

# DAIRY FARM BUSINESS SUMMARY

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## NORTHERN NEW YORK REGION 2012



*You can't manage what you can't measure.  
But if you measure it, you can improve it!*

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**2012 DAIRY FARM BUSINESS SUMMARY**  
**NORTHERN NEW YORK REGION**  
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## 2012 DAIRY FARM BUSINESS SUMMARY NORTHERN NEW YORK REGION\*

### INTRODUCTION

Dairy farm managers throughout New York State have been participating in Cornell Cooperative Extension's farm business summary and analysis program since the early 1950's. Managers of each participating farm business receive a comprehensive summary and analysis of their farm business. The information in this report represents averages of the data submitted from dairy farms in the Northern New York Region for 2012.

#### **Program Objective**

The primary objective of the dairy farm business summary, DFBS, is to help farm managers improve the business and financial management of their business through appropriate use of historical data and the application of modern farm business analysis techniques. This information can also be used to establish goals that enable the business to better fulfill its mission. In short, DFBS provides business and financial information needed in identifying and evaluating strengths and weaknesses of the farm business.

#### **Format Features**

This regional report follows the same general format as the 2012 DFBS individual farm report received by participating dairy farmers. The analysis tables have an open column or section labeled My Farm. It may be used by any dairy farm manager who wants to compare his or her business with the average data of this region. The individual farm data, the regional averages and other data can then be used to establish goals for the business. Non-DFBS participants can download a DFBS Data Check-In Form at <http://dfbs.cornell.edu>. After collecting the data on the form, it can be entered in the U. S. Top Dairies business summary program at the same web site to obtain a summary of their business.

This report features:

- (1) an income statement including accrual adjustments for farm business expenses and receipts, as well as measures of profitability with and without appreciation,
- (2) a complete balance sheet with analytical ratios;
- (3) a statement of owner equity which shows the sources of the change in owner equity during the year;
- (4) a cash flow statement and debt repayment ability analysis;
- (5) an analysis of crop acreage, yields, and expenses;
- (6) an analysis of dairy livestock numbers, production, and expenses;
- (7) a capital and labor efficiency analysis; and
- (8) progress of the farm business over the past two years.

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\* The Northern New York Region of New York State, with the number of participating farms in parentheses, is comprised of Clinton (3), Herkimer (1), Jefferson (10), Lewis (5), Montgomery (6), Oneida (6), and St. Lawrence (9) counties in New York. This report was written by Wayne A. Knoblauch, Professor, Farm Business Management. Cathryn Dymond was in charge of data and publication preparation. Farm business data were collected by Senior Extension Associate in PRO-DAIRY, Jason Karszes; Extension Support Specialist in PRO-DAIRY, Betsey Howland; Cooperative Extension Educators Peggy Murray, Frans Vokey, Anita Deming, Anita Figueras, David Balbian, Sandy Buxton, Jim Manning, and Bonnie Collins. We also acknowledge the cooperation of Charles Z. Radick, Consultant; Russell Saville, Cargill Animal Nutrition; and Farm Credit East Association for their assistance in data collection.

## SUMMARY AND ANALYSIS OF THE FARM BUSINESS

### Business Characteristics

Planning optimal management strategies is a crucial component of operating a successful farm. Various combinations of farm resources, enterprises, business arrangements, and management techniques are used by the dairy farmers in this region. The following table shows important farm business characteristics and the number of farms with each characteristic.

**BUSINESS CHARACTERISTICS**  
40 Northern New York Region Dairy Farms, 2012

Type of Farm	Number	Milking System	Number
Dairy	37	Bucket & carry	0
Part-time dairy	0	Dumping station	0
Dairy cash-crop	3	Pipeline	5
Certified organic milk producer	0	Herringbone conventional exit	10
Rotational grazing farm	0	Herringbone rapid exit	2
		Parallel	18
		Parabone	0
		Rotary	2
		Other	3
Type of Ownership	Number	Production Records	Number
Owner	38	Testing Service	32
Renter	2	On Farm System	5
		Other	0
		None	4
Type of Business	Number	Business Record System	Number
Sole Proprietorship	7	Account Book	1
Partnership	8	Accounting Service	6
Limited Liability Corporation	23	On-farm computer	35
Subchapter S Corporation	0	Other	0
Subchapter C Corporation	1		
Type of Barn	Number	Breed of Herd	Percent
Stanchion or Tie-Stall	2	Holstein	94
Freestall	34	Jersey	4
Combination	4	Other	2
Milking Frequency	Number		
2 times per day	13		
3 times per day	25		
Other	2		

The averages used in this report were compiled using data from all the participating dairy farms in this region unless noted otherwise. There are full-time dairy farms, dairy cash-crop farms, farms with confined herds, farms with grazing herds, farm renters, partnerships, and corporations included in the average. Average data for these specific types of farms are presented in the State Business Summary.

### Income Statement

In order for an income statement to accurately measure farm income, it must include cash transactions and accrual adjustments (changes in accounts payable, accounts receivable, inventories, and prepaid expenses).

Cash paid is the actual cash outlay during the year and does not necessarily represent the cost of goods and services actually used in 2012.

Change in inventory: Increases in inventories of supplies and other purchased inputs are subtracted in computing accrual expenses because they represent purchased inputs not actually used during the year. Decreases in purchased inventories are added to expenses because they represent inputs purchased in a prior year and used this year.

**CASH AND ACCRUAL FARM EXPENSES**  
40 Northern New York Region Dairy Farms, 2012

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
<u>Hired Labor</u>	\$ 410,056		\$ -1,389	<<	\$ -37		\$411,409
<u>Feed</u>							
Dairy grain & concentrate	1,103,148		-29,765		17,503		1,150,415
Dairy roughage	65,527		11,413		16,191		70,305
Nondairy	0		0		0		0
Professional nutritional services	297		0	<<	0		297
<u>Machinery</u>							
Machinery hire, rent & lease	64,111		0	<<	-369		63,741
Machinery repairs & farm vehicle exp.	146,608		390		889		147,107
Fuel, oil & grease	145,228		-278		69		145,575
<u>Livestock</u>							
Replacement livestock	16,031		0	<<	-231		15,800
Breeding	30,342		85		22		30,280
Veterinary & medicine	95,755		494		292		95,553
Milk marketing	135,591		0	<<	859		136,450
Bedding	66,709		216		-29		66,464
Milking supplies	62,352		-916		94		63,362
Cattle lease & rent	89		0	<<	0		89
Custom boarding	59,033		0	<<	24		59,057
bST	54,871		-273		77		55,220
Livestock professional fees	7,321		-228	<<	-8		7,542
Other livestock expense	15,213		-40		0		15,253
<u>Crops</u>							
Fertilizer & lime	113,513		-2,757		1,889		118,158
Seeds & plants	82,247		8,891		0		73,356
Spray, other crop expense	37,484		69		1,399		38,814
Crop professional fees	6,708		0	<<	0		6,708
<u>Real Estate</u>							
Land, building & fence repair	49,428		1,430		420		48,418
Taxes	37,437		246	<<	578		37,769
Rent & lease	35,875		9	<<	20		35,886
<u>Other</u>							
Insurance	30,943		179	<<	-20		30,744
Utilities (farm share)	66,585		0	<<	51		66,636
Interest paid	82,514		0	<<	4		82,518
Other professional fees	16,023		0	<<	58		16,081
Miscellaneous	20,068		45		21		20,045
Total Operating	<u>\$3,057,108</u>		<u>\$-12,178</u>		<u>\$ 39,766</u>		<u>\$3,109,053</u>
Expansion livestock	14,871		0	<<	0		14,871
Extraordinary expense	603		0	<<	0		603
Machinery depreciation							148,269
Building depreciation							<u>102,218</u>
<b>TOTAL ACCRUAL EXPENSES</b>							<u>\$3,375,014</u>

Change in prepaid expenses (noted above by <<) is a net change in non-inventory expenses that have been paid in advance of their use. For example, prepaid lease expense on the beginning of year balance sheet represents last year's payment for use of the asset during this year. End of year prepaid expense represents payments made this year for next year's use of the asset. Adding payments made last year for this year's use of the asset, and subtracting payments made this year for next year's use of the asset is accomplished by subtracting the difference.

Change in accounts payable: An increase in accounts payable from beginning to end of year is added when calculating accrual expenses because these expenses were incurred (resources used) in 2012 but not paid for. A decrease is subtracted because it represents payment for resources used before 2012.

Accrual expenses are an estimate of the costs of inputs, except operator/family labor and equity capital, actually used in this year's production. They are the cash paid, less changes in inventory and prepaid expenses, plus accounts payable.

**CASH AND ACCRUAL FARM RECEIPTS**  
40 Northern New York Region Dairy Farms, 2012

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	\$3,296,874				\$27,579		\$3,324,453
Dairy cattle	188,976		\$52,866		225		242,068
Dairy calves	22,162		2,011		0		24,173
Other livestock	1,200		223		0		1,423
Crops	63,817		84,986		-1,710		147,093
Government receipts	36,030		0 *		15		36,044
Custom machine work	10,430				186		10,616
Gas tax refund	367				0		367
Other	<u>52,619</u>				<u>-981</u>		51,638
Less nonfarm noncash capital**		(-)	<u>0 **</u>			(-)	<u>0</u>
Total Receipts	\$3,672,474		\$140,086		\$25,314		\$3,837,874

\*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 of assets produced by the business 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/or quality are subtracted. Changes in inventories of crops grown are also included. An increase in advanced government receipts is subtracted from cash income because it represents income received in 2012 for the 2013 crop year in excess of funds earned for 2012. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2012 but received in 2011.

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. Payments in January 2013 for milk produced in December 2012 compared to January 2012 payments for milk produced in 2011 are included as a change in accounts receivable in determining accrual milk sales.

Accrual receipts represent the value of all farm commodities produced and services actually generated by the farm business during the year.

### **Profitability Analysis**

Farm operators\* contribute labor, management, and equity capital to their businesses and the combination of these resources, and the other resources used in the business, determines profitability. 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.

The return to any individual resource must be viewed as an estimate because the cost of other family resources must be approximated to calculate returns to the selected resource. For example, the costs of operator and family labor and management must be approximated to calculate the returns to equity capital.

