 6,026	\$ 5,234	Accounts payable	\$ 3,494	\$ 4,065
Accounts rec.	13,456	13,537	Operating debt	6,758	7,591
Prepaid exp.	15	0	Short-term	1,620	2,451
Feed & supplies	30,037	33,697	Advanced govt. rec.	0	0
Total	\$49,534	\$52,468	Current Portion:		
<u>Intermediate</u>			Intermediate	10,041	11,140
Dairy cows: owned	\$73,055	\$74,574	Long Term	1,087	1,133
leased	40	5	Total	\$23,000	\$26,380
Heifers	28,091	32,544	<u>Intermediate</u>		
Bulls/other livestock	1,032	1,342	Structured debt		
Mach./eq. owned	76,982	81,359	1-10 years	\$35,424	\$38,515
Mach./eq. leased	259	677	Financial lease		
Farm Credit stock	1,104	1,126	(cattle/mach.)	299	682
Other stock/cert.	3,228	3,653	Farm Credit stock	1,104	1,126
Total	\$183,791	\$195,280	Total	\$36,827	\$40,323
<u>Long-Term</u>			<u>Long Term</u>		
Land/buildings:			Structured debt		
owned	\$15,394	\$16,795	≥ 10 years	\$13,335	\$12,738
leased	451	331	Financial lease		
Total	\$15,845	\$17,126	(structures)	451	331
Total Farm Assets	\$249,170	\$264,874	Total	\$13,786	\$13,069
			Total Farm Liab.	\$73,613	\$79,772
			FARM NET WORTH	\$175,557	\$185,102
(Average for 17 farms reporting)			Nonfarm Liabilities*		
<u>Nonfarm Assets*</u>	Jan. 1	Dec. 31	<u>&amp; Net Worth</u>	Jan. 1	Dec. 31
Personal cash, chkg. & savings	\$ 3,357	\$ 3,664	Nonfarm Liab.	\$11,572	\$10,740
Cash value life ins.	10,037	9,970	NONFARM NET WORTH	\$52,452	\$56,012
Nonfarm real estate	33,529	34,059			
Auto (personal sh.)	4,212	5,135	<u>FARM &amp; NONFARM*</u>	Jan. 1	Dec. 31
Stocks & bonds	4,285	6,083	Total Assets	\$313,194	\$331,626
Household furn.	6,382	6,629	Total Liabilities	85,185	90,512
All other	2,220	1,211			
Total Nonfarm	\$64,024	\$66,752	TOTAL FARM & NON-		
			FARM NET WORTH	\$228,009	\$241,114

\*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.

1994 FARM BUSINESS &amp; NONFARM BALANCE SHEET

Farm Assets			Farm Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings			Accounts payable		
Accounts rec.			Operating debt:		
Prepaid expense					
Feed & supplies			Short Term:		
Total					
<u>Intermediate</u>			Adv. govt. rec.		
Dairy cows:			Current Portion:		
owned			Intermediate		
leased			Long Term		
Heifers			Total		
Bulls/other lvstk.			<u>Intermediate</u>		
Mach./eq. owned					
Mach./eq. leased					
Farm Credit stock					
Other stock/cert.					
Total			Financial lease (cattle/mach.)		
			Farm Credit Stock		
			Total		
<u>Long-Term</u>			<u>Long-Term</u>		
Land/buildings:					
owned					
leased					
Total			Financial lease (structures)		
Total Farm Assets			Total		
			Total Farm Liab.		
			FARM NET WORTH		
<u>Nonfarm Assets</u>			<u>Nonfarm Liabilities &amp; Net Worth</u>		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
Personal cash, chkg. & savings			Nonfarm Liab.:		
Cash val. life ins.					
Nonfarm real est.					
Auto (pers. share)					
Stocks & bonds			Total Nonfarm		
Household furn.			Liabilities		
All other			Nonfarm		
Total Nonfarm			Net Worth		
TOTAL FARM & NONFARM				Jan. 1	Dec. 31
Total Farm and 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, 1994

Item	31 Dairy Farm Renters	124 Dairy Farm Owners	My Farm
<u>Financial Ratios - Farm:</u>			
Percent equity	70%	70%	_____ %
Debt/asset ratio: total	0.30	0.30	_____
long-term	0.76	0.25	_____
intermediate/current	0.27	0.34	_____
<u>Farm Debt Analysis:</u>			
Accounts payable as % of total debt	5%	3%	_____ %
Long-term liabilities as a % of total debt	16%	40%	_____ %
Current & inter. liab. as a % of total debt	84%	60%	_____ %
<u>Farm Debt Levels Per Cow:</u>			
Total farm debt	\$1,140	\$2,131	\$ _____
Long-term debt	\$ 187	\$ 851	_____
Intermediate & long-term debt	\$ 763	\$1,714	_____
Intermediate & current debt	\$ 953	\$1,280	_____

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, 1994

Item	31 Dairy Farm Renters	124 Dairy Farm Owners	My Farm
Value beg. of year	\$76,982	\$143,678	\$ _____
Purchases	\$12,442	\$19,407	\$ _____
+ Nonfarm noncash transfer	81	4	+ _____
- Net Sales	415	842	- _____
- Depreciation	<u>8,775</u>	<u>15,142</u>	- _____
= Net investment	3,333	3,427	=+ _____
+ Appreciation	<u>1,045</u>	<u>1,362</u>	+ _____
= Value end of year	\$81,359	\$148,467	\$ _____

