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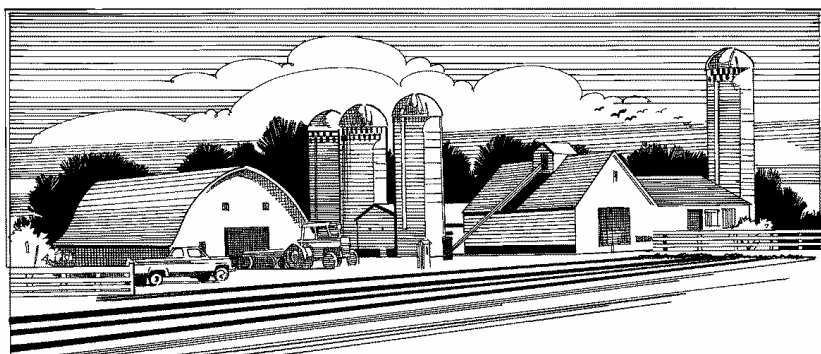
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# DAIRY FARM BUSINESS SUMMARY

## NEW YORK DAIRY FARM RENTERS 2006



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## 2006 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 six 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. Three 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 New York Dairy Farm Renter Business Summary is an average of 22 businesses that are renting substantially all of the farm real estate. The farm income, financial summary, and business analysis sections of this report include comparisons with average data for 54 owned dairy farms in New York that are similar in size and location to the farms that rent. This report is prepared in workbook form for farm renters to use in the systematic study of their farm business operations.

Business records for 22 farms in Albany, Chautauqua, Delaware, Erie, Essex, Genesee, Jefferson, Lewis, Orange, Rensselaer, Schenectady, Sullivan, Ulster, Washington and Wayne Counties are summarized in this publication (see Figure 1 on page 2). The 54 owned dairy farms summarized in this publication include farms from these counties that are similar in size to the renters.

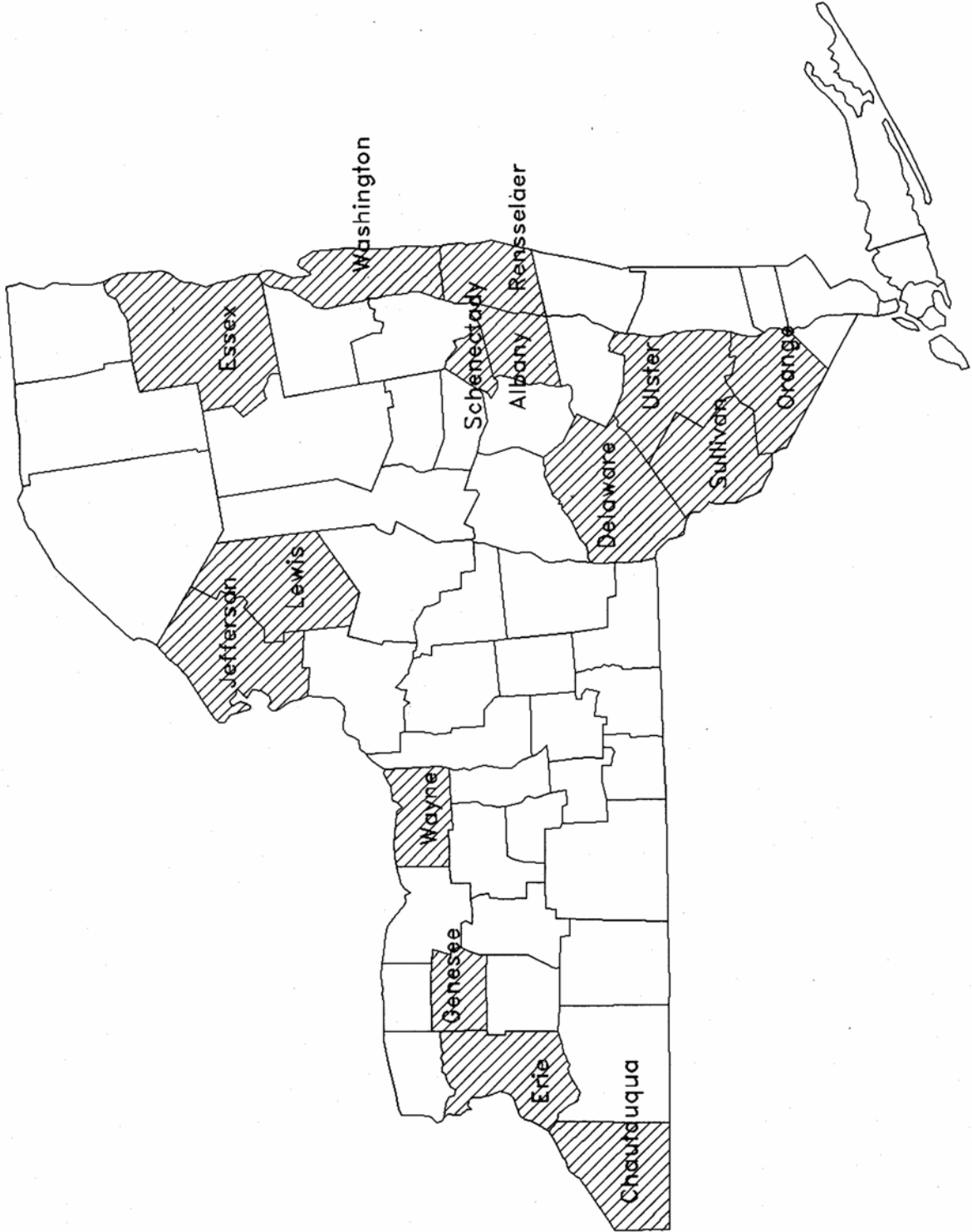
#### Use Comparative Profitability Data With Caution

The profitability analysis on page 8 implies that renting a dairy farm provides a greater return to the operator's labor and management than does owning the farm. Concessionary rental rates set by some land owners is a 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 land, building and fence repair; taxes; real estate rent and lease; depreciation; and interest on real estate investment averaged \$175 per tillable acre on the owned dairy farms compared to \$103 per tillable acre on the rented farms. On a per cow basis, these real estate costs averaged \$482 per cow on the owned dairy farms compared to \$261 on the rented farms. This accounts for a \$20,438 difference in costs between owned and rented farms. With this difference in cost structure, the renters averaged higher labor and management incomes per operator. A major factor is the lower interest on equity capital for renters versus farm owners. Opportunity cost of equity for renters was about half that for the owners.

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<sup>1</sup>Wayne A. Knoblauch, Linda D. Putnam and Jason Karszes, Dairy Farm Management Business Summary, New York, 2006, R.B. 2007-01, October 2007.

Figure 1. Location of 22 New York Dairy Farm Renters, 2006.



## 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 22 New York Dairy Farm Renters, 2006

<u>Type of Business</u>	<u>Number</u>	<u>bST Usage</u>	<u>Number</u>	
Single proprietorship	13	Used consistently	4	
Partnership	6	Used inconsistently	0	
Limited liability corporation	2	Started usage in 2006	0	
Subchapter S or C corporation	1	Stopped usage in 2006	0	
		Not used in 2006	18	
		Average percent usage, if used	53%	
<u>Milking System</u>	<u>Number</u>	<u>Labor Force*</u>	<u>My Farm</u>	<u>Average</u>
Dumping station	0	Operator 1	___ mo.	14.2
Pipeline	13	Operator 2	___ mo.	5.0
Herringbone parlor	5	Family paid	___ mo.	1.1
Other parlor	4	Family unpaid	___ mo.	3.2
<u>Type of Barn</u>	<u>Number</u>	Hired	___ mo.	8.5
Stanchion	13	Total	___ mo.	32.0
Freestall	7	Worker equivalent		
Combination	2	(total ÷ 12)	_____	2.67
<u>Dairy Records Service</u>	<u>Number</u>	Operator/Manager Equivalent	_____	1.36
Testing service	18			
On-farm system	0	<u>Land Use</u>	<u>My Farm</u>	<u>Average</u>
Other	0	Total acres rented	_____	315
None	4	Tillable acres rented	_____	222
<u>Business Record System</u>	<u>Number</u>	<u>Number of Cows</u>	<u>My Farm</u>	<u>Average</u>
Account book	6	Beg. year (owned)	_____	88
Accounting service	4	End year (owned & leased)	_____	89
On-farm computer	11	Average for year (owned & leased)	_____	88
Other	1			
<u>Milking Frequency</u>	<u>Number</u>	<u>Breed of Herd</u>	<u>My Farm</u>	<u>Percent</u>
2 times a day	20	Holstein	_____	89
3 times a day	2	Jersey	_____	6
Other	0	Other	_____	5

\*Based on hours actually worked by owner/operator, instead of standard 12 months per full-time owner/operator. The standard 12 months is used for operator/manager equivalent when calculating labor and management income per operator.