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\* Operators are the individuals who are integrally involved in the operation and management of the farm business. They are not limited to those who are the owner of a sole proprietorship or are formally a member of the partnership or corporation.

Net farm income is the return to the farm operators and other unpaid family members for their labor, management, and equity capital. It is the farm family's net annual return from working, managing, and financing 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.

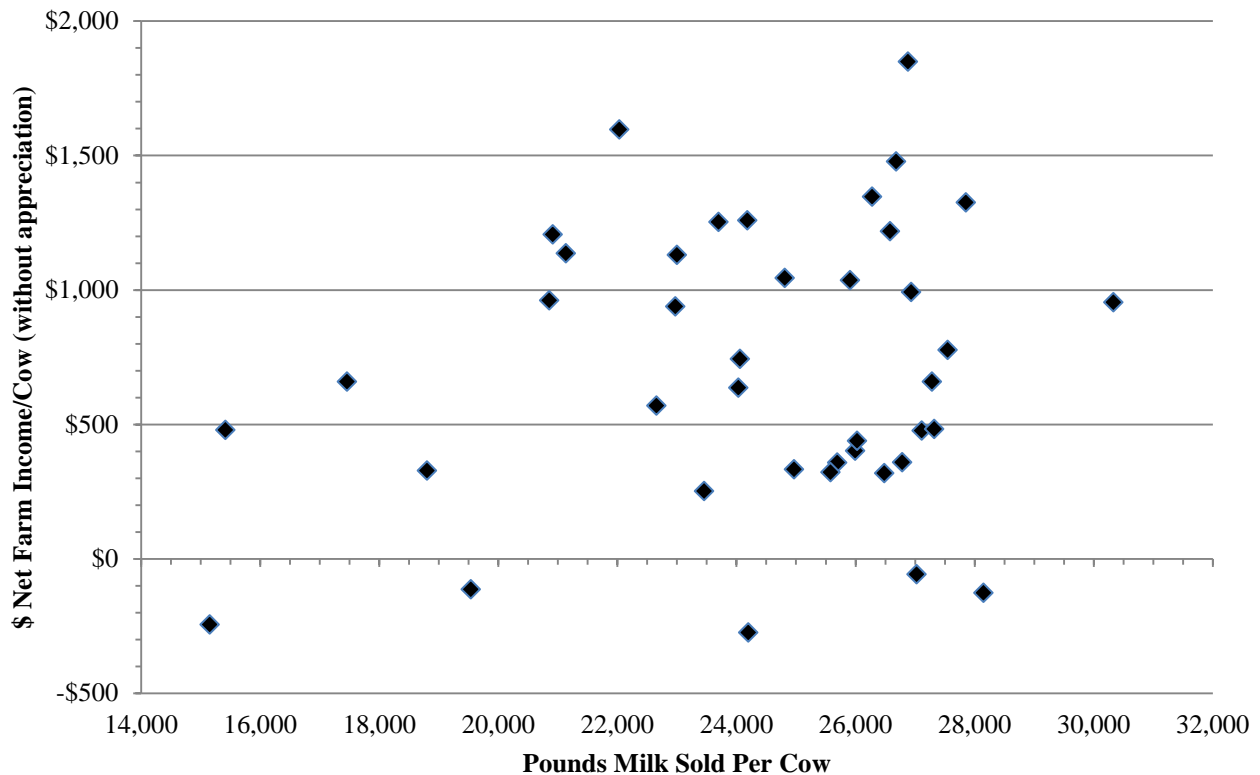
Net farm income is computed both with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than Farm Credit stock required for loan borrowings). Appreciation is a major factor contributing to changes in farm net worth and must be included for a complete profitability analysis.

**NET FARM INCOME**  
40 Northern New York Region Dairy Farms, 2012

Item	Average		My Farm	
	Total	Per Cow	Total	Per Cow
Total accrual receipts	\$ 3,837,874		\$ _____	
Appreciation: Livestock	-11,516		_____	
Machinery	44,755		_____	
Real Estate	138,017		_____	
Other Stock & Certificates	<u>-2,659</u>		_____	
Total Including Appreciation	\$ 4,006,470		\$ _____	
Total accrual expenses	<u>3,375,014</u>		- _____	
Net Farm Income (with appreciation)	\$ 631,457	\$ 962	\$ _____	\$ _____
Net Farm Income (without appreciation)	\$ 462,861	\$ 705	\$ _____	\$ _____

The chart below shows the relationship between net farm income per cow (without appreciation) and pounds of milk sold per cow. Higher net farm incomes can be achieved across a range of production levels as a result of different management systems, such as grazing, being utilized by the participating dairies.

**NET FARM INCOME PER COW AND MILK PER COW**  
42 Northern New York Region Dairy Farms, 2012





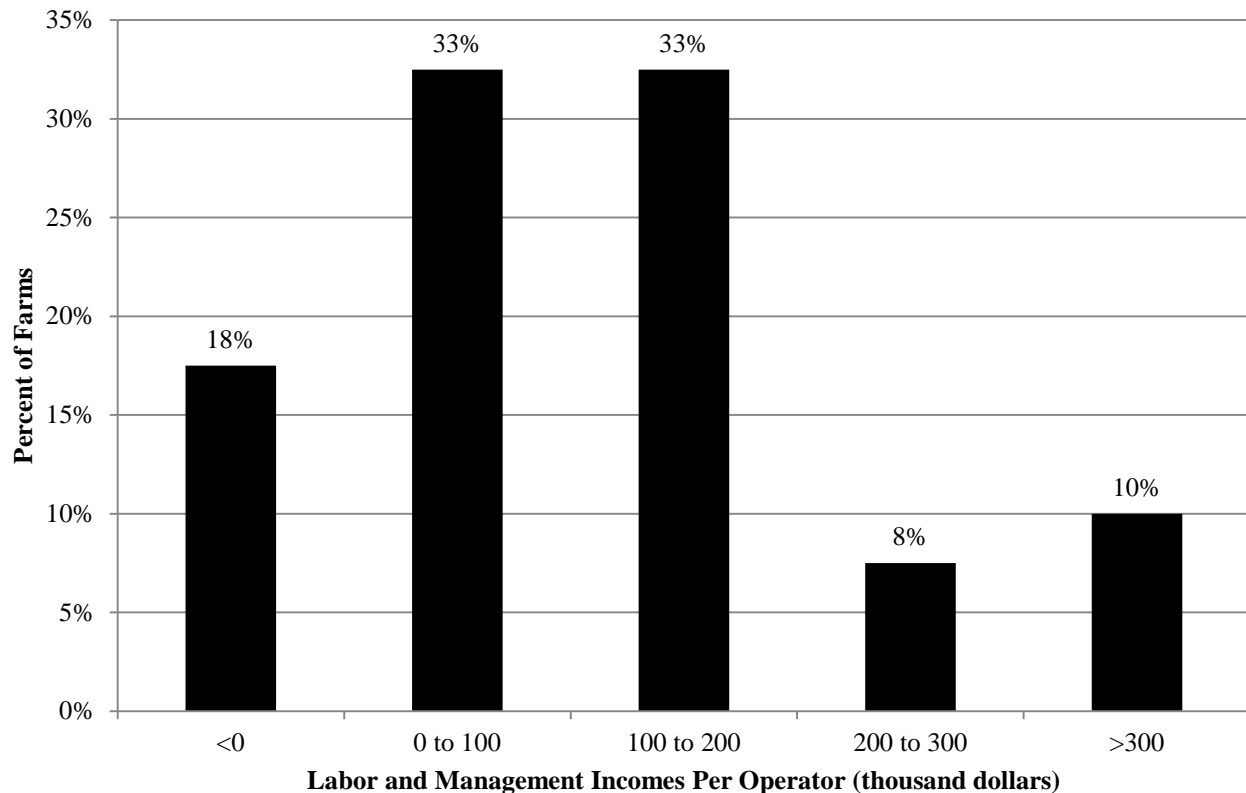
Labor and management income is the return which farm operators receive for their labor and management used in the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and management income is calculated by deducting a charge for unpaid family labor and the opportunity cost of equity capital, at a real interest rate of five percent, from net farm income excluding appreciation. The interest charge of five percent reflects the long-term average rate of return above inflation that a farmer might expect to earn in comparable risk investments.

**LABOR AND MANAGEMENT INCOME**  
40 Northern New York Region Dairy Farms, 2012

Item	Average	My Farm
Net farm income without appreciation	\$ 462,861	\$ _____
Family labor unpaid @ \$2,550 per month	- 3,036	- _____
Interest on \$4,400,446 average equity capital @ 5% real rate	<u>- 220,022</u>	- _____
Labor & Management Income per farm (1.98 Operators/farm)	\$ 239,803	\$ _____
Labor & Management Income per Operator/Manager	\$ 121,113	\$ _____

Labor and management income per operator averaged \$121,113 on these 40 farms in 2012. The range in labor and management income per operator was from about \$-206,000 to more than \$576,000. Returns to labor and management were less than \$0 on 17.5 percent of the farms. Labor and management incomes per operator were between \$0 and \$150,000 on 50.0 percent of the farms, while 32.5 percent had labor and management incomes of \$150,000 or more per operator.

**DISTRIBUTION OF LABOR AND MANAGEMENT INCOMES PER OPERATOR**  
40 Northern New York Region Dairy Farms, 2012



Return on equity capital measures the net return remaining for the farmer's equity or owned capital after a charge has been made for the owner-operator's labor and management. The earnings or amount of net farm income allocated to labor and management is the opportunity cost of operators' labor and management estimated by the cooperators. Return on equity capital is calculated with and without appreciation. The rate of return on equity capital is determined by dividing the amount returned by the average farm net worth (market value) or equity capital. Rate of return on total capital is calculated by adding interest paid to the return on equity capital and then dividing by average farm assets (market value). Net farm income from operations ratio is net farm income (without appreciation) divided by total accrual receipts.