The Statement of Owner Equity has two purposes. It allows (1) verification that the accrual income statement and market value balance sheet are interrelated and consistent (in accountants' terms, they reconcile) and (2) identification of the causes of change in equity that occurred on the farm during the year. The Statement of Owner Equity allows the farmer to determine to what degree the change in equity was caused by (1) earnings from the business, and nonfarm income, in excess of withdrawals being retained in the business (called retained earnings), (2) outside capital being invested in the business or farm capital being removed from the business (called contributed/withdrawn capital) and (3) increases or decreases in the value (price) of assets owned by the business (called change in valuation equity).

The change in farm net worth without appreciation is an excellent indicator of farm generated financial progress.

STATEMENT OF OWNER EQUITY (RECONCILIATION)  
31 Eastern New York Dairy Farm Renters, 1994

Item	Average	My Farm
Beginning of year farm net worth	\$175,557	\$_____
Net farm income w/o apprec. \$30,150		\$_____
+Nonfarm cash income + 3,350		+_____
-Personal withdrawals & family expenditures excluding non-farm borrowings -24,919		-_____
RETAINED EARNINGS	+\$ 8,581	+\$_____
Nonfarm noncash transfers to farm \$ 81		\$_____
+Cash used in business from nonfarm capital + 241		+_____
-Note/mortgage from farm real estate sold (nonfarm) -_____0		-_____
CONTRIBUTED/WITHDRAWN CAPITAL	+\$ 321	+\$_____
Appreciation \$ 1,514		\$_____
-Lost capital - 1,141		-_____
CHANGE IN VALUATION EQUITY	+\$ 373	+\$_____
IMBALANCE/ERROR	-\$ -268	-\$_____
End of year farm net worth*	=\$185,102	=\$_____
Change in net worth with apprec.	\$ 9,545	\$_____
<u>Change in Net Worth</u>		
Without appreciation	\$ 8,031	\$_____
With appreciation	\$ 9,545	\$_____

\*May not add due to rounding.

Cash Flow Statement

Completing an annual cash flow statement is an important step in understanding the sources and uses of funds for the business. Understanding last year's cash flow is the first step toward planning and managing cash flow for the current and future years.

The annual cash flow statement is structured to show net cash provided by operating activities, investing activities, financing activities and from reserves. All cash inflows and outflows including beginning and end balances are included. Therefore, the sum of net cash provided from all four activities should be zero. Any imbalance is the error from incorrect accounting of cash inflows/outflows.

ANNUAL CASH FLOW STATEMENT  
31 Eastern New York Dairy Farm Renters, 1994

Item	Average	
<u>Cash Flow from Operating Activities</u>		
Cash farm receipts	\$187,554	
- Cash farm expenses	<u>155,681</u>	
= Net cash farm income		\$ 31,874
Nonfarm income	\$ 3,350	
- Personal withdrawals/family expenses including nonfarm debt payments	<u>25,309</u>	
+ Net cash nonfarm income		<u>\$-21,959</u>
= Net Provided by Operating Activities		\$ 9,915
<u>Cash Flow From Investing Activities</u>		
Sale of assets: Machinery	\$ 415	
+ real estate	0	
+ other stock/cert.	<u>0</u>	
= Total asset sales		\$ 415
Capital purchases: expansion livestock	\$ 1,253	
+ machinery	12,442	
+ real estate	3,451	
+ other stock/cert.	<u>178</u>	
- Total invested in farm assets		<u>\$ 17,324</u>
= Net Provided by Investment Activities		\$-16,909
<u>Cash Flow From Financing Activities</u>		
Money borrowed (inter. & long-term)	\$17,174	
+ Money borrowed (short-term)	2,097	
+ Increase in operating debt	833	
+ Cash from nonfarm cap. used in business	241	
+ Money borrowed - nonfarm	<u>390</u>	
= Cash inflow from financing		\$20,735
Principal payments (inter. & long-term)	\$13,535	
+ Principal payments (short-term)	1,266	
+ Decrease in operating debt	<u>0</u>	
- Cash outflow for financing		<u>\$14,801</u>
= Net Provided by Financing Activities		\$ 5,934
<u>Cash Flow From Reserves</u>		
Beginning farm cash, checking & savings	\$ 6,026	
- Ending farm cash, checking & savings	<u>5,234</u>	
= Net Provided from Reserves		<u>\$ 792</u>
<u>Imbalance (error)</u>		\$ -268