Predominate business characteristics of the 22 rented farms include the single proprietorship, pipeline milking system, stanchion or conventional stall barn, two time a day milking, herd records with a testing service, and an on-farm computer record system. Fifty percent of the renters were using on-farm computers compared to 52 percent of the owners.

The average size of the labor force on the rented farms was similar to the 2.79 worker equivalent on owned farms. The rented farms averaged 222 tillable acres compared to 248 tillable acres on the 54 owned dairy farms. The owned farms averaged 32 cows per worker, and the rented farms averaged 33 cows per worker. In 2006, the rented farms used labor resources more efficiently than the owned farms when comparing pounds of milk sold per worker.



Income Statement

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

CASH AND ACCRUAL FARM EXPENSES  
22 New York Dairy Farm Renters, 2006

Expense Item	Cash Paid	- Change in Inventory or Prepaid Exp.	+	Change in Accounts Payable	=	Accrual Expenses	Percent of Total
<u>Hired Labor</u>	\$ 19,085	\$ 0	<<<*	\$ -27		\$ 19,057	8
<u>Feed</u>							
Dairy grain & concentrate	69,661	-1,804		2,452		73,916	30
Dairy roughage	10,873	291		1,094		11,676	5
Nondairy	54	9		0		45	<1
Professional nutritional services	0	0	<<	0		0	0
<u>Machinery</u>							
Machinery, hire, rent & lease	5,418	-727	<<	218		6,364	3
Machinery repair & farm veh. exp.	14,590	-9		640		15,239	6
Fuel, oil & grease	11,640	-308		147		12,095	5
<u>Livestock</u>							
Replacement livestock	2,660	0	<<	0		2,660	1
Breeding	4,704	-189		56		4,949	2
Vet & medicine	7,240	23		189		7,406	3
Milk marketing	15,954	0	<<	-35		15,919	7
Bedding	1,914	-51		118		2,083	1
Milking supplies	5,969	94		754		6,628	3
Cattle lease & rent	0	0	<<	0		0	0
Custom boarding	2,472	0	<<	838		3,310	1
bST expense	2,602	0		120		2,722	1
Livestock professional fees	2,261	0	<<	12		2,273	1
Other livestock expense	2,954	0		-7		2,947	1
<u>Crops</u>							
Fertilizer & lime	4,907	-2,649		4		7,560	3
Seeds & plants	3,238	-802		1		4,041	2
Spray, other crop expense	2,421	-189		95		2,705	1
Crop professional fees	131	0	<<	0		131	<1
<u>Real Estate</u>							
Land, building & fence repair	2,980	-32		66		3,078	1
Taxes	1,498	0	<<	0		1,498	1
Rent & lease	14,776	0	<<	799		15,574	6
<u>Other</u>							
Insurance	3,899	0	<<	0		3,899	2
Utilities (farm share)	10,131	0	<<	7		10,138	4
Interest paid	4,620	0	<<	0		4,620	2
Other professional fees	1,095	0	<<	11		1,106	<1
Miscellaneous	1,410	0		23		1,432	1
Total Operating	\$ 231,154	\$ -6,343		\$ 7,574		\$ 245,071	100
Expansion livestock	\$ 3,613	\$ 0	<<	\$ 0		\$ 3,613	
Extraordinary expense	0	0	<<	0		0	
Machinery depreciation						12,217	
Building depreciation						1,050	
TOTAL ACCRUAL EXPENSES						\$ 261,951	

\*A change in prepaid expense is noted by <<.

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, 2007 rent paid in 2006. A positive change is the amount the prepayment account increased from beginning to end year, a negative change indicates a decline 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 Exp.	+	Change in Accounts Payable	=	Accrual Expenses
<u>Hired Labor</u>	\$ _____		\$ _____	<<*	\$ _____		\$ _____
<u>Feed</u>							
Dairy grain & concentrate	_____		_____		_____		_____
Dairy roughage	_____		_____		_____		_____
Nondairy	_____		_____		_____		_____
Professional nutritional services	_____		_____	<<	_____		_____
<u>Machinery</u>							
Machinery, hire, rent & lease	_____		_____	<<	_____		_____
Machinery repair & farm veh. exp.	_____		_____		_____		_____
Fuel, oil & grease	_____		_____		_____		_____
<u>Livestock</u>							
Replacement livestock	_____		_____	<<	_____		_____
Breeding	_____		_____		_____		_____
Vet & medicine	_____		_____		_____		_____
Milk marketing	_____		_____	<<	_____		_____
Bedding	_____		_____		_____		_____
Milking supplies	_____		_____		_____		_____
Cattle lease & rent	_____		_____	<<	_____		_____
Custom boarding	_____		_____	<<	_____		_____
bST expense	_____		_____		_____		_____
Livestock professional fees	_____		_____	<<	_____		_____
Other livestock expense	_____		_____		_____		_____
<u>Crops</u>							
Fertilizer & lime	_____		_____		_____		_____
Seeds & plants	_____		_____		_____		_____
Spray, other crop expense	_____		_____		_____		_____
Crop professional fees	_____		_____	<<	_____		_____
<u>Real Estate</u>							
Land, building & fence repair	_____		_____		_____		_____
Taxes	_____		_____	<<	_____		_____
Rent & lease	_____		_____	<<	_____		_____
<u>Other</u>							
Insurance	_____		_____	<<	_____		_____
Utilities (farm share)	_____		_____	<<	_____		_____
Interest paid	_____		_____	<<	_____		_____
Other professional fees	_____		_____	<<	_____		_____
Miscellaneous	_____		_____		_____		_____
Total Operating	\$ _____		\$ _____		\$ _____		\$ _____
Expansion livestock	\$ _____		\$ _____	<<	\$ _____		\$ _____
Extraordinary expense	\$ _____		\$ _____	<<	\$ _____		\$ _____
Machinery depreciation							
Building depreciation							
<b>TOTAL ACCRUAL EXPENSES</b>							\$ _____

\*A change in prepaid expense is noted by <<.