**RETURN ON EQUITY CAPITAL AND RETURN ON TOTAL CAPITAL**  
40 Northern New York Region Dairy Farms, 2012

Item	Average	My Farm
Net farm income with appreciation	\$ 631,457	\$ _____
Family labor unpaid @ \$2,550 per month	- 3,036	- _____
Value of operators' labor & management	<u>- 123,917</u>	- _____
Return on equity capital with appreciation	\$ 504,504	\$ _____
Interest paid	<u>+ 82,518</u>	+ _____
Return on total capital with appreciation	\$ 587,022	\$ _____
Return on equity capital without appreciation	\$ 335,908	\$ _____
Return on total capital without appreciation	\$ 418,426	\$ _____
Rate of return on average equity capital:		
with appreciation	11.5%	_____ %
without appreciation	7.6%	_____ %
Rate of return on average total capital:		
with appreciation	8.9%	_____ %
without appreciation	6.3%	_____ %
Net Farm Income from Operations Ratio	0.12	_____

**Farm and Family Financial Status**

The first step in evaluating the financial position of the farm is to construct a balance sheet which identifies and values 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.

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. For 2012, lease payments were discounted by 7 percent to obtain their present value.

Advanced government receipts are included as current liabilities. Government payments received in 2012 that are for participation in the 2013 program are the end year balance and payments received in 2011 for participation in the 2012 program are the beginning year balance.

Current Portion or principal due in the next year for intermediate and long term debt is included as a current liability.

## 2012 FARM BUSINESS &amp; NONFARM MARKET VALUE BALANCE SHEET

40 Northern New York Region Dairy Farms, 2012

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 49,240	\$ 66,180	Accounts payable	\$ 37,030	\$ 76,796
Accounts receivable	276,816	302,130	Operating debt	126,186	140,061
Prepaid expenses	2,967	1,783	Short Term	4,451	2,029
Feed & supplies	<u>792,177</u>	<u>866,168</u>	Advanced govt. receipts	0	0
Total Current	\$ 1,121,199	\$ 1,236,261	Current Portion:		
			Intermediate	228,288	239,166
			Long Term	<u>71,058</u>	<u>82,113</u>
			Total Current	\$ 467,012	\$ 540,165
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows:			Structured debt		
owned	\$ 929,943	\$ 960,298	1-10 years	\$ 1,075,335	\$ 811,918
leased	0	214	Financial lease		
Heifers	530,880	543,804	(cattle/machinery)	5,971	13,913
Bulls & other livestock	4,333	4,638	Farm Credit stock	<u>1,078</u>	<u>1,153</u>
Mach. & equip. owned	1,013,912	1,162,418	Total Intermediate	\$ 1,082,383	\$ 826,983
Mach. & equip. leased	5,971	13,699			
Farm Credit stock	1,078	1,153			
Other stock/certificate	<u>91,570</u>	<u>110,790</u>			
Total Intermediate	\$ 2,577,685	\$ 2,797,013			
<u>Long Term</u>			<u>Long Term</u>		
Land & buildings:			Structured debt		
owned	\$ 2,579,292	\$ 2,891,719	>10 years	\$ 801,458	\$ 969,121
leased	<u>0</u>	<u>0</u>	Financial lease		
Total Long Term	\$ 2,579,292	\$ 2,891,719	(structures)	<u>0</u>	<u>0</u>
			Total Long Term	\$ 801,458	\$ 969,121
Total Farm Assets	\$ 6,278,176	\$ 6,924,993	Total Farm Liabilities	\$ 2,350,853	\$ 2,336,270
			FARM NET WORTH	\$ 3,927,323	\$ 4,588,723

## Nonfarm Assets, Liabilities &amp; Net Worth (Average of 7 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	\$ 13,501	\$ 14,428	Nonfarm Liabilities	\$ 37,824	\$ 41,421
Cash value life insurance	58,099	60,998			
Nonfarm real estate	857	857			
Auto (personal share)	15,143	18,929			
Stocks & bonds	293,934	301,889			
Household furnishings	6,571	6,571			
All other nonfarm assets	28,571	28,571			
Total Nonfarm Assets	\$416,678	\$432,243	NONFARM NET WORTH	\$378,854	\$390,822

## Farm &amp; Nonfarm Assets, Liabilities, and Net Worth\*

	Jan. 1	Dec. 31
Total Assets	\$ 6,694,854	\$ 7,357,236
Total Liabilities	<u>2,388,677</u>	<u>2,377,691</u>
TOTAL FARM & NONFARM NET WORTH	\$ 4,306,177	\$ 4,979,545

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

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 and multiplying by 100. 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**  
40 Northern New York Region Dairy Farms, 2012

Item	Average		My Farm	
<u>Financial Ratios - Farm:</u>				
Percent equity		66%	_____	%
Debt/asset ratio: total		.34	_____	
long-term		.34	_____	
intermediate/current		.34	_____	
Leverage Ratio:		.51	_____	
Current Ratio:		2.29		
Working capital	\$696,096	As % of total expenses:	21%	
<u>Farm Debt Analysis:</u>				
Accounts payable as % of total debt		3%	_____	%
Long-term liabilities as a % of total debt		41%	_____	%
Current & inter. liabilities as a % of total debt		59%	_____	%
Cost of term debt (weighted average)		4.0%	_____	%
<u>Farm Debt Levels:</u>				
	<u>Per Cow</u>	<u>Per Tillable Acre Owned</u>	<u>Per Cow</u>	<u>Per Tillable Acre Owned</u>
Total farm debt	\$ 2,978	\$ 2,793	\$ _____	\$ _____
Long-term debt	1,235	1,158	_____	_____
Intermediate & long term	2,290	2,147	_____	_____
Intermediate & current debt	1,743	1,634	_____	_____

Farm inventory balance is an accounting of the value of assets used on the balance sheet and the changes that occur from the beginning to end of year. Changes in the livestock inventory are included in the dairy analysis. Net investment indicates whether the capital stock is being expanded (positive) or depleted (negative).

**FARM INVENTORY BALANCE**  
40 Northern New York Region Dairy Farms, 2012

Item	Average of Region's Farms	
	Real Estate	Machinery & Equipment
Value beginning of year	\$ 2,579,292	\$ 1,013,912
Purchases	\$ 419,139*	\$ 258,877
Noncash transfer to farm	+ 917	+ 0
Lost capital	- 138,321	
Sales	- 5,107	- 6,856
Depreciation	- 102,218	- 148,269
Net investment	= 174,410	= 103,752
Appreciation	+ 138,017	+ 44,755
Value end of year	\$ 2,891,719	\$ 1,162,418

\*\$134,774 land and \$284,365 buildings and/or depreciable improvements.

The Statement of Owner Equity has two purposes. It allows (1) verification that the accrual income statement and market value balance sheet are 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 you 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), (3) increases or decreases in the value (price) of assets owned by the business (called change in valuation equity), and (4) the error in the business cash flow accounting.

Retained earnings is an excellent indicator of farm generated financial progress.

**STATEMENT OF OWNER EQUITY (RECONCILIATION)**  
40 Northern New York Region Dairy Farms, 2012

Item	Average	My Farm
Beginning of year farm net worth	\$4,212,170	\$ _____
Net farm income without appreciation	\$ 462,861	\$ _____
+Nonfarm cash income	+ 11,561	+ _____
-Personal withdrawals & family expenditures excluding nonfarm borrowings	<u>- 158,422</u>	- _____
RETAINED EARNINGS	+ \$ 316,000	+\$ _____
Nonfarm noncash transfers to farm	\$ 917	\$ _____
+Cash used in business from nonfarm capital	+ 27,650	+ _____
-Note or mortgage from farm real estate sold (nonfarm)	<u>- 0</u>	- _____
CONTRIBUTED/WITHDRAWN CAPITAL	+ \$ 28,567	+\$ _____
Appreciation	\$ 168,596	\$ _____
-Lost capital	<u>- 138,321</u>	- _____
CHANGE IN VALUATION EQUITY	+ \$ 30,274	+\$ _____
IMBALANCE/ERROR	<u>- -1,711</u>	- \$ _____
End of year net worth*	= \$4,588,723	=\$ _____
<hr/>		
<u>Change in Net Worth</u>		
Without appreciation	\$ 207,957	\$ _____
With appreciation	\$ 376,553	\$ _____

\*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**  
40 Northern New York Region Dairy Farms, 2012

Item	Average	
<b><u>Cash Flow from Operating Activities</u></b>		
Cash farm receipts	\$ 3,672,474	
- Cash farm expenses	3,057,108	
- Extraordinary expense	<u>603</u>	
= Net cash farm income		\$ 614,763
Personal withdrawals & family expenses including nonfarm debt payments	\$ 160,643	
- Nonfarm income	<u>11,561</u>	
- Net cash withdrawals from the farm		\$ 149,081
= Net Provided by Operating Activities		\$ 465,682
<b><u>Cash Flow From Investing Activities</u></b>		
Sale of assets: machinery	\$ 6,856	
+ real estate	5,107	
+ other stock & cert.	<u>5,017</u>	
= Total asset sales		\$ 16,980
Capital purchases: expansion livestock	\$ 14,871	
+ machinery	258,877	
+ real estate	419,139	
+ other stock & cert.	<u>26,896</u>	
- Total invested in farm assets		\$ 719,783
= Net Provided by Investment Activities		\$ -702,803
<b><u>Cash Flow From Financing Activities</u></b>		
Money borrowed (intermediate & long term)	\$ 464,568	
+ Money borrowed (short term)	938	
+ Increase in operating debt	13,876	
+ Cash from nonfarm capital used in business	27,650	
+ Money borrowed - nonfarm	<u>2,221</u>	
= Cash inflow from financing		\$ 509,253
Principal payments (intermediate & long term)	\$ 253,545	
+ Principal payments (short term)	3,360	
+ Decrease in operating debt	<u>0</u>	
- Cash outflow for financing		\$ 256,905
= Net Provided by Financing Activities		\$ 252,348
<b><u>Cash Flow From Reserves</u></b>		
Beginning farm cash, checking & savings		\$ 49,240
- Ending farm cash, checking & savings		<u>66,180</u>
= Net Provided from Reserves		\$ -16,940
Imbalance (error)		\$ -1,713

## 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 & 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 (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		\$ _____
Imbalance (error)		\$ _____

## Repayment Analysis

A valuable use of 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 2013. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2013 debt payments shown below.