## ANNUAL CASH FLOW STATEMENT

<u>Item</u>	<u>My Farm</u>
<u>Cash Flow from Operating Activities</u>	
Cash farm receipts	\$ _____
- Cash farm expenses	_____
= Net cash farm income	\$ _____
Nonfarm income	\$ _____
- Personal withdrawals/family expenses including nonfarm debt payments	_____
+ Net cash nonfarm income	\$ _____
= Net Provided by Operating Activities	\$ _____
<u>Cash Flow From Investing Activities</u>	
Sale of assets: Machinery	\$ _____
+ real estate	_____
+ other stock/cert.	_____
= Total asset sales	\$ _____
Capital purchases: expansion livestock	\$ _____
+ machinery	_____
+ real estate	_____
+ other stock/cert.	_____
- Total invested in farm assets	\$ _____
= Net Provided by Investment Activities	\$ _____
<u>Cash Flow From Financing Activities</u>	
Money borrowed (inter. & long-term)	\$ _____
+ Money borrowed (short-term)	_____
+ Increase in operating debt	_____
+ Cash from nonfarm cap. used in business	_____
+ Money borrowed - nonfarm	_____
= Cash inflow from financing	\$ _____
Principal payments (inter. & long-term)	\$ _____
+ Principal payments (short-term)	_____
+ Decrease in operating debt	_____
- Cash outflow for financing	\$ _____
= Net Provided by Financing Activities	\$ _____
<u>Cash Flow From Reserves</u>	
Beginning farm cash, checking & savings	\$ _____
- Ending farm cash, checking & savings	_____
= Net Provided from Reserves	\$ _____
<u>Imbalance (error)</u>	<u>\$ _____</u>

### Repayment Analysis

The second step in cash flow analysis is to compare the debt payments planned for the last year with the amount actually paid. The measures listed below provide a number of different perspectives on the repayment performance of the business. However, the critical question to many farmers and lenders is whether planned payments can be made in 1995. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 1995 debt payments shown below.

#### FARM DEBT PAYMENTS PLANNED Same 21 Eastern New York Dairy Farm Renters, 1994\*

Debt Payments	Average			My Farm		
	1994 Payments		Planned 1995	1994 Payments		Planned 1995
	Planned	Made		Planned	Made	
Long-term	\$ 0	\$ 0	\$ 0	\$ _____	\$ _____	\$ _____
Intermediate-term	12,757	16,607	13,814	_____	_____	_____
Short-term	1,314	1,441	2,270	_____	_____	_____
Operating (net red.)	1,586	0	629	_____	_____	_____
Accounts payable (net reduction)	233	0	429	_____	_____	_____
Total	\$15,890	\$18,048	\$17,142	\$ _____	\$ _____	\$ _____
Per cow	\$227	\$258		\$ _____	\$ _____	
Per cwt. 1994 milk	\$1.26	\$1.43		\$ _____	\$ _____	
Percent of total 1994 receipts	8%	9%		_____	_____	
Percent of 1994 milk receipts	9%	10%		_____	_____	

\*Farms that completed Dairy Farm Business Summaries for both 1993 and 1994.

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 1995.

#### CASH FLOW COVERAGE RATIO Eastern New York Dairy Farm Renters and Owners, 1994

Item	Same 21 Farm Renters	Same 108 Farm Owners	My Farm
Cash farm receipts	\$191,372	\$328,099	\$ _____
- Cash farm expenses	158,900	273,212	_____
+ Interest paid	3,934	15,923	_____
- Net personal withdrawals from farm*	24,492	26,379	_____
(A) = Amount Available for Debt Service	\$11,914	\$44,431	\$ _____
(B) = Debt Payments Planned for 1994 (as of December 31, 1993)	\$15,890	\$41,869	\$ _____
(A ÷ B) = Cash Flow Coverage Ratio for 1994	0.75	1.06	_____

\*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	31 Dairy	My Farm		Expected	1995
	Farm Renters (per cow)	Total	Per Cow	Change	Projection
Average number of cows	69				
<u>Accrual Oper. Receipts</u>					
Milk	\$2,507	\$	\$		\$
Dairy cattle	195				
Dairy calves	41				
Other livestock	7				
Crops	70				
Misc. receipts	51				
Total	\$2,871	\$	\$		\$
<u>Accrual Oper. Expenses</u>					
Hired labor	\$ 163	\$	\$		\$
Dairy grain & conc.	713				
Dairy roughage	42				
Other lvstk. feed	0				
Mach. hire/rent/lease	37				
Mach. repair/parts & auto	150				
Fuel, oil & grease	61				
Replacement lvstk.	44				
Breeding	38				
Vet & medicine	71				
Milk marketing	184				
Cattle lease	1				
Other lvstk. exp.	145				
Fertilizer & lime	55				
Seeds & plants	35				
Spray/other crop exp.	41				
Land, bldg., fence repair	33				
Taxes	24				
Real est. rent/lease	207				
Insurance	32				
Utilities	87				
Miscellaneous	28				
Total Less Interest Paid	\$2,191	\$	\$	\$	\$
<u>Net Accrual Operating Income</u>	(total)				
(without interest paid)	\$46,777	\$			\$
- Change in lvstk./crop inv.	9,905				
- Change in accts. rec.	81				
+ Change in feed/supply inv.*	-99				
+ Change in accts. payable**	571				
NET CASH FLOW	\$37,263	\$			\$
- Net personal withdrawals & family expenditures	21,569				
Available for Farm Debt Payments & Investments	\$15,694	\$			\$
- Farm debt payments	19,718				
Available for Farm Investments	\$-4,024	\$			\$
- Capital purchases: cattle, machinery & improvements	\$17,324	\$		\$	\$
Additional Capital Needed		\$			\$

\*Includes change in prepaid expenses.

\*\*Excludes change in interest account payable.