CASH AND ACCRUAL FARM RECEIPTS  
22 New York Dairy Farm Renters, 2006

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk Sales	\$ 237,933				\$ -844		\$ 237,088
Dairy cattle	12,714		\$ 10,700		32		23,446
Dairy calves	5,295		493		0		5,789
Other livestock	90		64		0		154
Crops	551		-614		-193		-256
Government receipts	12,670		0*		0		12,670
Custom machine work	2,100				0		2,100
Gas tax refund	198				0		198
Other	2,579				0		2,579
- Nonfarm noncash capital**	_____		(-) 0		_____		(-) 0
Total Accrual Receipts	\$ 274,131		\$ 10,643		\$ -1,005		\$ 283,769

\*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	_____		_____		_____		_____
- Nonfarm noncash capital**	_____		(-) _____		_____		(-) _____
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 New York Dairy Farm Renters and Owners, 2006

Item	22 Dairy Farm Renters	54 Dairy Farm Owners	My Farm
Total accrual receipts	\$ 283,769	\$ 288,010	\$ _____
+ Appreciation: Livestock	4,977	1,701	_____
Machinery	155	4,554	_____
Real Estate	1,359	11,497	_____
Other Stock & Certificates	<u>103</u>	<u>155</u>	_____
= Total Including Appreciation	\$ 290,363	\$ 305,917	\$ _____
- Total accrual expenses	<u>261,951</u>	<u>276,544</u>	_____
= Net Farm Income (with appreciation)	\$ 28,411	\$ 29,372	\$ _____
Per cow	\$ 323	\$ 325	\$ _____
Net Farm Income (without appreciation)	\$ 21,817	\$ 11,466	\$ _____
Per cow	\$ 248	\$ 127	\$ _____

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 from net farm income excluding appreciation a charge for unpaid family labor and the opportunity cost of using equity capital at a 5 percent interest rate. The interest charge of 5 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  
New York Dairy Farm Renters and Owners, 2006

Item	22 Dairy Farm Renters	54 Dairy Farm Owners	My Farm
Net farm income without appreciation	\$ 21,817	\$ 11,466	\$ _____
- Family labor unpaid @ \$2,300 per month	- 7,433	- 8,237	- _____
- Interest on average equity capital @ 5% real rate	- <u>17,015</u>	- <u>34,680</u>	- _____
= Labor & Management Income	\$ -2,631	\$ -31,452	\$ _____
Labor & Management Income per Operator/Manager	\$ -1,935	\$ -22,627	\$ _____

Return to equity capital measures the net return remaining for the farmer's equity or owned capital after a charge has been made for unpaid family labor and 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. Net farm income from operations ratio is net farm income (without appreciation) divided by total accrual receipts.

RETURN TO EQUITY CAPITAL AND RETURN TO ALL CAPITAL  
New York Dairy Farm Renters and Owners, 2006

Item	22 Dairy Farm Renters	54 Dairy Farm Owners	My Farm
Net farm income with appreciation	\$ 28,411	\$ 29,372	\$ _____
- Family labor unpaid @ \$2,300 per month	\$ 7,433	\$ 8,237	\$ _____
- Value of operators' labor & management	<u>42,368</u>	<u>39,528</u>	_____
= Return to equity capital with appreciation	\$ -21,390	\$ -18,393	\$ _____
+ Interest paid	<u>4,620</u>	<u>13,075</u>	_____
= Return to all capital with appreciation	\$ -16,770	\$ -5,318	\$ _____
Return to equity capital without appreciation	\$ -27,984	\$ -36,300	\$ _____
Return to all capital without appreciation	\$ -23,364	\$ -23,225	\$ _____
Rate of return on average equity capital:			
with appreciation	-6.4%	-2.7%	_____ %
without appreciation	-8.3%	-5.2%	_____ %
Rate of return on all capital:			
with appreciation	-3.9%	-0.6%	_____ %
without appreciation	-5.4%	-2.6%	_____ %
Net farm income from operations ratio	0.08	0.04	_____

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.

2006 FARM BUSINESS & NONFARM BALANCE SHEET  
22 New York Dairy Farm Renters

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 4,981	\$ 5,102	Accounts payable	\$ 4,898	\$ 12,472
Accounts receivable	20,383	19,378	Operating debt	7,315	2,580
Prepaid expenses	727	0	Short term	0	542
Feed & supplies	<u>50,619</u>	<u>44,389</u>	Advanced gov't. receipt	0	0
Total Current	\$ 76,709	\$ 68,868	Current portion:		
			Intermediate	8,026	12,836
			Long term	<u>652</u>	<u>687</u>
			Total Current	\$ 20,891	\$ 29,117
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy Cows:			Structured debt		
owned	\$ 115,259	\$ 120,396	1-10 years	\$ 59,486	\$ 56,782
leased	0	0	Financial lease		
Heifers	59,371	70,404	(cattle & machinery)	0	0
Bulls & other livestock	366	430	Farm Credit stock	<u>125</u>	<u>171</u>
Mach. & equip. owned	119,113	119,594	Total Intermediate	\$ 59,611	\$ 56,953
Mach. & equip. leased	0	0			
Farm Credit stock	125	171	<u>Long Term</u>		
Other stock & cert.	<u>25,529</u>	<u>22,676</u>	Structured debt		
Total Intermediate	\$ 319,763	\$ 333,670	≥ 10 years	\$ 12,894	\$ 12,030
<u>Long Term</u>			Financial lease		
Land & buildings:			(structures)	<u>2,142</u>	<u>1,497</u>
owned	\$ 32,823	\$ 33,333	Total Long Term	\$ 15,036	\$ 13,527
leased	<u>2,142</u>	<u>1,497</u>			
Total Long Term	\$ 34,965	\$ 34,830	Total Farm Liabilities	\$ 95,538	\$ 99,597
Total Farm Assets	\$ 431,438	\$ 437,368	FARM NET WORTH	\$ 335,899	\$ 337,771
(Average for 7 farms reporting)			Nonfarm Liabilities*		
Nonfarm Assets*	Jan.1	Dec. 31	& Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	\$ 16,528	\$ 13,588	Nonfarm Liabilities	\$ 643	\$ 2,839
Cash value life ins.	0	0	NONFARM NET WORTH	\$ 36,897	\$ 33,413
Nonfarm real estate	0	0			
Auto (personal share)	2,214	1,857	FARM & NONFARM**	Jan. 1	Dec. 21
Stocks & bonds	1,724	2,486	Total Assets	\$ 468,977	\$ 473,620
Household furn.	7,857	7,857	Total Liabilities	<u>96,181</u>	<u>102,436</u>
All other	<u>9,215</u>	<u>10,464</u>	TOTAL FARM & NON-		
Total Nonfarm	\$ 37,539	\$ 36,252	FARM NET WORTH	\$ 372,796	\$ 371,184

\*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.

Advance government receipts are included as current liabilities. Government payments received in 2006 that are for participation in the 2007 program are the end year balance and payments received in 2005 for participation in the 2006 program are the beginning year balance.

Date \_\_\_\_\_

2006 FARM BUSINESS & 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	_____	_____
			Operating debt	_____	_____
Accounts receivable	_____	_____	Short term	_____	_____
Prepaid expenses	_____	_____	Advanced gov't. receipt	_____	_____
Feed & supplies	_____	_____	Current portion:		
Total Current	_____	_____	Intermediate	_____	_____
			Long term	_____	_____
			Total Current	_____	_____
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy Cows:					
owned	_____	_____			
leased	_____	_____	Financial lease	_____	_____
Heifers	_____	_____	(cattle & machinery)	_____	_____
Bulls & other livestock	_____	_____	Farm Credit stock	_____	_____
Mach. & equip. owned	_____	_____	Total Intermediate	_____	_____
Mach. & equip. leased	_____	_____			
Farm Credit stock	_____	_____	<u>Long Term</u>		
Other stock & cert.	_____	_____			
Total Intermediate	_____	_____	Financial lease	_____	_____
<u>Long Term</u>			(structures)	_____	_____
Land & buildings:			Total Long Term	_____	_____
owned	_____	_____			
leased	_____	_____	Total Farm Liabilities	_____	_____
Total Long Term	_____	_____			
Total Farm Assets	_____	_____	FARM NET WORTH	_____	_____
Nonfarm Assets			Nonfarm Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
Personal cash, checking & savings	_____	_____	Nonfarm Liabilities	_____	_____
Cash value life ins.	_____	_____			
Nonfarm real estate	_____	_____			
Auto (personal share)	_____	_____	Total Nonfarm Liabilities	_____	_____
Stocks & bonds	_____	_____			
Household furn.	_____	_____	Nonfarm Net Worth	_____	_____
All other	_____	_____			
Total Nonfarm	_____	_____			
TOTAL FARM & NONFARM			Jan. 1	Dec. 31	
Total Farm and Nonfarm Assets			_____	_____	
Less Total Farm & Nonfarm Liabilities			_____	_____	
Farm & Nonfarm Net Worth			_____	_____	

Balance sheet analysis involves examination of relative asset and debt levels for the business. 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 business solvency and the potential capacity to borrow. The leverage ratio is the dollars of debt per dollar of equity, computed by dividing total farm liabilities by farm net worth. Debt levels per productive unit represent old standards that are still useful if used with measures of cash flow and repayment ability. A current ratio of less than 1.5 or that has been falling warrants additional evaluation. The amount of working capital that is adequate must be related to the size of the farm business.