### FARM DEBT PAYMENTS PLANNED

Same 36 Northern New York Region Dairy Farms, 2011 & 2012

Debt Payments	Average			My Farm		
	2012 Payments		Planned 2013	2012 Payments		Planned 2013
	Planned	Made		Planned	Made	
Long term	\$ 89,377	\$ 101,182	\$ 119,685	\$ _____	\$ _____	\$ _____
Intermediate term	266,643	249,086	279,316	_____	_____	_____
Short term	4,292	3,733	893	_____	_____	_____
Operating (net reduction)	2,019	35,899	8,472	_____	_____	_____
Accounts payable (net reduction)	0	2,126	903	_____	_____	_____
Total	\$ 362,331	\$ 392,026	\$ 409,269	\$ _____	\$ _____	\$ _____
Per cow	\$ 550	\$ 595		\$ _____	\$ _____	
Per cwt. 2012 milk	\$ 2.15	\$ 2.32		\$ _____	\$ _____	
Percent of total 2012 farm receipts	10%	10%		_____	_____	
Percent of 2012 milk receipts	11%	12%		_____	_____	

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 payments planned for 2012 (as of December 31, 2011) that could have been made with the amount available for debt service in 2012. Farmers who did not participate in DFBS in 2011 have their 2012 ratios based on planned debt payments for 2013.

### COVERAGE RATIOS

Same 36 Northern New York Region Dairy Farms, 2011 & 2012

Item	Average	Item	Average
<u>Cash Flow Coverage Ratio</u>		<u>Debt Coverage Ratio</u>	
Cash farm receipts	\$3,688,780	Net farm income (w/o appreciation)	\$437,560
- Cash farm expenses	3,082,938	+ Depreciation	256,918
+ Interest paid (cash)	81,936	+ Interest paid (accrual)	81,940
- Net personal withdrawals from farm*	<u>150,254</u>	- Net personal withdrawals from farm*	<u>150,254</u>
(A) = Amount Available for Debt Service	\$ 537,523	(A') = Repayment Capacity	\$626,163
(B) = Debt Payments Planned for 2012 (as of December 31, 2011)	\$ 362,331	(B) = Debt Payments Planned for 2012 (as of December 31, 2011)	\$362,331
(A/B)= Cash Flow Coverage Ratio for 2012	1.48	(A'/B)= Debt Coverage Ratio for 2012	1.73

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



## ANNUAL CASH FLOW WORKSHEET

Item	40 Northern New York Region Dairy Farms		My Farm	Expected Change	2013 Projection
	Per Cow	Per Cwt.	Per Cow/ Per Cwt.		
Average number of cows	656				
Total cwt. of milk sold		169,146			
<u>Accrual Operating Receipts</u>					
Milk	\$5,066	\$19.65	\$ _____	_____	\$ _____
Dairy cattle	369	1.43	_____	_____	_____
Dairy calves	37	0.14	_____	_____	_____
Other livestock	2	0.01	_____	_____	_____
Crops	224	0.87	_____	_____	_____
Miscellaneous Receipts	<u>150</u>	<u>0.58</u>	_____	_____	_____
Total	\$5,848	\$22.69	\$ _____	_____	\$ _____
<u>Accrual Operating Expenses</u>					
Hired labor	\$ 627	\$ 2.43	\$ _____	_____	\$ _____
Dairy grain & concentrate	1,753	6.80	_____	_____	_____
Dairy roughage	107	0.42	_____	_____	_____
Nondairy feed	0	0.00	_____	_____	_____
Professional nutritional services	0	0.00	_____	_____	_____
Machinery hire, rent & lease	97	0.38	_____	_____	_____
Machinery repair & vehicle expense	224	0.87	_____	_____	_____
Fuel, oil & grease	222	0.86	_____	_____	_____
Replacement livestock	24	0.09	_____	_____	_____
Breeding	46	0.18	_____	_____	_____
Veterinary & medicine	146	0.56	_____	_____	_____
Milk marketing	208	0.81	_____	_____	_____
Bedding	101	0.39	_____	_____	_____
Milking supplies	97	0.37	_____	_____	_____
Cattle lease	0	0.00	_____	_____	_____
Custom boarding	90	0.35	_____	_____	_____
bST expense	84	0.33	_____	_____	_____
Livestock professional fees	11	0.04	_____	_____	_____
Other livestock expense	23	0.09	_____	_____	_____
Fertilizer & lime	180	0.70	_____	_____	_____
Seeds & plants	112	0.43	_____	_____	_____
Spray & other crop expense	59	0.23	_____	_____	_____
Crop professional fees	10	0.04	_____	_____	_____
Land, building & fence repair	74	0.29	_____	_____	_____
Taxes	58	0.22	_____	_____	_____
Real estate rent & lease	55	0.21	_____	_____	_____
Insurance	47	0.18	_____	_____	_____
Utilities	102	0.39	_____	_____	_____
Other professional fees	25	0.10	_____	_____	_____
Miscellaneous	<u>31</u>	<u>0.12</u>	_____	_____	_____
Total Less Interest Paid	\$4,612	\$17.89	\$ _____	_____	\$ _____
<u>Net Accrual Operating Income</u>					
		<u>Total</u>			
(without interest paid)	\$811,339		\$ _____	_____	\$ _____
- Change in livestock /crop inventory*	140,086		_____	_____	_____
- Change in accounts receivable	25,314		_____	_____	_____
- Change in feed & supply inventory**	-12,178		_____	_____	_____
+ Change in accounts payable***	39,763		_____	_____	_____
NET CASH FLOW	\$697,880		\$ _____	_____	\$ _____
- Net family withdrawals	145,739		_____	_____	_____
Available for Farm	\$552,141		\$ _____	_____	_____
- Farm debt payments	374,060		_____	_____	_____
Available for Farm Investment	\$178,081		\$ _____	_____	\$ _____
- Capital purchases	719,783		_____	_____	_____
Additional Capital Needed	\$541,702		\$ _____	_____	\$ _____

\*Includes change in advance government receipts. \*\*Includes change in prepaid expenses. \*\*\*Excludes change in interest account payable.

### Cropping Analysis

The cropping program is an important part of the dairy farm business and often represents opportunities for improved productivity and profitability. A complete evaluation of what the available land resources are, how they are being used, the level of crop yields, and what it costs to produce crops is important in evaluating alternative cropping and feed purchasing alternatives.

#### **LAND RESOURCES AND CROP PRODUCTION** 40 Northern New York Region Dairy Farms, 2012

Item	Average			My Farm		
<u>Land</u>	<u>Owned</u>	<u>Rented</u>	<u>Total</u>	<u>Owned</u>	<u>Rented</u>	<u>Total</u>
Tillable	837	560	1,396	_____	_____	_____
Nontillable	26	4	30	_____	_____	_____
Other nontillable	<u>260</u>	<u>1</u>	<u>261</u>	_____	_____	_____
Total	1,122	565	1,687	_____	_____	_____
<u>Crop Yields</u>	<u>Farms</u>	<u>Acres*</u>	<u>Production/Acre</u>	<u>Acres</u>	<u>Production/Acre</u>	
Hay crop	37	673	2.88 tons DM	_____	_____	tons DM
Corn silage	37	552	16.92 tons	_____	_____	tons
			5.83 tons DM			tons DM
Other forage	5	110	2.70 tons DM	_____	_____	tons DM
Total forage	37	1,240	4.19 tons DM	_____	_____	tons DM
Corn grain	26	268	137 bushels	_____	_____	bushels
Oats	2	54	71 bushels	_____	_____	bushels
Wheat	4	116	59 bushels	_____	_____	bushels
Other crops	9	248		_____		
Tillable pasture	8	34		_____		
Idle	8	22		_____		
Total Tillable Acres	40	1,396		_____		

\*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were hay crop 623, corn silage 510, corn grain 174, oats 3, tillable pasture 7, and idle 4.

Average crop acres and yields compiled for the region are for the 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 crop/dairy ratios indicate the relationship between forage production, forage production resources, and the dairy herd.

#### **CROP/DAIRY RATIOS** 37 Northern New York Region Dairy Farms, 2012

Item	Average*	My Farm
Total tillable acres per cow	2.28	_____
Total forage acres per cow	1.87	_____
Harvested forage dry matter, tons per cow	7.84	_____

\*Excludes farms that do not harvest forages.

**Cropping Analysis** (continued)

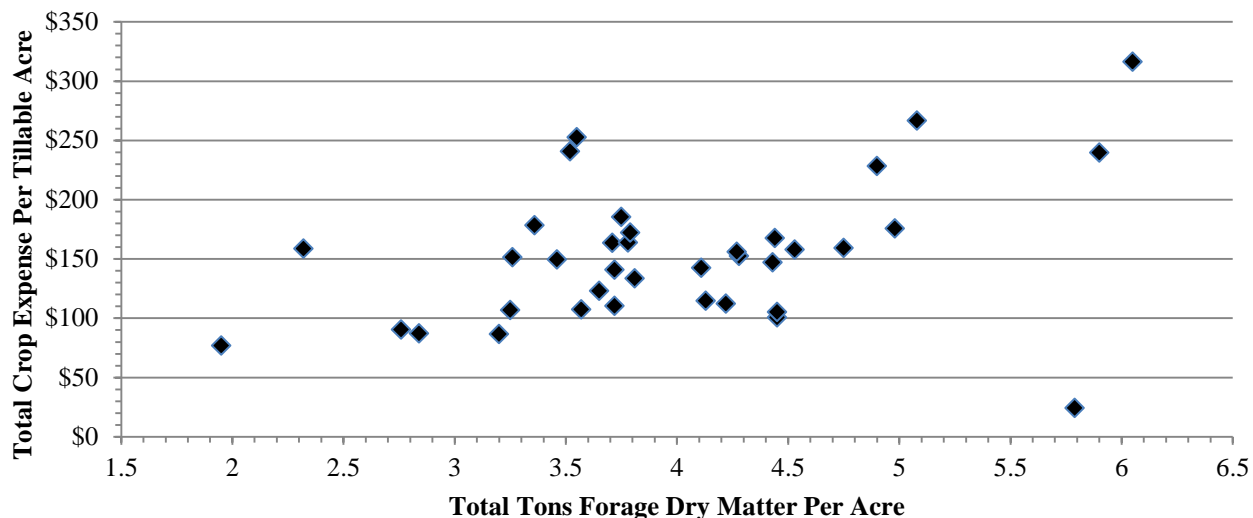
Crop input costs per tillable acre are reported in the table below. The chart below shows the relationship between total forage dry matter and total crop input costs.