### Cropping Program Analysis

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

#### LAND RESOURCES AND CROP PRODUCTION 31 Eastern New York Dairy Farm Renters, 1994

<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	29	125	2.96 tn DM	_____	_____ tn DM
Corn silage	23	48	15.11 tn	_____	_____ tn
			5.36 tn DM	_____	_____ tn DM
Other forage	3	18	1.30 tn DM	_____	_____ tn DM
Total forage	29	165	3.35 tn DM	_____	_____ tn DM
Corn grain	14	54	109.91 bu	_____	_____ bu
Oats	3	15	67.50 bu	_____	_____ bu
Wheat	0	0	0.00 bu	_____	_____ bu
Other crops	0	0		_____	
Tillable pasture	8	25		_____	
Idle	8	19		_____	
Total Tillable Acres	31	191		_____	

\*1994 average yields for 124 dairy farm owners in Eastern New York included: all hay crops, 2.8 tons dry matter per acre; corn silage, 16.1 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, 1994

<u>Item</u>	<u>31 Dairy Farm Renters</u>	<u>124 Dairy Farm Owners</u>	<u>My Farm</u>
Total tillable acres per cow	2.78	2.99	_____
Total forage acres per cow	2.24	2.40	_____
Harvested forage dry matter, tons per cow	7.51	8.60	_____

Average fertilizer and lime, seeds and plants, and spray and other crop expenses have been computed per tillable acre for all farms in the first column of the table below. Average hay crop and corn crop related expenses are from the limited number of farms allocating crop expenses. Additional expense items such as fuels, labor, and machinery repairs are not included. Rotational grazing was used on seven rented farms and 15 owned farms in the region.

**CROP RELATED ACCRUAL EXPENSES**  
**Eastern New York Dairy Farm Renters and Owners, 1994**

	Total/ Till.	<u>Hay Crop</u>		All Corn	Corn Sil. Per Ton	Corn Grain Per Dry
<u>Expense</u>	<u>Acre</u>	<u>Per Acre</u>	<u>Per Ton DM</u>	<u>Per Acre</u>	<u>DM</u>	<u>Shell Bu.</u>
<u>31 Dairy Farm Renters:</u> Average 2 Farms Reporting Individual Crop Costs						
Fertilizer & lime	\$19.71	\$24.54	\$ 6.16	\$31.31	\$ 8.40	\$0.25
Seeds & plants	12.79	7.08	1.78	24.40	6.54	0.20
Spray & other crop expense	<u>14.77</u>	<u>5.64</u>	<u>1.42</u>	<u>21.73</u>	<u>5.83</u>	<u>0.18</u>
Total	\$47.27	\$37.26	\$ 9.36	\$77.44	\$20.77	\$0.63
<u>124 Dairy Farm Owners:</u> Average 27 Farms Reporting Individual Crop Costs						
Fertilizer & lime	\$29.50	\$18.67	\$ 6.48	\$ 40.75	\$ 7.71	\$0.32
Seeds & plants	13.78	11.93	4.14	24.71	4.67	0.19
Spray & other crop expense	<u>13.02</u>	<u>3.73</u>	<u>1.29</u>	<u>39.86</u>	<u>7.54</u>	<u>0.31</u>
Total	\$56.30	\$34.33	\$11.91	\$105.32	\$19.92	\$0.82
<u>My Farm:</u>						
Fertilizer & lime	\$_____	\$_____	\$_____	\$_____	\$_____	\$_____
Seeds & plants	_____	_____	_____	_____	_____	_____
Spray & other crop expense	_____	_____	_____	_____	_____	_____
Total	\$_____	\$_____	\$_____	\$_____	\$_____	\$_____

Most machinery costs are associated with crop production and should be analyzed with the crop enterprise. Total machinery expenses include the major fixed costs (interest and depreciation), as well as the accrual operating costs. 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, 1994**

<u>Item</u>	<u>Average Per Tillable Acre</u>		<u>My Farm</u>	
	<u>31 Dairy Farm Renters</u>	<u>124 Dairy Farm Owners</u>	<u>Total Expenses</u>	<u>Per Til. Acres</u>
Fuel, oil & grease	\$ 22.14	\$ 25.30	\$_____	\$_____
Machinery repairs & parts	49.53	53.35	_____	_____
Machine hire, rent & lease	13.51	10.72	_____	_____
Auto expense (farm share)	4.59	3.18	_____	_____
Interest (5%)	20.73	21.74	_____	_____
Depreciation	<u>45.94</u>	<u>45.07</u>	_____	_____
Total	\$156.44	\$159.35	\$_____	\$_____

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, 1994

	<u>Dairy Cows</u>		<u>Heifers</u>					
			<u>Bred</u>		<u>Open</u>	<u>Calves</u>		
<u>Item</u>	<u>No.</u>	<u>Value</u>	<u>No.</u>	<u>Value</u>	<u>No.</u>	<u>Value</u>	<u>No.</u>	<u>Value</u>
<u>31 Dairy Farm Renters:</u>								
Beg. year (owned)	67	\$73,055	15	\$13,574	18	\$ 9,601	17	\$4,916
+ Change w/o apprec.		1,716		2,823		1,882		-345
+ Appreciation		<u>-197</u>		<u>35</u>		<u>54</u>		<u>3</u>
End year (owned)	68	\$74,574	18	\$16,432	21	\$11,537	15	\$4,574
End incl. leased	70							
Average number	69		52 (all age groups)					
<u>124 Dairy Farm Owners:</u>								
Beg. year (owned)	111	\$119,637	30	\$27,095	30	\$16,694	26	\$7,182
+ Change w/o apprec.		4,921		2,452		-21		211
+ Appreciation		<u>1</u>		<u>57</u>		<u>132</u>		<u>38</u>
End year (owned)	115	\$124,559	32	\$29,604	29	\$16,805	27	\$7,431
End incl. leased	116							
Average number	112		86 (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, 1994