**BALANCE SHEET ANALYSIS**  
New York Dairy Farm Renters and Owners, 2006

Item	22 Dairy Farm Renters	54 Dairy Farm Owners	My Farm
<u>Financial Ratios - Farm:</u>			
Percent equity	77%	77%	_____ %
Debt/asset ratio: total	0.23	0.23	_____
long term	0.39	0.20	_____
intermediate & current	0.21	0.27	_____
Leverage ratio	0.29	0.30	_____
Current ratio	2.37	1.60	_____
Working capital      \$39,752      as % of total expenses	15%	(\$30,302) 11%	_____ %
<u>Farm Debt Analysis:</u>			
Accounts payable as % of total debt	13%	7%	_____ %
Long term liabilities as a % of total debt	14%	40%	_____ %
Current & intermediate liabilities as a % of total debt	86%	60%	_____ %
Cost of term debt (weighted average)	4.0%	5.6%	_____ %
<u>Farm Debt Levels Per Cow:</u>			
Total farm debt	\$ 1,122	\$ 2,355	\$ _____
Long term debt	\$ 152	\$ 940	\$ _____
Intermediate & long term debt	\$ 794	\$ 1,793	\$ _____
Intermediate & current debt	\$ 970	\$ 1,414	\$ _____

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**  
New York Dairy Farm Renters and Owners, 2006

Item	22 Dairy Farm Renters	54 Dairy Farm Owners	My Farm
Value beginning of year	\$ 119,113	\$ 179,123	\$ _____
Purchases	\$ 13,464	\$ 18,779	\$ _____
+ Nonfarm noncash transfer	0	722	_____
- Net Sales	921	1,413	_____
- Depreciation	<u>12,217</u>	<u>16,682</u>	_____
= Net investment	326	1,407	_____
+ Appreciation	<u>155</u>	<u>4,554</u>	_____
= Value end of year	\$ 119,594	\$ 185,084	\$ _____



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)  
22 New York Dairy Farm Renters, 2006

Item	Average	My Farm
Beginning of year farm net worth	\$ 335,899	\$ _____
Net farm income without appreciation	\$ 21,817	\$ _____
+ Nonfarm cash income	+ 5,274	+ _____
- Personal withdrawals & family expenditures excluding nonfarm borrowings	<u>- 35,098</u>	- _____
RETAINED EARNINGS	+ \$ -8,007	+ \$ _____
Nonfarm noncash transfers to farm	\$ 0	\$ _____
+ Cash used in business from nonfarm capital	+ 2,769	+ _____
- Note/mortgage from farm real estate sold (nonfarm)	<u>- 0</u>	- _____
CONTRIBUTED/WITHDRAWN CAPITAL	+ \$ 2,769	+ \$ _____
Appreciation	\$ 6,594	\$ _____
- Lost capital	<u>- 250</u>	- _____
CHANGE IN VALUATION EQUITY	+ \$ 6,344	+ \$ _____
IMBALANCE/ERROR	<u>- \$ -766</u>	- \$ _____
End of year farm net worth*	= \$ 337,771	= \$ _____
Change in net worth with appreciation.	\$ 1,872	\$ _____
<hr/>		
<u>Change in Net Worth</u>		
Without appreciation	\$ -4,722	\$ _____
With appreciation	\$ 1,872	\$ _____

\*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  
22 New York Dairy Farm Renters, 2006

Item	Average	
<u>Cash Flow from Operating Activities</u>		
Cash farm receipts	\$ 274,131	
- Cash farm expenses	231,154	
- Extraordinary expense	<u>0</u>	
= Net cash farm income		\$ 42,977
Personal withdrawals & family expenses including nonfarm debt payments	\$ 35,916	
- Nonfarm income	<u>5,274</u>	
- Net cash withdrawals from the farm		\$ 30,643
= Net Provided by Operating Activities		\$ 12,334
<u>Cash Flow From Investing Activities</u>		
Sale of assets: Machinery	\$ 921	
+ real estate	0	
+ other stock & certificates	<u>3,727</u>	
= Total asset sales		\$ 4,648
Capital purchases: expansion livestock	\$ 3,613	
+ machinery	13,464	
+ real estate	451	
+ other stock & certificates	<u>771</u>	
- Total invested in farm assets		\$ 18,299
= Net Provided by Investment Activities		\$ -13,650
<u>Cash Flow From Financing Activities</u>		
Money borrowed (intermediate & long term)	\$ 21,167	
+ Money borrowed (short term)	542	
+ Increase in operating debt	0	
+ Cash from nonfarm capital used in business	2,769	
+ Money borrowed - nonfarm	<u>818</u>	
= Cash inflow from financing		\$ 25,297
Principal payments (intermediate & long term)	\$ 19,889	
+ Principal payments (short term)	0	
+ Decrease in operating debt	<u>4,736</u>	
- Cash outflow for financing		\$ 24,625
= Net Provided by Financing Activities		\$ 672
<u>Cash Flow From Reserves</u>		
Beginning farm cash, checking & savings	\$ 4,981	
- Ending farm cash, checking & savings	<u>5,102</u>	
= Net Provided from Reserves		\$ -122
<u>Imbalance (error)</u>		\$ -766

## ANNUAL CASH FLOW STATEMENT

Item	My Farm	
<u>Cash Flow from Operating Activities</u>		
Cash farm receipts	\$ _____	
- Cash farm expenses	_____	
- Extraordinary expense	_____	
= Net cash farm income		\$ _____
Personal withdrawals & family expenses including nonfarm debt payments	\$ _____	
- Nonfarm income	_____	
- Net cash withdrawals from the farm		\$ _____
= Net Provided by Operating Activities		\$ _____
<u>Cash Flow From Investing Activities</u>		
Sale of assets: Machinery	\$ _____	
+ real estate	_____	
+ other stock & certificates	_____	
= Total asset sales		\$ _____
Capital purchases: expansion livestock	\$ _____	
+ machinery	_____	
+ real estate	_____	
+ other stock & certificates	_____	
- Total invested in farm assets		\$ _____
= Net Provided by Investment Activities		\$ _____
<u>Cash Flow From Financing Activities</u>		
Money borrowed (intermediate & long term)	\$ _____	
+ Money borrowed (short term)	_____	
+ Increase in operating debt	_____	
+ Cash from nonfarm capital used in business	_____	
+ Money borrowed - nonfarm	_____	
= Cash inflow from financing		\$ _____
Principal payments (intermediate & 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>		\$ _____

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 2007. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2007 debt payments shown below.

**FARM DEBT PAYMENTS PLANNED**  
Same 17 New York Dairy Farm Renters, 2005 & 2006\*

Debt Payments	Average			My Farm		
	2006 Payments		Planned 2007	2006 Payments		Planned 2007
	Planned	Made		Planned	Made	
Long-term	\$ 1,836	\$ 1,460	\$ 1,568	\$ _____	\$ _____	\$ _____
Intermediate-term	20,603	25,094	18,319	_____	_____	_____
Short-term	0	0	702	_____	_____	_____
Operating (net red.)	118	6,129	253	_____	_____	_____
Accounts payable (net reduction)	<u>353</u>	<u>135</u>	<u>325</u>	_____	_____	_____
Total	\$ 22,910	\$ 32,817	\$ 21,167	\$ _____	\$ _____	\$ _____
Per cow	\$ 233	\$ 334		\$ _____	\$ _____	
Per cwt. 2006 milk	\$ 1.19	\$ 1.70		\$ _____	\$ _____	
Percent of total 2006 receipts	7%	10%		_____	_____	
Percent of 2006 milk receipts	9%	12%		_____	_____	

\*Farms that completed Dairy Farm Business Summaries for both 2005 and 2006.