**CROP RELATED ACCRUAL EXPENSES**  
Northern New York Region Dairy Farms Reporting, 2012\*

Item	Average 37 Farms		My Farm	
	Total Per Tillable Acre		Total Per Tillable Acre	
Number of farms reporting	37		_____	
Average number of acres	1,555		_____	
Fertilizer & lime expenses	\$	75.99	\$	_____
Seeds & plants		47.51		_____
Spray & other crop expenses		28.99		_____
Total	\$	152.49	\$	_____

\* Excludes farms that do not harvest forages.

**CROP EXPENSE PER ACRE AND TOTAL FORAGE PRODUCTION PER ACRE**  
37 Northern New York Dairy Farms, 2012\*



\* Excludes farms that do not harvest forages.

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**  
37 Northern New York Region Dairy Farms, 2012\*

Machinery Expense	Average		My Farm	
	Total Expenses	Per Tillable Acre	Total Expenses	Per Tillable Acre
Fuel, oil & grease	\$ 151,005	\$ 100.03	\$ _____	\$ _____
Mach. repair & vehicle expense	152,526	101.04	_____	_____
Machine hire, rent & lease	66,763	44.23	_____	_____
Interest (5%)	58,343	38.65	_____	_____
Depreciation	<u>157,099</u>	<u>104.07</u>	_____	_____
Total	\$585,736	\$388.02	\$ _____	\$ _____

\*Excludes farms that do not harvest forages.

**Dairy Analysis**

Analysis of the dairy enterprise can reveal 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. Any change in inventory is included as an accrual farm receipt when calculating all of the profitability measures on pages 6 and 7.

**DAIRY HERD INVENTORY**  
40 Northern New York Region Dairy Farms, 2012

Item	Dairy Cows		Bred		Heifer Open		Calves	
	No.	Value	No.	Value	No.	Value	No.	Value
Beg. year (owned)	644	\$ 929,943	202	\$ 297,370	187	\$ 160,150	164	\$ 73,360
+ Change w/o apprec.		39,204		13,575		88		2,011
+ Appreciation		<u>-8,849</u>		<u>-5,984</u>		<u>4,103</u>		<u>-869</u>
End year (owned)	672	\$ 960,298	212	\$ 304,961	187	\$ 164,340	170	\$ 74,503
End including leased	784							
Average number	656		562	(all age groups)				

**My Farm:**

Beg. 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 size and productivity, respectively, on the dairy farm. These measures of milk output are based on pounds of milk marketed during the year.

**MILK PRODUCTION**  
40 Northern New York Region Dairy Farms, 2012

Item	Average	My Farm
Total milk sold, pounds	16,914,560	_____
Milk sold per cow, pounds	25,775	_____
Average milk plant test, percent butterfat	3.52%	_____

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

**ANIMALS LEAVING THE HERD**  
40 Northern New York Region Dairy Farms, 2012

Item	Average		My Farm	
	Number	Percent*	Number	Percent*
Cows sold for beef	183	27.9	_____	_____
Cows sold for dairy	20	3.1	_____	_____
Cows died	39	5.9	_____	_____
Culling rate**		34.0		_____

\*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 can be compared with the accrual costs of producing milk per cow and 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 including expansion livestock purchased. Purchased inputs cost of producing milk are the operating costs plus depreciation. Total costs of producing milk include the operating costs of producing milk plus depreciation on machinery and buildings, the value of unpaid family labor, the value of operators' labor and management, and the interest charge for using equity capital.

**ACCRUAL RECEIPTS FROM DAIRY, COSTS OF PRODUCING MILK,  
AND PROFITABILITY**

40 Northern New York Region Dairy Farms, 2012

Item	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
<u>Accrual Cost of Producing Milk</u>						
Operating costs	\$ 2,610,502	\$ 3,978	\$ 15.43	\$ _____	\$ _____	\$ _____
Purchased inputs costs	\$ 2,861,592	\$ 4,361	\$ 16.92	\$ _____	\$ _____	\$ _____
Total Costs	\$ 3,208,567	\$ 4,889	\$ 18.97	\$ _____	\$ _____	\$ _____
<u>Accrual Receipts</u>						
<u>From Milk</u>	\$3,324,453	\$ 5,066	\$ 19.65	\$ _____	\$ _____	\$ _____
Net Milk Receipts	\$3,188,003	\$ 4,858	\$ 18.85	\$ _____	\$ _____	\$ _____
Net Farm Income without Apprec.	\$ 462,861	\$ 705	\$ 2.74	\$ _____	\$ _____	\$ _____
Net Farm Income with Appreciation	\$ 631,457	\$ 962	\$ 3.73	\$ _____	\$ _____	\$ _____

The accrual operating expenses most commonly associated with the dairy enterprise are listed in the table below. Feed and crop expenses include total purchased dairy feed plus fertilizer, seeds, spray and other crop expenses.

**DAIRY RELATED ACCRUAL EXPENSES**

40 Northern New York Region Dairy Farms, 2012

Item	Average		My Farm	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrate	\$ 1,753	\$ 6.80	\$ _____	\$ _____
Purchased dairy roughage	107	0.42	_____	_____
Total Purchased Dairy Feed	\$ 1,860	\$ 7.22	\$ _____	\$ _____
Purchased grain & concentrate as % of milk receipts		33%	_____ %	_____ %
Purchased feed & crop expense	\$ 2,221	\$ 8.62	\$ _____	\$ _____
Purchased feed & crop expense as % of milk receipts		43%	_____ %	_____ %
Breeding	\$ 46	\$ 0.18	\$ _____	\$ _____
Veterinary & medicine	146	0.56	_____	_____
Milk marketing	208	0.81	_____	_____
Bedding	101	0.39	_____	_____
Milking supplies	97	0.37	_____	_____
Cattle lease	0	0.00	_____	_____
Custom boarding	90	0.35	_____	_____
bST expense	84	0.33	_____	_____
Livestock professional fees	11	0.04	_____	_____
Other livestock expense	23	0.09	_____	_____

**Capital and Labor Efficiency Analysis**

Capital efficiency factors measure how effectively the capital is being used in the farm business. Measures of labor efficiency are key indicators of management's success in generating products per unit of labor input. When evaluating a business, the relationship between capital efficiency and labor efficiency should be explored. For example, if capital efficiency shows high capital investment per worker or per cow, labor efficiency should be high reflecting use of capital to make labor more effective. However, if capital investment is high per worker or per cow, and labor efficiency is low, a problem may exist on that farm.

**CAPITAL EFFICIENCY**  
40 Northern New York Region Dairy Farms, 2012

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	\$460,362	\$10,060	\$4,728	\$7,891
Real estate		4,168		3,270
Machinery & equipment	76,569	1,673	786	

Ratios

Asset turnover	Operating Expense	Interest Expense	Depreciation Expense
0.61	0.79	0.02	0.07

My Farm

Farm capital	\$ _____	\$ _____	\$ _____	\$ _____
Real estate	_____	_____	_____	_____
Machinery & equipment	_____	_____	_____	_____

Ratios

Asset turnover	Operating Expense	Interest Expense	Depreciation Expense
_____	_____	_____	_____

**LABOR FORCE INVENTORY**  
40 Northern New York Region Dairy Farms, 2012

Labor Force	Months	Age	Years of Education	Value of Labor & Management
Operator number 1	13.0	53	14	\$59,293
Operator number 2	8.2	52	14	40,126
Operator number 3	4.1	48	15	17,593
Operator number 4	1.4	46	13	6,906
Family paid	2.9			
Family unpaid	1.2			
Hired	<u>141.3</u>			
Total	172.1	/ 12 = 14.34 Worker Equivalent 1.98 Operator/Manager Equivalent		
<u>My Farm:</u> Total	_____	/ 12 = ____ Worker Equivalent		
Operator's	_____	/ 12 = ____ Operator/Manager Equivalent		

Small conventional stall operations of 60 or less cows should strive for labor efficiency of 600,000 or more pounds of milk sold per worker. Large conventional stall operations should strive for 850,000 or more pounds of milk sold per worker. Small free stall operations of less than 300 cows should strive for 1,000,000 pounds of milk sold per worker and large free stall operations with more than 300 cows should strive for over 1,200,000 pounds of milk sold per worker.

Labor costs and machinery costs should also be evaluated both individually and jointly. The more machinery or technology at a worker's disposal, the less time, and therefore cost, that should be required to get work accomplished. Striving for labor and machinery costs per cow of less than \$1,000 on small conventional stall barns, less than \$900 on large conventional stall barns, less than \$850 on small free stall barns and below \$750 on large free stall barns should be a goal.

**LABOR EFFICIENCY**  
40 Northern New York Region Dairy Farms, 2012

Labor Efficiency	Average		My Farm	
	Total	Per Worker	Total	Per Worker
Cows, average number	656	46	_____	_____
Milk sold, pounds	16,914,560	1,179,468	_____	_____
Tillable acres	1,396	97	_____	_____

**LABOR AND MACHINERY COSTS**  
40 Northern New York Region Dairy Farms, 2012

Labor Costs	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Value of operator(s) labor (\$2,550/month)	\$ 69,524	\$ 106	\$ 0.41	\$ _____	\$ _____	\$ _____
Family unpaid (\$2,550/month)	3,042	5	0.02	_____	_____	_____
Hired	<u>411,409</u>	<u>627</u>	<u>2.43</u>	_____	_____	_____
Total Labor	\$ 483,975	\$ 737	\$ 2.86	\$ _____	\$ _____	\$ _____
Machinery Cost	<u>\$ 559,593</u>	<u>\$ 853</u>	<u>\$ 3.31</u>	\$ _____	\$ _____	\$ _____
Total Labor & Mach.	\$1,043,567	\$ 1,590	\$ 6.17	\$ _____	\$ _____	\$ _____
Hired labor expense per hired worker equivalent			\$ 34,241	\$ _____		
Hired labor expense as % of milk sales			12.4%	_____%		

## 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 can be helpful to establishing your goals for these parameters. It is equally important for you to determine the progress your business has made over the past two or three years, to compare this progress to your goals, and to set goals for the future.