Item	31 Dairy Farm Renters	124 Dairy Farm Owners	My Farm
Total milk sold, lbs.	1,249,306	2,163,425	_____
Milk sold per cow, lbs.	18,148	19,287	_____
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. Purchased input costs of producing milk are the operating costs plus depreciation. Total costs of producing milk include the operating costs plus depreciation on machinery and buildings, the value of unpaid family labor, the value of operator(s') labor and management, and an interest charge for using equity capital.

ACCRUAL RECEIPTS FROM DAIRY, AND COST OF PRODUCING MILK  
Eastern New York Dairy Farm Renters and Owners, 1994

Item	31 Renters		124 Owners		My Farm	
	Total	Per Cwt.	Total	Per Cwt.	Total	Per Cwt.
<u>Accrual Costs of Producing Milk</u>						
Operating costs	\$132,352	\$10.59	\$234,508	\$10.84	\$_____	\$_____
Purchased input costs	\$142,336	\$11.39	\$258,406	\$11.94	\$_____	\$_____
Total Costs	\$183,008	\$14.65	\$322,174	\$14.89	\$_____	\$_____
<u>Accrual Receipts from Milk</u>						
	\$172,485	\$13.81	\$299,706	\$13.85	\$_____	\$_____

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, 1994

Item	Average Per Cwt. Milk		My Farm
	31 Renters	124 Owners	Per Cwt.
Purchased dairy grain & conc.	\$3.93	\$3.86	\$_____
Purchased dairy roughage	0.23	0.06	_____
Total Purchased Dairy Feed	\$4.16	\$3.93	\$_____
Purchased grain & conc.			
as % of milk receipts	28%	28%	_____%
Purchased feed & crop exp.	\$4.88	\$4.80	\$_____
Purchased feed & crop exp.			
as % of milk receipts	35%	35%	_____%
Breeding	\$0.21	\$0.20	\$_____
Veterinary & medicine	0.39	0.40	_____
Milk marketing	1.01	1.03	_____
Cattle lease	0.00	0.01	_____
Other livestock expense	0.80	0.75	_____

Capital and Labor Efficiency Analysis

Capital efficiency factors measure how intensively the capital is being used in the farm business. The asset turnover ratio is the ratio of total farm income to total farm assets. It is calculated by dividing total accrual operating receipts plus appreciation by average total farm assets. Measures of labor efficiency are key indicators of management's success in generating products per unit of labor input.

## CAPITAL EFFICIENCY

Eastern New York Dairy Farm Renters and Owners, 1994

<u>Item</u>	<u>Per Worker</u>	<u>Per Cow</u>	<u>Per Tillable Acre</u>
<u>31 Dairy Farm Renters:</u>			
Farm capital	\$109,582	\$3,736	\$1,346
Machinery & equipment	33,954	1,158	417
Asset turnover ratio	0.77		
<u>124 Dairy Farm Owners:</u>			
Farm capital	\$245,590	\$7,286	\$2,433
Machinery & equipment	44,527	1,321	441
Asset turnover ratio	0.43		
<u>My Farm:</u>			
Farm capital	\$_____	\$_____	\$_____
Machinery & equipment	_____	_____	_____
Asset turnover ratio	_____		

## LABOR FORCE ANALYSIS

Eastern New York Dairy Farm Renters and Owners, 1994

<u>Efficiency</u>	<u>31 Renters</u>		<u>124 Owners</u>		<u>My Farm</u>	
	<u>Total</u>	<u>Per Worker</u>	<u>Total</u>	<u>Per Worker</u>	<u>Total</u>	<u>Per Worker</u>
Cows, average number	69	29	112	34	_____	_____
Milk sold, pounds	1,249,306	532,643	2,163,425	649,942	_____	_____
Tillable acres	191	81	336	101	_____	_____
Work units	705	301	1,169	351	_____	_____
<hr/>						
<u>Labor Costs</u>	<u>31 Renters</u>		<u>124 Owners</u>		<u>My Farm</u>	
	<u>Total</u>	<u>Per Cow</u>	<u>Total</u>	<u>Per Cow</u>	<u>Total</u>	<u>Per Cow</u>
Value of operator(s) labor*	\$23,403	\$ 340	\$25,535	\$228	\$_____	\$_____
Family unpaid*	6,163	90	4,234	38	_____	_____
Hired	<u>11,232</u>	<u>163</u>	<u>33,030</u>	<u>294</u>	_____	_____
Total Labor	\$40,798	\$ 593	\$62,799	\$560	\$_____	\$_____
Machinery Cost	\$29,880	\$ 434	\$53,542	\$477	\$_____	\$_____
Total Labor & Mach.	\$70,678	\$1,027	\$116,341	\$1,037	\$_____	\$_____

\* \$1,450 per month.