The cash flow coverage ratio and debt coverage ratio measure the ability of the farm business to meet its planned debt payment schedule. The ratios show the percentage of planned payments (as of December 31, 2005) that could have been made with the amount available for debt service in 2006. Farmers that did not participate in DFBS last year will find in their report coverage ratios based on planned debt payments for 2007.

**COVERAGE RATIOS**  
Same 17 New York Dairy Farm Renters, 2005 & 2006

Item	Average	Item	My Farm
<u>Cash Flow Coverage Ratio</u>		<u>Debt Coverage Ratio</u>	
Cash farm receipts	\$ 306,893	Net farm income (w/o appreciation)	\$ 24,676
- Cash farm expenses	255,436	+ Depreciation	14,859
+ Interest paid (cash)	5,286	+ Interest paid (accrual)	5,286
- Net personal withdrawals from farm*	<u>32,940</u>	- Net personal withdrawals from farm*	<u>32,940</u>
(A) = Amount Available for Debt Service	\$ 23,804	(A') = Repayment Capacity	\$ 11,882
(B) = Debt Payments Planned for 2006 (as of December 31, 2005)	\$ 22,910	(B) = Debt Payments Planned for 2006 (as of December 31, 2005)	\$ 22,910
(A/B)=Cash Flow Coverage Ratio for 2006	1.04	(A'/B)=Debt Coverage Ratio for 2006	0.52
-----			
Same 48 New York Dairy Farm Owners, 2005 & 2006			
(A) = Amount Available for Debt Service	\$ 27,004	(A') = Repayment Capacity	\$ 17,825
(B) = Debt Payments Planned for 2006	37,360	(B) = Debt Payments Planned for 2006	37,360
(A/B)=Cash Flow Coverage Ratio for 2006	0.72	(A'/B)=Debt Coverage Ratio for 2006	0.48

\*Personal withdrawals and family expenditures less nonfarm income and nonfarm money borrowed. If family withdrawals are excluded, or inaccurately included, the coverage ratios will be incorrect.

## ANNUAL CASH FLOW WORKSHEET

Item	22 Dairy	My Farm		Expected Change	2007 Projection
	Farm Renters	Total	Per Cow		
Average number of cows	88				
<u>Accrual Operating Receipts</u>	(per cow)				
Milk	\$2,698	\$	\$		\$
Dairy cattle	267				
Dairy calves	66				
Other livestock	2				
Crops	-3				
Miscellaneous receipts	<u>200</u>				
Total	\$3,230	\$	\$		\$
<u>Accrual Operating Expenses</u>					
Hired labor	\$ 217	\$	\$		\$
Dairy grain & concentrate	841				
Dairy roughage	133				
Nondairy feed	1				
Professional nutritional services	0				
Machinery hire, rent & lease	72				
Machinery repair & vehicle exp.	173				
Fuel, oil & grease	138				
Replacement livestock	30				
Breeding	56				
Vet & medicine	84				
Milk marketing	181				
Bedding	24				
Milking supplies	75				
Cattle lease	0				
Custom boarding	38				
bST expense	31				
Livestock professional fees	26				
Other livestock expense	34				
Fertilizer & lime	86				
Seeds & plants	46				
Spray & other crop expense	31				
Crop professional fees	1				
Land, building & fence repair	35				
Taxes	17				
Real estate rent & lease	177				
Insurance	44				
Utilities	115				
Misc. & other professional fees	<u>29</u>				
Total Less Interest Paid	\$2,737	\$	\$	\$	\$
<u>Net Accrual Operating Income</u>	(Total)				
(without interest paid)	\$ 43,318	\$			\$
- Change in livestock & crop inv.	10,643				
- Change in accounts receivable	-1,005				
- Change in feed & supply inv.*	-6,343				
+ Change in accounts payable**	<u>7,574</u>				
NET CASH FLOW	\$ 47,597	\$			\$
- Net family withdrawals	<u>29,238</u>				
Available for Farm Debt & Investments	\$ 18,359	\$			\$
- Farm debt payments	<u>29,215</u>				
Available for Farm Investments	\$-10,856	\$			\$
- Capital purchases: cattle, machinery & improvements	<u>18,299</u>	\$		\$	\$
Additional Capital Needed	\$ 29,155	\$			\$

\*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  
New York Dairy Farm Renters Reporting, 2006

Item	Average of Farms Reporting			My Farm	
	<u>Farms</u>	<u>Acres</u>	<u>Production/Acre*</u>	<u>Acres</u>	<u>Production/Acre</u>
<u>Crop Yields</u>					
Hay crop	17	169	2.41 tons DM	_____	_____ tons DM
Corn silage	14	83	11.34 tons 3.73 tons DM	_____	_____ tons _____ tons DM
Other forage	0	0	0.00 tons DM	_____	_____ tons DM
Total forage	17	239	2.78 tons DM	_____	_____ tons DM
Corn grain	3	73	86 bushels	_____	_____ bushels
Oats	0	0	0 bushels	_____	_____ bushels
Wheat	0	0	0 bushels	_____	_____ bushels
Other crops	3	60		_____	
Tillable pasture	6	39		_____	
Idle	4	47		_____	
Total Tillable Acres	22	222		_____	

\*2006 average yields for 54 Dairy farm owners in New York included: all hay crops, 2.5 tons dry matter per acre; corn silage, 15.0 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 FOR FARMS GROWING FORAGES  
New York Dairy Farm Renters and Owners, 2006

Item	22 Dairy Farm Renters	54 Dairy Farm Owners	My Farm
Total tillable acres per cow	3.08	2.75	_____
Total forage acres per cow	2.58	2.44	_____
Harvested forage dry matter, tons per cow	7.17	7.79	_____

Average fertilizer and lime, seeds and plants, and spray and other crop expenses have been computed per tillable acre in the first column of the table below for all farms that grew forages. Additional expense items such as fuels, labor, and machinery repairs are not included. There was not a sufficient number of renting farms providing a breakdown in expenses for hay crop and corn. Rotational grazing was used on 5 rented farms and 17 owned farms.

**CROP RELATED ACCRUAL EXPENSES**  
New York Dairy Farm Renters and Owners, 2006

Expense	Total Per Tillable Acre	Hay Crop		All Corn Per Acre	Corn Silage Per Ton DM	Corn Grain Per Dry Shell Bu.
		Per Acre	Per Ton DM			
<u>Dairy Farm Renters:</u> -----NO FARMS REPORTED THIS DATA-----						
Fertilizer & lime	\$27.32					
Seeds & plants	14.22					
Spray & other crop expense	<u>7.37</u>					
Total	\$48.91					
<u>Dairy Farm Owners:</u> -----Average of 10 Farms Reporting Individual Crop Costs-----						
Fertilizer & lime	\$32.24	\$ 26.44	\$ 15.80	\$ 61.55	\$ 15.45	\$ 0.27
Seeds & plants	17.02	7.33	2.88	41.77	9.27	0.21
Spray & other crop expense	<u>13.04</u>	<u>1.70</u>	<u>0.75</u>	<u>51.74</u>	<u>10.75</u>	<u>0.20</u>
Total	\$62.30	\$ 35.47	\$ 19.43	\$155.06	\$ 35.47	\$ 0.68
<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 FOR FARMS GROWING FORAGES**  
New York Dairy Farm Renters and Owners, 2006