### PROGRESS OF THE FARM BUSINESS

Same 36 Northern New York Region Dairy Farms, 2011 & 2012

Selected Factors	Average of 36 Farms*		My Farm		Goal
	2011	2012	2011	2012	
<u>Size of Business</u>					
Average number of cows	639	659	_____	_____	_____
Average number of heifers	546	568	_____	_____	_____
Milk sold, pounds	16,121,738	16,881,463	_____	_____	_____
Worker equivalent	13.99	14.68	_____	_____	_____
Total tillable acres	1,387	1,470	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, pounds	25,214	25,606	_____	_____	_____
Hay DM per acre, tons	3.3	2.9	_____	_____	_____
Corn silage per acre, tons	17.2	17.1	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	46	45	_____	_____	_____
Milk sold/worker, pounds	1,152,376	1,149,963	_____	_____	_____
<u>Cost Control</u>					
Grain & conc. purchased as % of milk sales	27%	35%	_____ %	_____ %	_____ %
Dairy feed & crop expense per cwt. milk	\$ 7.30	\$ 8.63	\$ _____	\$ _____	\$ _____
Labor & mach. costs/cow	\$ 1,592	\$ 1,630	\$ _____	\$ _____	\$ _____
Operating cost of producing cwt. of milk	\$ 14.87	\$ 15.59	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency**</u>					
Farm capital per cow	\$ 9,421	\$ 10,243	\$ _____	\$ _____	\$ _____
Mach. & equipment per cow	\$ 1,584	\$ 1,743	\$ _____	\$ _____	\$ _____
Asset turnover ratio	0.65	0.60	_____	_____	_____
<u>Profitability</u>					
Net farm income w/o apprec.	\$ 811,555	\$ 437,560	\$ _____	\$ _____	\$ _____
Net farm income w/apprec.	\$ 907,336	\$ 613,464	\$ _____	\$ _____	\$ _____
Labor & mgmt. income per operator/manager	\$ 306,547	\$ 102,565	\$ _____	\$ _____	\$ _____
Rate of return on equity capital with appreciation	19.9	10.6	_____ %	_____ %	_____ %
Rate of return on all capital with appreciation	14.4	8.4	_____ %	_____ %	_____ %
<u>Financial Summary</u>					
Farm net worth, end year	\$4,327,824	\$4,744,102	\$ _____	\$ _____	\$ _____
Debt to asset ratio	0.32	0.33	_____	_____	_____
Farm debt per cow	\$ 3,182	\$ 3,449	\$ _____	\$ _____	\$ _____

\*Farms participating both years.

\*\*Average for the year.



**RECEIPTS AND EXPENSES PER COW AND PER CWT.**  
Same 36 Northern New York Region Dairy Farms, 2011 & 2012

Item	2011		2012	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	639		659	
Cwt. of Milk Sold		161,217		168,815
<b><u>ACCRUAL OPERATING RECEIPTS</u></b>				
Milk	\$5,388	\$21.37	\$5,047	\$19.71
Dairy cattle	311	1.24	369	1.44
Dairy calves	26	0.10	37	0.15
Other livestock	1	0.00	2	0.01
Crops	152	0.60	247	0.96
Miscellaneous receipts	<u>137</u>	<u>0.54</u>	<u>153</u>	<u>0.60</u>
Total Receipts	\$6,015	\$23.85	\$5,856	\$22.87
<b><u>ACCRUAL OPERATING EXPENSES</u></b>				
Hired labor	\$ 616	\$ 2.44	\$ 642	\$ 2.51
Dairy grain & concentrate	1,455	5.77	1,749	6.83
Dairy roughage	78	0.31	83	0.32
Nondairy feed	0	0.00	0	0.00
Professional nutritional services	0	0.00	1	0.00
Machine hire, rent & lease	108	0.43	105	0.41
Machinery repair & vehicle expense	233	0.92	226	0.88
Fuel, oil & grease	223	0.88	227	0.89
Replacement livestock	23	0.09	22	0.08
Breeding	53	0.21	49	0.19
Veterinary & medicine	147	0.58	149	0.58
Milk marketing	201	0.80	212	0.83
Bedding	89	0.35	102	0.40
Milking supplies	90	0.36	97	0.38
Cattle lease	2	0.01	0	0.00
Custom boarding	82	0.32	100	0.39
bST expense	77	0.30	80	0.31
Livestock professional fees	8	0.03	11	0.04
Other livestock expense	27	0.11	26	0.10
Fertilizer & lime	142	0.56	187	0.73
Seeds & plants	99	0.39	118	0.46
Spray & other crop expense	60	0.24	62	0.24
Crop professional fees	6	0.03	11	0.04
Land, building & fence repair	91	0.36	76	0.30
Taxes	56	0.22	60	0.23
Real estate rent & lease	52	0.21	58	0.23
Insurance	48	0.19	47	0.18
Utilities	117	0.46	101	0.39
Interest paid	130	0.52	124	0.49
Other professional fees	22	0.09	24	0.09
Miscellaneous	<u>30</u>	<u>0.12</u>	<u>31</u>	<u>0.12</u>
Total Operating Expenses	\$4,363	\$17.30	\$4,777	\$18.66
Expansion Livestock	15	0.06	25	0.10
Extraordinary Expense	0	0.00	1	0.00
Machinery Depreciation	222	0.88	234	0.91
Real Estate Depreciation	<u>146</u>	<u>0.58</u>	<u>156</u>	<u>0.61</u>
Total Expenses	\$4,746	\$18.82	\$5,193	\$20.28
Net Farm Income Without Appreciation	\$ 1,269	\$ 5.03	\$ 664	\$ 2.59

### 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. Use this information to identify business areas where more challenging goals are needed.

#### FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS

40 Northern New York Region Dairy Farms, 2012

Size of Business			Rate of Production			Labor Efficiency	
Worker Equivalent	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
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
33.51	1,664	43,615,678	27,829	4.0	22	59	1,478.888
16.68	766	20,635,087	26,581	3.1	18	48	1,196.700
12.12	504	12,461,560	25,168	2.7	16	43	1,117.387
6.62	242	5,753,785	23,239	2.2	14	38	908.697
2.79	105	2,106,688	18,659	0.8	8	29	588.979

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)	
\$966	23%	\$535	\$1,219	\$1,378	\$6.43	
1,373	30	760	1,487	1,852	7.60	
1,681	33	880	1,659	2,051	8.19	
1,817	36	1,026	1,804	2,266	8.98	
2,128	45	1,299	2,415	2,680	10.76	

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 w/o Appreciation	Labor & Mgt. Income Per Operator	Change in Net Worth with Appreciation
(12)	(12)	(12)	(4)	(4)	(4)	(8)
\$5,587	\$11.93	\$16.62	\$1,734,896	\$1,294,229	\$338,475	\$1,178,109
5,168	13.50	18.23	813,951	642,439	154,019	510,360
4,890	15.16	19.16	401,637	259,299	80,743	201,678
4,473	16.63	20.88	179,621	123,065	18,799	92,377
3,631	18.75	23.95	27,180	-4,727	-68,576	-99,759

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

### **Supplementary Information**

Each year DFBS cooperators volunteer to complete supplementary data collection forms looking at selected management aspects of the business or specific research areas being studied. This is in addition to the normal DFBS data collection form. An area that was examined this year was the source of dairy replacements. Following is a summary of this information.

#### **SOURCE OF DAIRY REPLACEMENTS** 15 New York Dairy Farms, 2012

<u>Animals Entering Herd</u>	Average
Number calving in 2012 for first time	353
Animals purchased, % <sup>1</sup>	4.0%
Animals raised by farm, % <sup>2</sup>	96.0%
 <u>Current Heifer Inventory</u>	
Raised on dairy, %	87.1%
Raised by a custom grower, %	12.8%

<sup>1</sup> Animals purchased are animals purchased from a different farm and were not the farm's genetics.

<sup>2</sup> Animals raised by farm are animals that were born on the farm and entered the herd, which includes animals raised by the farm or custom grower.

On the average farm, 353 animals calved for the first time in 2012. The breakdown on the source of these animals was 4.0 percent purchased and 96.0 percent raised on the farm. Of the current heifer inventory, 87.1 percent were raised on the dairy and 12.8 percent were raised by a custom grower. There is increased interest in evaluating the dairy replacement enterprise.

### **Milk Income and Marketing Expense Breakdown**

Starting January 1<sup>st</sup>, 2000, the northeast switched to multiple components pricing, which changed the format of the milk check and how farmers received payment for their milk. To examine the breakdown of the gross milk income and the marketing expenses, 33 farms filled out a detailed form for all the different sources of income for milk sales and the milk marketing expenses on an accrual basis. This information is reported in the following two tables. The tables are divided into six different areas, each representing a different area of income or expenses.

The first section looks at the value of the milk components on a per cwt. basis. The second area looks at the Producer Price Differential. The third area looks at the premiums a farm receives. Any premiums not specifically noted as quality or volume-related are included in market premiums. The fourth area looks at the expenses associated with marketing milk. A line item in this section is the expense associated with utilizing forward contracting or hedging programs to market milk, such as commissions or broker fees. The fifth area is income from forward contracting or hedging programs. The sixth area is the patronage dividends or refunds from the milk cooperatives. Equity purchased in the milk cooperative utilizing a monthly deduction from the milk check or a percent of the patronage dividend is treated as a capital purchase and is not a milk marketing expense. The cumulative total for these six areas is the net price received on farms. For participating farms, the net farm price can be found on page 13 of the DFBS report.

The table on page 25 reports the averages for these different areas. The table on page 26 contains the range for each of the individual lines of the report. This table is in farm business chart format with each item sorted independently and ranked by fifths. Numbers for the different areas will not add to the totals for that quintile or to the net price received because the highest farms for each item were averaged, not the same farms throughout the six areas. This table shows the range of income and expenses received by farms for all the different areas.

For your individual farm, compare your accrual numbers following this same format to look at how you compare to other farms in your region and to identify possible areas to generate additional revenue.