## COMPARATIVE ANALYSIS OF THE FARM BUSINESS

Progress of the Farm Business

Comparing your business with average data from regional DFBS cooperators that participated in both of the last two years is one part of a business checkup. It is equally important for you to determine the progress your business has made over the past two or three years and to set targets or goals for the future.

## PROGRESS OF THE FARM BUSINESS

Same 21 Eastern New York Dairy Farm Renters, 1993 & 1994

Selected Factors	Average		My Farm		Goal
	1993	1994	1993	1994	
<u>Size of Business</u>					
Average number of cows	70	70	_____	_____	_____
Average number of heifers	49	55	_____	_____	_____
Milk sold, lbs.	1,234,254	1,259,820	_____	_____	_____
Worker equivalent	2.23	2.42	_____	_____	_____
Total tillable acres	183	191	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, lbs.	17,765	17,936	_____	_____	_____
Hay DM per acre, tons	2.5	3.1	_____	_____	_____
Corn silage per acre, tons	13	14	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	31	29	_____	_____	_____
Milk sold per worker, lbs.	553,328	521,082	_____	_____	_____
<u>Cost Control</u>					
Grain & conc. purchased					
as % of milk sales	27%	28%	_____%	_____%	_____%
Dairy feed & crop exp.					
per cwt. milk	\$4.29	\$4.92	\$_____	\$_____	\$_____
Labor & mach. costs/cow	\$ 949	\$1,029	\$_____	\$_____	\$_____
Operating cost of producing					
cwt. milk	\$10.01	\$10.57	\$_____	\$_____	\$_____
<u>Capital Efficiency*</u>					
Farm capital per cow	\$3,909	\$3,713	\$_____	\$_____	\$_____
Mach. & equip. per cow	\$1,093	\$1,127	\$_____	\$_____	\$_____
Asset turnover ratio	0.69	0.79	_____	_____	_____
<u>Profitability</u>					
Net farm income w/o apprec.	\$30,351	\$32,182	\$_____	\$_____	\$_____
Net farm income w/apprec.	\$33,509	\$34,195	\$_____	\$_____	\$_____
Labor & mgmt. income					
per operator/manager	\$12,791	\$11,487	\$_____	\$_____	\$_____
Rate of return on equity					
capital w/apprec.	3.0%	1.4%	_____%	_____%	_____%
Rate of return on all					
capital w/apprec.	3.7%	2.6%	_____%	_____%	_____%
<u>Financial Summary</u>					
Farm net worth	\$218,172	\$206,683	\$_____	\$_____	\$_____
Debt to asset ratio	0.21	0.23	_____	_____	_____
Farm debt per cow	\$825	\$870	\$_____	\$_____	\$_____

\*Average for the year.

### Regional Farm Business Chart

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

#### FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS 31 Eastern New York Dairy Farm Renters, 1994

<u>Size of Business</u>			<u>Rates of Production</u>			<u>Labor Efficiency</u>	
Worker Equiv- alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(11)*	(10)	(10)	(10)	(9)	(9)	(11)	(11)
3.5	109	2,037,130	21,065	4.6	20	39	740,505
2.7	70	1,399,419	19,514	3.3	17	34	592,039
2.3	64	1,158,545	18,323	2.8	15	28	519,026
1.8	55	904,266	16,387	2.3	12	26	455,056
1.3	39	615,865	13,949	1.9	10	21	345,095

#### Cost Control

Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(10)	(10)	(11)	(11)	(10)	(10)
\$464	18%	\$261	\$ 785	\$ 593	\$3.39
606	26	378	960	780	4.31
696	30	431	1,041	866	4.98
810	33	509	1,135	948	5.54
965	39	596	1,288	1,207	6.51

<u>Value and Cost of Production</u>			<u>Profitability</u>		
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income w/Apprec.	Net Farm Inc. w/o Apprec.	Labor & Mgt. Inc. Per Oper.
(10)	(10)	(10)	(3)	(3)	(3)
\$2,891	\$ 8.23	\$12.58	\$65,905	\$64,670	\$31,948
2,706	9.65	13.89	46,189	41,996	21,520
2,507	10.46	14.47	27,791	26,490	9,774
2,263	11.41	15.61	13,438	11,997	561
1,890	12.74	17.92	-704	-153	-13,203

\*Page number of the participant's DFBS where the factor is located.

# Regional Financial Analysis Chart

The farm financial analysis chart is designed just like the Farm Business Chart and may be used to assess the financial health of the farm business. Most of the financial measures used in the chart are defined on pages 7, 8, 11, and 15 of this publication. References to DFBS output page numbers for participating dairy farmers are provided in the table headings.