Item	Average Per Tillable Acre		My Farm	
	17 Dairy Farm Renters	54 Dairy Farm Owners	Total Expenses	Per Tillable Acre
Fuel, oil & grease	\$ 48.94	\$ 51.29	\$ _____	\$ _____
Machine repair & farm vehicle expense	64.55	72.63	_____	_____
Machine hire, rent & lease	28.57	20.20	_____	_____
Interest (5%)	25.68	36.89	_____	_____
Depreciation	<u>49.95</u>	<u>67.22</u>	_____	_____
Total	\$217.69	\$248.23	\$ _____	\$ _____

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 the following 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  
New York Dairy Farm Renters and Owners, 2006

Item	Dairy Cows		Heifers					
	No.	Value	Bred		Open		Calves	
	No.	Value	No.	Value	No.	Value	No.	Value
<u>22 Dairy Farm Renters:</u>								
Beginning year (owned)	88	\$ 115,259	20	\$ 26,620	31	\$ 25,264	16	\$ 7,486
+ Change w/o apprec.		1,627		4,800		4,273		493
+ Appreciation		<u>3,509</u>		<u>468</u>		<u>895</u>		<u>105</u>
End year (owned)	89	\$ 120,395	25	\$ 31,889	35	\$ 30,432	16	\$ 8,084
End including leased	89							
Average number	88		73	(all age groups)				
<u>54 Dairy Farm Owners:</u>								
Beginning year (owned)	91	\$ 128,982	24	\$ 33,469	27	\$ 24,346	20	\$ 10,983
+ Change w/o apprec.		683		843		784		1,125
+ Appreciation		<u>1,538</u>		<u>225</u>		<u>417</u>		<u>-523</u>
End year (owned)	90	\$ 131,204	25	\$ 34,536	27	\$ 25,547	22	\$ 11,585
End including leased	90							
Average number	90		73	(all age groups)				
<u>My Farm:</u>								
Beginning year (owned)	—	\$ _____	—	\$ _____	—	\$ _____	—	\$ _____
+ Change w/o apprec.		_____		_____		_____		_____
+ Appreciation		_____		_____		_____		_____
End 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.

MILK PRODUCTION  
New York Dairy Farm Renters and Owners, 2006

Item	22 Dairy Farm Renters	54 Dairy Farm Owners	My Farm
Total milk sold, pounds	1,733,083	1,734,762	_____
Milk sold per cow, pounds	19,726	19,224	_____
Average milk plant test, % butterfat	3.42%	3.54%	_____

Monitoring and evaluating culling practices and experiences on an annual basis are important herd management tools. Culling rate can have an affect on both milk per cow and profitability.

ANIMALS LEAVING THE HERD  
New York Dairy Farm Renters and Owners, 2006

Item	22 Dairy Farm Renters		54 Dairy Farm Owners		My Farm	
	Number	Percent*	Number	Percent*	Number	Percent*
Cows sold for beef	21	24.0	21	22.8	_____	_____
Cows sold for dairy	0	0.0	1	0.7	_____	_____
Cows died	5	6.1	5	6.0	_____	_____
Culling rate**		30.1		28.8	_____	_____

\*Percent of average number of cows in the herd. \*\* Cows sold for beef plus cows died.



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 cost of producing milk is estimated by deducting nonmilk accrual receipts from total accrual operating expenses plus expansion livestock purchased. Purchased input cost of producing milk is the operating cost plus depreciation. Total cost of producing milk includes the operating cost 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.

COST OF PRODUCING MILK AND ACCRUAL RECEIPTS FROM MILK  
New York Dairy Farm Renters and Owners, 2006

Item	22 Dairy Farm Renters		54 Dairy Farm Owners		My Farm	
	Total	Per Cwt.	Total	Per Cwt.	Total	Per Cwt.
<u>Accrual Cost of Producing Milk</u>						
Operating cost	\$202,004	\$11.66	\$204,705	\$11.80	\$ _____	\$ _____
Purchased input cost	\$215,271	\$12.42	\$228,697	\$13.18	\$ _____	\$ _____
Total cost	\$282,088	\$16.28	\$311,142	\$17.94	\$ _____	\$ _____
<u>Accrual Receipts from Milk</u>	\$237,088	\$13.68	\$240,162	\$13.84	\$ _____	\$ _____
Net Milk Receipts	\$221,170	\$12.76	\$221,548	\$12.77	\$ _____	\$ _____

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  
New York Dairy Farm Renters and Owners, 2006

Item	Average Per Cwt. Milk		My Farm
	22 Dairy Farm Renters	54 Dairy Farm Owners	Per Cwt.
Purchased dairy grain & concentrate	\$4.27	\$4.43	\$ _____
Purchased dairy roughage	0.67	0.13	_____
Total Purchased Dairy Feed	\$4.94	\$4.56	\$ _____
Purchased grain & concentrate as % of milk receipts	29%	32%	_____ %
Purchased feed & crop expense	\$5.77	\$5.47	\$ _____
Purchased feed & crop expense as % of milk receipts	41%	39%	_____ %
Breeding	\$0.29	\$0.25	\$ _____
Veterinary & medicine	0.43	0.52	_____
Milk marketing	0.92	1.07	_____
Bedding	0.12	0.18	_____
Milking supplies	0.38	0.41	_____
Cattle lease	0.00	0.01	_____
Custom boarding	0.19	0.14	_____
bST expense	0.16	0.10	_____
Livestock professional fees	0.13	0.08	_____
Other livestock expense	0.17	0.19	_____

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  
New York Dairy Farm Renters and Owners, 2006

Item	Per Worker	Per Cow	Per Tillable Acre
<u>22 Dairy Farm Renters:</u>			
Farm capital	\$ 162,698	\$ 4,944	\$ 1,953
Machinery & equipment	44,702	1,358	537
<u>Ratios</u>			
Asset turnover 0.67	Operating expense 0.86	Interest expense 0.02	Depreciation expense 0.05
<u>54 Dairy Farm Owners:</u>			
Farm capital	\$ 322,890	\$ 9,983	\$ 3,630
Machinery & equipment	65,631	2,029	738
<u>Ratios</u>			
Asset turnover 0.34	Operating expense 0.83	Interest expense 0.05	Depreciation expense 0.08
<u>My Farm:</u>			
Farm capital	\$ _____	\$ _____	\$ _____
Machinery & equipment	_____	_____	_____
<u>Ratios</u>			
Asset turnover _____	Operating expense _____	Interest expense _____	Depreciation expense _____

LABOR FORCE ANALYSIS  
New York Dairy Farm Renters and Owners, 2006

Efficiency	22 Dairy Farm Renters		54 Dairy Farm Owners		My Farm	
	Total	Per Worker	Total	Per Worker	Total	Per Worker
Cows, average number	88	33	90	32	_____	_____
Milk sold, pounds	1,733,083	648,285	1,734,762	621,036	_____	_____
Tillable acres	222	83	248	89	_____	_____
Labor Costs	22 Dairy Farm Renters		54 Dairy Farm Owners		My Farm	
	Total	Per Cow	Total	Per Cow	Total	Per Cow
Value of operator(s) labor*	\$ 44,229	\$ 503	\$ 44,068	\$ 488	\$ _____	\$ _____
Family unpaid*	7,429	85	8,234	91	_____	_____
Hired	19,057	217	22,693	251	_____	_____
Total Labor	\$ 70,715	\$ 805	\$ 74,995	\$ 831	\$ _____	\$ _____
Machinery Cost	\$ 51,882	\$ 591	\$ 61,603	\$ 683	\$ _____	\$ _____
Total Labor & Machinery	\$ 122,598	\$ 1,395	\$ 136,598	\$ 1,514	\$ _____	\$ _____
Hired labor expense per hired worker equivalent	\$ 23,772		\$ 25,261		\$ _____	
Hired labor expense as % of milk sales	8.0%		9.5%		_____%	