**AVERAGE MILK INCOME AND MARKETING REPORT**  
33 Northern New York Region Dairy Farms, 2012

	Pounds	Percent	Price/Pound	Total	\$/Cwt of Milk
<b>BASE FARM PRICE</b>					
Butterfat	641,245	3.77%	\$1.69	\$1,082,082	\$6.36
Protein	524,789	3.09%	\$3.05	\$1,598,369	\$9.40
Solids	983,362	5.78%	\$0.40	\$394,384	\$2.32
<b>Total Component Contribution</b>					<b>\$18.09</b>
<b>PPD</b>	17,002,061			\$61,460	<b>\$0.36</b>
<b>Base Farm Price</b>					<b>\$18.45</b>
<b>Premiums</b>					
Quality				\$45,379	\$0.27
Volume				\$54,380	\$0.32
Market Premiums				\$92,684	\$0.55
<b>Total Premiums</b>					<b>\$1.13</b>
<b>BASE FARM PRICE + PREMIUM</b>					<b>\$19.58</b>
<b>Deductions</b>					
Promotion				\$25,533	\$0.15
Hauling + Stop Charges.				\$92,309	\$0.54
Market Fees & Coop Dues				\$13,449	\$0.08
<b>Total Deductions</b>					<b>\$0.77</b>
<b>BASE FARM PRICE + PREMIUMS - DEDUCTIONS</b>					<b>\$18.81</b>
<b>Marketing Programs</b>					
Futures Contracts, Forward Contracting, Etc.				-\$12,168	-\$0.07
<b>Total Marketing Income</b>					<b>-\$0.07</b>
<b>Patronage Dividends</b>				\$31,066	<b>\$0.18</b>
<b>NET PRICE RECEIVED ON FARM, ALL SOURCES</b>					<b>\$18.92</b>
<b>PPD - Hauling, \$ per cwt.</b>					<b>-\$0.18</b>
<b>PPD - Hauling + Market Premiums, \$ per cwt.</b>					<b>\$0.36</b>
<b>Net Marketing Value (PPD + Total Premiums - Total Deductions), \$ per cwt.</b>					<b>\$0.72</b>

**MILK PRICE INFORMATION BY QUINTILE\***

(Each Category Sorted Independently)

33 Northern New York Region Dairy Farms, 2012

	Lowest Quintile				Highest Quintile
Butterfat, %	3.56	3.63	3.71	3.80	4.44
Protein, %	2.96	3.06	3.09	3.12	3.18
Other Solids, %	5.71	5.76	5.78	5.80	5.86
Butterfat, \$ per Cwt.	6.09	6.22	6.37	6.50	6.99
Protein, \$ per Cwt.	9.01	9.31	9.40	9.50	9.67
Other solids, \$ per Cwt.	2.04	2.33	2.34	2.35	2.37
<b>Total Component Value per Cwt.</b>	<b>\$17.27</b>	<b>\$17.88</b>	<b>\$18.09</b>	<b>\$18.35</b>	<b>\$18.88</b>
PPD, \$ per Cwt.	0.16	0.24	0.28	0.45	0.97
<b>Base Farm Price per Cwt.</b>	<b>\$17.60</b>	<b>\$18.14</b>	<b>\$18.43</b>	<b>\$18.76</b>	<b>\$19.58</b>
Quality, \$ per Cwt.	0.07	0.17	0.26	0.33	0.48
Volume, \$ per Cwt.	0.00	0.06	0.20	0.43	0.60
Market premium, \$ per Cwt.	0.11	0.23	0.40	0.66	1.16
<b>Total Premium, \$ per Cwt.</b>	<b>0.48</b>	<b>0.73</b>	<b>1.00</b>	<b>1.24</b>	<b>1.61</b>
<b>Base Farm Price + Premiums per Cwt.</b>	<b>\$18.44</b>	<b>\$19.08</b>	<b>\$19.33</b>	<b>\$19.88</b>	<b>\$20.75</b>
Promotion, \$ per Cwt.	0.15	0.15	0.15	0.15	0.15
Hauling, \$ per Cwt.	0.19	0.37	0.48	0.66	1.07
Market fees & coop dues per Cwt.	0.00	0.03	0.07	0.09	0.16
<b>Total Marketing Expenses per Cwt.</b>	<b>\$0.36</b>	<b>\$0.60</b>	<b>\$0.74</b>	<b>\$0.90</b>	<b>\$1.27</b>
<b>Base + Premiums – Deductions per Cwt.</b>	<b>\$17.85</b>	<b>\$18.43</b>	<b>\$18.64</b>	<b>\$19.01</b>	<b>\$19.75</b>
Futures contract, forward contracting, \$ per Cwt.	-0.28	-0.01	0.00	0.00	0.06
<b>Total Marketing Income, \$ per Cwt.</b>	<b>\$-0.28</b>	<b>\$-0.01</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.06</b>
<b>Patronage Dividends, \$ per Cwt.</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.02</b>	<b>\$0.18</b>	<b>\$0.61</b>
<b>Net Price Received From All Sources, \$ per Cwt.</b>	<b>\$18.03</b>	<b>\$18.45</b>	<b>\$18.71</b>	<b>\$19.06</b>	<b>\$19.91</b>
<b>PPD - Hauling, \$ per cwt.</b>	<b>-0.43</b>	<b>-0.23</b>	<b>-0.14</b>	<b>-0.04</b>	<b>0.24</b>
<b>PPD - Hauling + Market Premiums, \$ per cwt.</b>	<b>-0.18</b>	<b>0.08</b>	<b>0.29</b>	<b>0.65</b>	<b>1.09</b>
<b>Net Marketing Value (PPD + Total Premiums - Total Deductions), \$ per cwt.</b>	<b>0.03</b>	<b>0.44</b>	<b>0.67</b>	<b>0.81</b>	<b>1.35</b>

\*Data for each category are calculated independently of all others. Therefore, summation of individual categories will not equal total categories.

### New York State Farm Business Charts

The Farm Business Chart is a tool which can be used in analyzing a business by drawing a line through the figure in each column which represents the current level of management performance. The figure at the top of each column is the average of the top 10 percent of the 190 farms for that factor. The other figures in each column are the average for the second 10 percent, third 10 percent, etc. **Each column of the chart is independent of the others.** The farms which are in the top 10 percent for one factor would not necessarily be the same farms which make up the top 10 percent for any other factor.

The cost control factors are ranked from low to high, but the lowest cost is not necessarily the most profitable. In some cases, the "best" management position is somewhere near the middle or average. Many things affect the level of costs, and must be taken into account when analyzing the factors.

### FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS

190 New York Dairy Farms, 2011

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	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
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
37.4	1,706	43,858,755	27,706	5.3	23	63	1,458,922
22.9	1,021	26,336,021	26,440	4.4	20	51	1,243,329
17.6	785	20,082,453	25,674	3.9	18	48	1,167,110
14.1	612	14,432,284	24,907	3.6	18	45	1,088,025
10.6	466	11,020,599	24,206	3.4	17	42	1,010,627
7.0	325	7,344,654	23,151	3.1	16	40	925,116
4.7	174	3,679,214	21,982	2.8	15	37	793,037
3.1	108	2,120,345	20,278	2.3	14	33	667,413
2.3	69	1,296,787	17,715	2.1	13	28	550,182
1.6	45	726,923	12,283	1.6	10	21	343,454

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)	
\$651	18%	\$493	\$1,152	\$898	\$5.24	
1,014	23	651	1,413	1,300	6.42	
1,136	26	716	1,533	1,473	6.94	
1,258	27	779	1,625	1,617	7.24	
1,384	28	843	1,691	1,739	7.55	
1,475	29	901	1,759	1,827	7.82	
1,564	31	960	1,842	1,936	8.19	
1,653	32	1,038	1,933	2,030	8.61	
1,731	34	1,126	2,102	2,150	9.24	
1,947	38	1,384	2,606	2,388	10.66	

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

**FARM BUSINESS CHART FOR  
FARM MANAGEMENT COOPERATORS**  
190 New York Dairy Farms, 2011

Milk Receipts Per Cow	Milk Receipts Per Cwt.	Operating Cost Milk Production Per Cow	Operating Cost Milk Production Per Cwt.	Total Cost Milk Production Per Cow	Total Cost Milk Production Per Cwt.
(12)	(12)	(12)	(12)	(12)	(12)
\$6,127	\$23.60	\$1,932	\$12.19	\$3,184	\$16.71
5,705	22.51	2,646	13.62	3,969	17.95
5,520	22.08	3,015	14.29	4,328	18.65
5,369	21.81	3,355	14.98	4,506	19.22
5,188	21.63	3,601	15.53	4,650	19.75
-----					
4,959	21.41	3,740	16.05	4,757	20.34
4,719	21.21	3,881	16.62	4,910	21.30
4,381	21.00	4,083	17.35	5,104	22.92
3,837	20.75	4,353	17.88	5,317	25.38
2,658	20.24	4,711	19.90	5,728	31.41

Profitability						
Net Farm Income Without Appreciation			Net Farm Income With Appreciation		Labor & Management Income	
Total	Per Cow	Operations Ratio	Total	Per Cow	Per Farm	Per Operator
(4)	(12)	(4)	(4)	(12)	(4)	(4)
\$2,341,294	\$1,900	0.31	\$2,707,050	\$2,395	\$1,794,884	\$864,454
1,264,736	1,606	0.27	1,485,514	1,927	951,356	476,538
867,967	1,344	0.23	1,079,176	1,610	628,200	311,166
616,369	1,165	0.20	792,265	1,395	457,712	212,547
438,110	1,017	0.18	552,379	1,238	289,617	153,689
-----						
274,291	913	0.16	349,944	1,111	150,363	84,765
143,833	773	0.14	185,513	994	66,657	48,741
80,696	612	0.12	109,297	833	29,919	20,449
34,852	399	0.09	56,294	566	-10,042	-8,376
-10,917	-25	-0.01	15,314	222	-90,536	-56,785

Farm Business Charts for farms with freestall barns and 150 cows or less, 151-300 cows, and more than 300 cows; and farms with conventional barns with 60 cows or less and more than 60 cows are shown on pages 32-36.

**Financial Analysis Chart**

The farm financial analysis chart on page 29 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 6, 9, 13 and 19 of this publication. References to DFBS output page numbers for participating dairy farmers are provided in the table headings.