## FINANCIAL ANALYSIS CHART 31 Eastern New York Dairy Farm Renters, 1994

### Liquidity (repayment)

Planned Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio	Debt Payments as Percent of Milk Sales	Debt Per Cow
(8)*	(12)	(8)	(8)	(5)
\$ 0	\$526	1.56	0%	\$ 29
60	362	0.64	3	470
195	211	0.24	8	930
318	82	0.00	10	1,619
504	-59	-0.25	21	2,415

### Solvency

Leverage Ratio**	Percent Equity	Debt/Asset Ratio Current & Intermediate
	(5)	(5)
0.01	98%	0.01
0.16	84	0.13
0.33	71	0.23
0.74	55	0.40
2.09	33	0.59

### Profitability

Percent Rate of Return with appreciation on:	
Equity	Investment***
(3)	(3)
15%	12%
7	7
0	1
-12	-7
-36	-14

### Efficiency (Capital)

Asset Turnover Ratio	Machinery Investment Per Cow	Total Farm Assets Per Cow	Change in Net Worth w/Appreciation
(11)	(11)	(11)	(6)
1.17	\$ 316	\$4,978	\$ 37,536
0.84	896	4,223	20,344
0.75	1,133	3,616	5,752
0.69	1,432	3,111	-1,870
0.58	2,037	2,400	-18,710

\*Page number of the participant's DFBS where the factor is located.

\*\*Dollars of debt per dollar of equity, computed by dividing total liabilities by total equity.

\*\*\*Return on all farm capital (no deduction for interest paid) divided by total farm assets.

## IDENTIFY AND SET GOALS

If businesses are to be successful, they must have direction. Written goals help provide businesses with an identifiable direction over both the long and the short term. Goal setting is as important on a dairy farm as it is in other businesses. Written goals are a tool which farm operators can use to ensure that the business continues to move in the proper direction. Goals should be **SMART**:

1. Goals should be **Specific**.
2. Goals should be **Measurable**.
3. Goals should be **Achievable** but challenging.
4. Goals should be **Rewarding**.
5. You should designate a **Time** when each goal will be achieved.

Goal setting on a dairy farm does not have to be a complex process. In many cases it provides a process for writing down and agreeing on goals that you have already given some thought to. It is also important to remember that once you write out your goals they are not cast in concrete. If a change takes place which has a major impact on the farm business, the goals should be reworked to accommodate that change. Refer to your goals as often as necessary to keep the farm business progressing.

It is important to identify both objectives (long-range) and goals (short-range) when looking at the future of your farm business.

A suggested format for writing out your goals is as follows:

- a. Begin with a mission statement which describes why the business exists based on the preferences and values of the owners.
- b. Identify 4-6 objectives.
- c. Identify SMART goals.

## Worksheet for Setting Goals

## I. Mission and Objectives

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## GLOSSARY AND LOCATION OF COMMON TERMS

**Accounts Payable** - Open accounts or bills owed to feed and supply firms, cattle dealers, veterinarians and other providers of farm services and supplies.

**Accounts Receivable** - Outstanding receipts from items sold or sales proceeds not yet received such as the payment for December milk sales received in January.

**Accrual Expenses** - (defined on page 5)

**Accrual Receipts** - (defined on page 6)

**Annual Cash Flow Statement** - (defined on page 13)

**Appreciation** - (defined on page 7)

**Asset Turnover Ratio** - (defined on page 21)

**Balance Sheet** - A "snapshot" of the business financial position at a given point in time, usually December 31. The balance sheet equates the value of assets to liabilities plus net worth.

**bST Usage** - An estimate of percentage of herd that was injected with bovine somatotropin since February of 1994.

**Capital Efficiency** - The amount of capital invested per production unit. Relatively high investments per worker with low to moderate investments per cow imply efficient use of capital.

**Cash From Nonfarm Capital Used in the Business** - Transfers of money from nonfarm savings or investments to the farm business where it is used to pay operating expenses, make debt payments and/or capital purchases.

**Cash Flow Coverage Ratio** - (defined on page 15)

**Cash Paid** - (defined on page 4)

**Cash Receipts** - (defined on page 6)

**Change in Accounts Payable** - (defined on page 5)

**Change in Accounts Receivable** - (defined on page 6)

**Change in Inventory** - (defined on page 4)

**Current Portion** - Principal due in the next year for intermediate and long term debt.

**Dairy (farm)** - A farm business where dairy farming is the primary enterprise, operating and managing this farm is a full-time occupation for one or more people and cropland is owned.

**Dairy Cash-Crop (farm)** - Operating and managing this farm is the full-time occupation of one or more people, cropland is owned but crop sales exceed 10 percent of accrual milk receipts.

**Debt Per Cow** - Total end-of-year debt divided by end-of-year number of cows.

**Debt to Asset Ratios** - (defined on page 11)

**Dry Matter** - The amount or proportion of dry material that remains after all water is removed. Commonly used to measure dry matter percent and tons of dry matter in feed.

**Equity Capital** - The farm operator/manager's owned capital or farm net worth.

**Expansion Livestock** - Purchased dairy cattle and other livestock that cause an increase in herd size from the beginning to the end of the year.

**Farm Debt Payments as Percent of Milk Sales** - Amount of milk income committed to debt repayment, calculated by dividing planned debt payments by total milk receipts. A reliable measure of repayment ability, see page 15.

**Farm Debt Payments Per Cow** - Planned or scheduled debt payments per cow represent the repayment plan scheduled at the beginning of the year divided by the average number of cows for the year. This measure of repayment ability is used in the Financial Analysis Chart.

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

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

**Labor and Management Income** - (defined on page 8)

**Labor and Management Income Per Operator** - The return to the owner/manager's labor and management per full-time operator.