\*\$2,300 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 17 New York Dairy Farm Renters, 2005 & 2006

Selected Factors	Average		My Farm		Goal
	2005	2006	2005	2006	
<u>Size of Business</u>					
Average number of cows	96	98	_____	_____	_____
Average number of heifers	76	82	_____	_____	_____
Milk sold, lbs.	1,964,431	1,925,389	_____	_____	_____
Worker equivalent	2.95	2.89	_____	_____	_____
Total tillable acres	238	247	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, lbs.	20,400	19,600	_____	_____	_____
Hay DM per acre, tons	1.8	2.3	_____	_____	_____
Corn silage per acre, tons	15.5	10.9	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	33	34	_____	_____	_____
Milk sold per worker, lbs.	665,909	666,225	_____	_____	_____
<u>Cost Control</u>					
Grain & concentrate purchased as % of milk sales	28%	32%	_____ %	_____ %	_____ %
Dairy feed & crop expense per cwt. milk	\$5.66	\$5.81	\$ _____	\$ _____	\$ _____
Labor & machinery costs/cow	\$1,368	\$1,378	\$ _____	\$ _____	\$ _____
Operating cost of producing cwt. milk	\$11.60	\$11.65	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency*</u>					
Farm capital per cow	\$4,900	\$4,994	\$ _____	\$ _____	\$ _____
Machinery & equipment per cow	\$1,300	\$1,327	\$ _____	\$ _____	\$ _____
Asset turnover ratio	0.77	0.66	_____	_____	_____
<u>Profitability</u>					
Net farm income without appreciation	\$59,505	\$24,676	\$ _____	\$ _____	\$ _____
Net farm income with appreciation	\$71,111	\$32,138	\$ _____	\$ _____	\$ _____
Labor & management income per operator/manager	\$21,678	\$-2,532	\$ _____	\$ _____	\$ _____
Rate of return on equity capital with appreciation	4.7%	-6.0%	_____ %	_____ %	_____ %
Rate of return on all capital with appreciation	4.8%	-3.5%	_____ %	_____ %	_____ %
<u>Financial Summary</u>					
Farm net worth, end year	\$374,304	\$374,334	\$ _____	\$ _____	\$ _____
Debt to asset ratio	0.23	0.24	_____	_____	_____
Farm debt per cow	\$1,131	\$1,177	\$ _____	\$ _____	\$ _____

\*Average for the year.

RECEIPTS AND EXPENSES PER COW AND PER HUNDREDWEIGHT  
Same 17 New York Dairy Farm Renters, 2005 & 2006

Item	2005		2006	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	96		98	
Cwt. of Milk Sold		19,644		19,254
<u>ACCRUAL OPERATING RECEIPTS</u>				
Milk	\$3,161	\$15.49	\$2,686	\$13.71
Dairy cattle	245	1.20	250	1.28
Dairy calves	68	0.33	59	0.30
Other livestock	-1	0.00	2	0.01
Crops	-28	-0.14	-5	-0.02
Miscellaneous receipts	<u>191</u>	<u>0.94</u>	<u>204</u>	<u>1.04</u>
Total Receipts	\$3,636	\$17.82	\$3,196	\$16.31
<u>ACCRUAL OPERATING EXPENSES</u>				
Hired labor	\$ 199	\$ 0.97	\$ 212	\$ 1.08
Dairy grain & concentrate	881	4.32	866	4.42
Dairy roughage	76	0.37	100	0.51
Nondairy feed	0	0.00	1	0.00
Professional nutritional services	3	0.01	0	0.00
Machine hire/rent/lease	91	0.45	80	0.41
Machinery repair & vehicle expense	170	0.83	167	0.85
Fuel, oil & grease	115	0.56	137	0.70
Replacement livestock	21	0.10	25	0.13
Breeding	59	0.29	55	0.28
Veterinary & medicine	99	0.49	82	0.42
Milk marketing	179	0.88	179	0.91
Bedding	26	0.13	20	0.10
Milking supplies	71	0.35	73	0.37
Cattle lease	0	0.00	0	0.00
Custom boarding	34	0.17	41	0.21
bST expense	29	0.14	33	0.17
Livestock professional fees	13	0.07	28	0.14
Other livestock expense	46	0.22	32	0.16
Fertilizer & lime	112	0.55	91	0.47
Seeds & plants	43	0.21	48	0.24
Spray/other crop expense	43	0.21	33	0.17
Crop professional fees	0	0.00	2	0.01
Land, building, fence repair	43	0.21	39	0.20
Taxes	29	0.14	20	0.10
Real estate rent/lease	153	0.75	174	0.89
Insurance	42	0.21	46	0.24
Utilities	110	0.54	117	0.60
Interest paid	58	0.28	54	0.27
Other professional fees	9	0.05	13	0.06
Miscellaneous	<u>14</u>	<u>0.07</u>	<u>17</u>	<u>0.09</u>
Total Operating Expenses	\$2,767	\$13.56	\$2,783	\$14.20
Expansion Livestock	76	0.37	11	0.06
Extraordinary Expense	0	0.00	0	0.00
Machinery Depreciation	164	0.81	137	0.70
Real Estate Depreciation	<u>11</u>	<u>0.05</u>	<u>14</u>	<u>0.07</u>
Total Expenses	\$3,018	\$14.79	\$2,945	\$15.03
Net Farm Income Without Appreciation	\$ 618	\$ 3.03	\$ 251	\$ 1.28

Condensed Summary and Selected Business Factors for Two Herd Size Groups

CONDENSED FARM BUSINESS SUMMARY FOR TWO RENTER GROUPS BY HERD SIZE  
22 New York Dairy Farm Renters, 2006

Item	11 Dairy Farm Renters with < 63 Cows		11 Dairy Farm Renters with > 63 Cows	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
<u>ACCRUAL EXPENSES</u>				
Hired labor	\$ 119	\$ 0.63	\$ 251	\$ 1.26
Dairy grain & concentrate	731	3.85	880	4.40
Dairy roughage	211	1.11	105	0.53
Nondairy feed	0	0.00	1	0.00
Professional nutritional services	0	0.00	0	0.00
Machine hire, rent & lease	33	0.17	86	0.43
Machine repairs & farm vehicle expense	192	1.01	167	0.83
Fuel, oil & grease	121	0.64	143	0.72
Replacement livestock	39	0.21	27	0.14
Breeding	55	0.29	57	0.28
Veterinary & medicine	63	0.33	92	0.46
Milk marketing	235	1.24	162	0.81
Bedding	40	0.21	18	0.09
Milking supplies	100	0.53	67	0.33
Cattle lease & rent	0	0.00	0	0.00
Custom boarding	7	0.04	48	0.24
bST expense	10	0.05	38	0.19
Livestock professional fees	17	0.09	29	0.15
Other livestock expense	38	0.20	32	0.16
Fertilizer & lime	61	0.32	95	0.47
Seeds & plants	29	0.15	52	0.26
Spray & other crop expense	11	0.06	38	0.19
Crop professional fees	0	0.00	2	0.01
Land, building & fence repair	42	0.22	32	0.16
Taxes & rent	176	0.93	201	1.01
Utilities	111	0.59	117	0.58
Interest paid	60	0.32	50	0.25
Other professional fees	7	0.04	14	0.07
Misc. (including insurance)	53	0.28	63	0.32
Total Operating Expenses	\$2,564	\$13.51	\$2,865	\$14.36
Expansion livestock	121	0.64	13	0.06
Extraordinary expense	0	0.00	0	0.00
Machinery depreciation	143	0.75	138	0.69
Building depreciation	16	0.08	11	0.05
Total Accrual Expenses	\$2,844	\$14.98	\$3,027	\$15.16
<u>ACCRUAL RECEIPTS</u>				
Milk sales	\$2,611	\$13.75	\$2,729	\$13.66
Dairy cattle	239	1.26	277	1.38
Dairy calves	86	0.45	59	0.29
Other livestock	4	0.02	1	0.00
Crops	28	0.15	-14	-0.07
Miscellaneous receipts	156	0.82	215	1.08
Total Accrual Receipts	\$3,124	\$16.45	\$3,267	\$16.35
<u>PROFITABILITY ANALYSIS (Total)</u>				
Net farm income (without appreciation)		\$12,879		\$30,755
Net farm income (with appreciation)		\$17,880		\$38,943
Labor & management income/operator		\$-1,132		\$-2,512
Rates of return on:				
Equity capital without appreciation		-15.4%		-5.9%
Equity capital with appreciation		-12.4%		-4.3%
All capital without appreciation		-10.4%		-3.6%
All capital with appreciation		-8.2%		-2.4%

SELECTED BUSINESS FACTORS FOR TWO RENTER GROUPS BY HERD SIZE  
22 New York Dairy Farm Renters, 2006

Item	11 Dairy Farm Renters with < 63 Cows	11 Dairy Farm Renters with > 63 Cows
<u>Cropping Program Analysis</u>		
Total acres rented	210	421
Tillable acres rented	132	313
Hay crop acres*	117	228
Corn silage acres*	27	139
Hay crop, tons DM/acre*	1.9	2.7
Corn silage, tons/acre*	9.9	11.6
Forage DM per cow, tons*	6.6	7.4
Tillable acres/cow*	3.6	2.9
Fertilizer & lime expense/tillable acre*	\$24.55	\$30.43
Machinery cost/tillable acre*	\$168	\$239
<u>Dairy Analysis</u>		
Number of cows	46	130
Number of heifers	33	112
Milk sold, pounds	871,698	2,594,468
Milk sold/cow, pounds	18,987	19,985
Operating cost of producing milk/cwt.	\$11.44	\$11.73
Total cost of producing milk/cwt.	\$17.75	\$15.78
Price/cwt. milk sold	\$13.75	\$13.66
Purchased dairy feed/cow	\$942	\$985
Purchased dairy feed/cwt. milk	\$4.96	\$4.93
Purchased grain & concentrate as % of milk receipts	27%	31%
Purchased feed & crop expense/cwt. milk	\$5.50	\$5.86
<u>Capital Efficiency</u>		
Farm capital/worker	\$126,939	\$180,278
Farm capital/cow	\$4,866	\$4,971
Real estate/cow	\$487	\$365
Machinery investment/cow	\$1,596	\$1,274
Asset turnover ratio	0.66	0.67
<u>Labor Efficiency</u>		
Worker equivalent	1.76	3.58
Operator/manager equivalent	1.12	1.59
Milk sold/worker, lbs.	494,113	724,375
Cows/worker	26	36
Labor cost/cow	\$1,037	\$723
<u>Financial Measures</u>		
Percent equity	75%	78%
Debt/asset ratio - long term	0.63	0.28
Debt/asset ratio - intermediate & current	0.21	0.21
Change in net worth with appreciation	\$2,348	\$1,396
Total farm debt per cow	\$1,228	\$1,084
Debt payments made per cow	\$315	\$338
Debt payments as % of milk sales	13%	12%
Amount available for debt service	\$12,011	\$31,593
Debt coverage ratio for 2006	0.36	0.56

\* Average of farms growing forages.

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  
22 New York Dairy Farm Renters, 2006

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds of 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
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
6.0	225	4,569,151	23,645	4.6	19	52	1,037,441
2.7	83	1,712,376	20,841	3.0	16	37	742,534
2.2	65	1,304,446	19,257	2.5	14	32	629,583
1.7	56	1,006,790	18,217	1.9	11	26	495,427
1.3	33	549,998	14,393	1.1	5	19	310,395

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
(12)	(12)	(14)	(14)	(12)	(12)
\$444	20%	\$253	\$1,017	\$665	\$3.87
747	27	506	1,239	1,028	5.14
846	31	612	1,567	1,094	5.54
895	33	767	1,814	1,235	6.38
991	38	903	2,213	1,479	7.83

Value and Cost of Production			Profitability		
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Producing Milk Per Cwt.	Net Farm Income With Appreciation	Net Farm Income Without Appreciation	Labor & Management Income Per Operator
(12)	(12)	(12)	(4)	(4)	(4)
\$3,162	\$8.16	\$13.48	\$73,110	\$64,359	\$43,359
2,832	10.15	15.40	49,998	41,841	10,620
2,667	11.78	16.43	28,176	26,407	781
2,490	13.29	18.22	12,534	10,107	-13,505
2,018	15.59	26.63	-8,551	-20,196	-38,779

\*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  
22 New York Dairy Farm Renters, 2006

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
(10)*	(16)	(10)	(10)	(7)
\$ 66	\$723	2.85	0%	\$53
129	359	1.41	5	268
254	317	1.09	13	925
397	158	0.84	22	1,879
661	-311	-5.59	31	4,270

Solvency			Profitability	
Leverage Ratio**	Percent Equity	Debt/Asset Ratio Current & Intermediate	Percent Rate of Return with appreciation on:	
(7)	(7)	(7)	Equity (4)	Investment*** (4)
-0.37	100%	0.01	18%	14%
0.04	96	0.05	1	1
0.18	91	0.18	-5	-5
0.72	61	0.44	-13	-7
2.19	4	0.64	-54	-34

Efficiency (Capital)				
Asset Turnover Ratio	Machinery Investment Per Cow	Total Farm Assets Per Cow	Change in Net Worth With Appreciation	
(14)	(14)	(14)	(8)	
1.48	\$290	\$7,894	\$49,240	
0.87	1,102	6,030	20,019	
0.64	1,495	5,210	12,354	
0.51	1,773	3,962	-2,174	
0.37	3,078	2,796	-54,881	

\*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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Worksheet for Setting Goals (continued)

II. Goals

What	How	When	Who is Responsible

Summarize Your Business Performance

The Farm Business and Financial Analysis Charts on pages 26 and 27 can be used to help identify strengths and weaknesses of your farm business. Identify three major strengths and three areas of your farm business that need improvement.

Strengths: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Need Improvements: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 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 during the year.

**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)

**Cost of Term Debt** - A weighted average of the cost of borrowed capital to the farm. Calculate by multiplying end of year principal of each loan that is borrowed by the interest rate for each loan at that time. Add up each amount that is calculated for each loan and then divide by total amount of borrowed funds. Do not include accounts payable, operating debt or advanced government receipts. This information is found on pages 10 and 11 of the data entry form.

**Culling Rate** - (defined on page 19)

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

**Current Ratio** - Measures the extent to which current farm assets, if liquidated, would cover current farm liabilities. Calculated as current farm assets at end year divided by current farm liabilities at end year.

**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)

**Depreciation Expense Ratio** - Machinery and building depreciation divided by total accrual receipts.

**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-cancelable 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.

**Hired Labor Expense per Hired Worker Equivalent** - The total cost to the farm per hired worker equivalent. Divide accrual hired labor expense by number of hired plus family paid worker equivalent.

**Hired Labor Expense as % of Milk Sales** - The percentage of the gross milk receipts that is used for labor expense. Divide accrual hired labor expense by accrual milk sales.

**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.

**Interest Expense Ratio** - Accrual interest expense divided by total accrual receipts.

**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.

**Leverage Ratio** - (defined on page 11)

**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 Farm Income from Operations Ratio** - (defined on page 8)

**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)

**Operating Expense Ratio** - Total accrual expenses less interest and machinery and building depreciation divided by total accrual receipts.

**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.

**Working Capital** - A theoretical measure of the amount of funds available to purchase inputs and inventory items after the sale of current farm assets and payment of all current farm liabilities. Calculate as current farm assets at end year less current farm liabilities at end year.

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