**Labor Efficiency** - Production capacity and output per worker.

**Liquidity** - Ability of business to generate cash to make debt payments or to convert assets to cash.

**Net Farm Income** - (defined on page 7)

**Net Worth** - The value of assets less liabilities equal net worth. It is the equity the owner has in owned assets.

**Operating Costs of Producing Milk** - (defined on page 20)

**Opportunity Cost** - The cost or charge made for using a resource based on its value in its most likely alternative use. The opportunity cost of a farmer's labor and management is the value he/she would receive if employed in his/her most qualified alternative position.

**Other Livestock Expenses** - All other dairy herd and livestock expenses not included in more specific categories. Other livestock expenses include; bedding, DHIC, milk house and parlor supplies, livestock board, registration fees and transfers.

**Part-Time Cash-Crop Dairy (farm)** - Operating and managing this farm is not a full-time occupation, crop sales exceed 10 percent of accrual milk receipts and cropland is owned.

**Part-Time Dairy (farm)** - Dairy farming is the primary enterprise, cropland is owned but operating and managing this farm is not a full-time occupation for one or more people.

**Personal Withdrawals and Family Expenditures Including Nonfarm Debt Payments** - All the money removed from the farm business for personal or nonfarm use including family living expenses, health and life insurance, income taxes, nonfarm debt payments, and investments.

**Profitability** - The return or net income the owner/manager receives for using one or more of his or her resources in the farm business. True "economic profit" is what remains after deducting all costs including the opportunity costs of the owner/manager's labor, management, and equity capital.

**Purchased Inputs Cost of Producing Milk** - (defined on page 20)

**Repayment Analysis** - An evaluation of the business' ability to make planned debt payments.

**Replacement Livestock** - Dairy cattle and other livestock purchased to replace those that were culled or sold from the herd during the year.

**Return on Equity Capital** - (defined on page 8)

**Return on Total Capital** - (defined on page 8)

**Return to Operators' Labor, Management, and Equity Capital** - (defined on page 7)

**Rotational Grazing** - The dairy herd is on pasture at least three months of the year, changing paddock at least every three days.

**Solvency** - The extent or ability of assets to cover or pay liabilities. Debt/asset and leverage ratios are common measures of solvency.

**Total Costs of Producing Milk** - (defined on page 20)

**Whole Farm Method** - A procedure used to calculate costs of producing milk on dairy farms without using enterprise cost accounts. All non-milk receipts are assigned a cost equal to their sale value and deducted from total farm expenses to determine the costs of producing milk.



## INDEX

	<u>Page(s)</u>		<u>Page(s)</u>
Accounts Payable .....	4,9	Financial Analysis Chart ...	24
Accounts Receivable .....	6,9	Financial Lease .....	9
Accrual Expenses .....	4,7	Income Statement .....	4
Accrual Receipts .....	6,7	Inflows .....	13
Acreage .....	3,17	Labor and Management	
Advanced Government		Income .....	8
Receipts .....	9,10	Labor and Management	
Amount Available		Income Per Operator .....	8
for Debt Service.....	15	Labor Efficiency .....	21
Annual Cash Flow		Land Resources .....	17
Statement .....	13	Liquidity .....	11
Appreciation .....	7,8,11,	Machinery Expenses .....	4,18
.....	12,19	Milk Production .....	19
Asset Turnover Ratio.....	21	Milking System .....	3
Balance Sheet .....	9	Money Borrowed .....	13
Barn Type .....	3	Net Farm Income .....	7
bST Usage.....	3	Net Investment .....	11
Business Type .....	3	Net Worth .....	9
Capital Efficiency .....	21	Number of Cows.....	19
Cash From Nonfarm		Operating Costs of	
Capital Used in		Producing Milk .....	20
the Business .....	13	Opportunity Cost .....	8
Cash Flow Coverage Ratio ..	15	Other Livestock Expenses ...	4
Cash Paid .....	4	Outflows .....	13
Cash Receipts .....	6,13	Personal Withdrawals and	
Change in Accounts		Family Expenditures	
Payable .....	4	Including Nonfarm	
Change in Accounts		Debt Payments .....	13
Receivable .....	6	Principal Payments .....	13
Change in Inventory .....	4,6	Profitability .....	7
Change in Net Worth .....	12	Purchased Inputs Cost	
Crop Expenses .....	4,18	of Producing Milk .....	20
Crop/Dairy Ratios .....	17	Receipts .....	6
Current Portion.....	9	Record System .....	3
Dairy (farm) .....	1	Repayment Analysis .....	15
Debt Per Cow .....	11	Replacement Livestock .....	4
Debt to Asset Ratios .....	11	Return on Equity Capital ...	8
Depreciation .....	4,11	Return on Total Capital ....	8
Dry Matter .....	17	Return to Operator's	
Equity Capital .....	9	Labor, Management,	
Expansion Livestock .....	4,13	and Equity Capital .....	7
Expenses .....	4	Rotational Grazing.....	18
Farm Business Chart.....	23	Solvency .....	11
Farm Debt Payments		Total Costs of	
as Percent of		Producing Milk .....	20
Milk Sales .....	15	Whole Farm Method .....	20
Farm Debt Payments		Worker Equivalent .....	3
Per Cow .....	15	Yields Per Acre .....	17

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