**FINANCIAL ANALYSIS CHART**  
190 New York Dairy Farms, 2011

Liquidity (repayment)							
Planned Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio	Debt Coverage Ratio	Debt Payments as Percent of Milk Sales	Debt Per Cow	Working Capital as % of Total Expenses	Current Ratio
(10)*	(16)	(10)	(10)	(10)	(7)	(7)	(7)
\$ 63	\$1,607	10.52	13.41	3%	\$ 133	57%	48.32
283	1,339	3.30	4.56	5	1,137	41	6.16
419	1,157	2.47	3.36	7	1,841	31	3.96
485	989	1.96	2.79	9	2,316	26	3.17
575	867	1.64	2.34	10	2,787	21	2.54
642	750	1.45	1.96	11	3,167	17	2.01
703	641	1.23	1.61	13	3,635	13	1.74
799	558	1.02	1.30	15	4,210	10	1.43
932	444	0.88	0.83	17	4,916	4	1.05
1,446	86	0.24	0.08	25	6,691	-13	0.41
Solvency				Operational Ratios			
Leverage Ratio**	Percent Equity	Debt/Asset Ratio		Operating Expense Ratio	Interest Expense Ratio	Depreciation Expense Ratio	
		Current & Intermediate	Long Term				
(7)	(7)	(7)	(7)	(14)	(14)	(14)	
0.01	99%	0.01	0.00	0.61	0.00	0.02	
0.12	89	0.09	0.00	0.65	0.01	0.04	
0.20	83	0.17	0.01	0.68	0.01	0.04	
0.27	79	0.24	0.10	0.70	0.01	0.05	
0.35	74	0.27	0.19	0.73	0.02	0.06	
0.48	68	0.32	0.30	0.75	0.02	0.06	
0.61	62	0.37	0.39	0.77	0.03	0.07	
0.75	57	0.43	0.49	0.79	0.03	0.08	
0.98	51	0.54	0.59	0.82	0.04	0.10	
1.91	38	0.73	0.83	0.89	0.08	0.14	
Efficiency (Capital)				Profitability			
Asset Turnover (ratio)	Real Estate Investment Per Cow	Machinery Investment Per Cow	Total Farm Assets Per Cow	Change in Net Worth With Appreciation	Percent Rate of Return with Appreciation on:		
					Equity	Investment***	
(14)	(14)	(14)	(14)	(8)	(4)	(4)	
0.92	\$1,960	\$662	\$6,389	\$2,323,290	35%	23%	
0.77	2,744	1,032	7,721	1,203,378	25	17	
0.70	3,065	1,335	8,235	886,807	22	15	
0.65	3,357	1,567	8,929	659,342	19	14	
0.61	3,684	1,735	9,627	394,739	16	12	
0.57	4,277	1,884	10,269	256,529	12	10	
0.52	4,745	2,046	11,111	116,070	9	8	
0.47	5,543	2,367	11,989	63,416	6	5	
0.39	6,721	2,816	13,236	23,571	0	1	
0.27	9,736	4,002	16,747	-6,842	-18	-4	

\*Page number of the participant's DFBS report 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



### **Comparison by Type of Barn and Herd Size**

When analyzing a dairy farm business by comparing it to a group of farms, it is important that the group of farms have used as many of the same physical characteristics as possible as the farm being analyzed. To assist in this endeavor, dairy farms in the summary have been divided into those with freestall and those with conventional housing. Conventional housing includes stanchion and tiestall barns. Within each group, is a further classification by size of the dairy herd.

The table on page 31 includes the average values for the resulting five groups of dairy farms. The average size of farms in the five groups ranges from 45 cows on the small conventional farms to 993 cows on the largest freestall farms.

The largest freestall farms averaged the highest milk output per cow and per worker, the lowest total cost of production and investment per cow as well as the highest returns to labor, management and capital.

Farm business charts have been computed for each of the five housing and herd size categories and are on pages 32-36. By comparing the farm's performance on the most appropriate business chart, a farm manager will be better able to evaluate his or her business performance.

### **Herd Size Comparisons**

A detailed comparison of profitability, financial situation and business analysis factors across herd sizes is contained on pages 48-60 of the 2012 State Summary\*. In most years, as herd size increases, the net farm income increases (page 48)\*; and that was generally the case for 2012. Net farm income without appreciation averaged \$25,530 per farm for the less than 60 cow farms and \$1,187,170 per farm for those with more than 900 cows. Return to all capital without appreciation generally increased as herd size increased. With herd sizes between 60 and 200 cows, many farms find it difficult to find a low cost combination of technology and labor to produce milk. Thus profits are lower for these herds than other herd sizes.

Assets, liabilities and financial measures are presented on pages 55-58\*. All herd size categories saw an increase in net worth during 2012. The largest herd size category experienced an increase in net worth of \$1,565,749. However, percent equity varied as herd size increased. The 200 to 399 and 600 to 899 herd size categories had the lowest percent equity at 68 percent; while the 100 to 199 herd size category averaged the highest percent equity at 76 percent.

Crop yields showed little relationship to herd size, but fertilizer and lime expenses, and machinery cost per tillable acre generally increased as herd size increased (pages 59-60)\*. The farms with more than 900 cows averaged more milk sold per cow than any other size category (page 60). With 25,689 pounds of milk sold per cow, farms in the largest herd size group averaged 9.3 percent more milk output per cow than the average of all herds in the summary with less than 900 cows. Farm capital per cow generally decreased as herd size increased. Milk sold per worker increased dramatically as herd size increased, ranging from 403,817 pounds at the lowest herd size category up to 1,144,223 pounds at the largest size category.

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\*Wayne A. Knoblauch, Linda D. Putnam, Jason Karszes, Richard Overton, and Cathryn Dymond, Dairy Farm Management Business Summary, New York, 2012, Charles H. Dyson School of Applied Economics and Management, Cornell University, R.B. 2013-01, November 2013.

**SELECTED BUSINESS FACTORS BY TYPE OF BARN AND HERD SIZE**

190 New York Dairy Farms, 2011

Item	Farms with:	Conventional		Freestall		
		<= 60 Cows	>60 Cows	<=200 Cows	200-400 Cows	≥400 Cows
Number of farms		19	16	34	29	81
<u>Cropping Program Analysis</u>						
Total Tillable acres		162	262	314	695	1,971
Tillable acres rented*		70	111	128	337	961
Hay crop acres*		126	170	185	322	812
Corn silage acres*		16	51	77	241	793
Hay crop, tons DM/acre		2.0	2.9	2.8	3.4	3.5
Corn silage, tons/acre		13.8	15.1	15.7	15.5	16.8
Oats, bushels/acre		36	0	26	62	40
Forage DM per cow, tons		7.3	10.0	8.1	7.5	7.6
Tillable acres/cow		3.6	3.3	2.7	2.1	2.0
Fertilizer & lime expense/tillable acre		\$30.12	\$32.10	\$50.37	\$53.43	\$57.47
Total machinery costs		\$42,752	\$76,737	\$117,280	\$305,214	\$827,012
Machinery cost/tillable acre		\$265	\$293	\$341	\$428	\$420
<u>Dairy Analysis</u>						
Number of cows		45	79	122	345	993
Number of heifers		36	69	102	289	865
Milk sold, lbs.		753,119	1,560,301	2,552,966	8,372,391	25,195,786
Milk sold/cow, lbs.		16,736	19,656	20,986	24,278	25,369
Operating cost of producing milk/cwt.		\$15.62	\$15.73	\$15.80	\$15.89	\$15.59
Total cost of producing milk/cwt.		\$26.65	\$23.22	\$22.14	\$19.60	\$18.87
Price/cwt. milk sold		\$21.22	\$21.24	\$21.65	\$21.67	\$21.66
Purchased dairy feed/cow		\$1,092	\$1,228	\$1,441	\$1,612	\$1,642
Purchased dairy feed/cwt. milk		\$6.53	\$6.25	\$6.87	\$6.64	\$6.47
Purchased grain & concentrate as % of milk receipts		28%	28%	30%	29%	28%
Purchased feed & crop expense/cwt milk		\$7.45	\$7.45	\$8.12	\$7.66	\$7.56
<u>Capital Efficiency</u>						
Farm capital/worker		\$313,036	\$330,689	\$396,926	\$391,603	\$431,126
Farm capital/cow		\$12,939	\$11,498	\$11,485	\$9,187	\$9,559
Farm capital/tillable acre owned		\$6,361	\$6,039	\$7,487	\$8,850	\$9,402
Real estate/cow		\$6,522	\$5,120	\$5,451	\$3,661	\$3,865
Machinery investment/cow		\$2,957	\$2,550	\$2,170	\$1,664	\$1,559
Asset turnover ratio		0.36	0.43	0.46	0.67	0.67
<u>Labor Efficiency</u>						
Worker equivalent		1.87	2.75	3.52	8.09	22.02
Operator/manager equivalent		1.08	1.08	1.56	1.79	2.36
Milk sold/worker, lbs.		403,817	566,524	725,790	1,035,333	1,144,223
Cows/worker		24	29	35	43	45
Labor cost/cow		\$1,206	\$1,000	\$870	\$800	\$817
Labor cost/tillable acre		\$336	\$303	\$337	\$397	\$411
<u>Profitability &amp; Balance Sheet Analysis</u>						
Net farm income (without appreciation)		\$25,530	\$56,823	\$108,118	\$370,111	\$1,187,170
Labor & management income/operator		\$-6,817	\$8,089	\$29,650	\$145,678	\$367,715
Rate return on all capital with appreciation		1.6%	3.2%	5.7%	13.2%	14.5%
Farm debt/cow		\$3,654	\$2,295	\$2,813	\$2,900	\$3,095
Percent equity		73%	80%	76%	69%	69%

\*Average of all farms, not only those reporting data.

**FARM BUSINESS CHART FOR SMALL CONVENTIONAL STALL DAIRY FARMS**

19 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 2011

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	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
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
2.45	52	1,060,903	22,928	2.5	19	34	639,886
2.15	49	1,000,778	20,391	2.2	17	29	508,524
1.90	47	830,676	18,419	2.1	15	25	423,294
1.63	43	623,732	13,630	1.9	12	21	303,771
1.36	36	326,453	8,627	1.4	9	18	219,300

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)	
\$356	15%	\$532	\$1,445	\$530	\$4.51	
829	26	699	1,957	1,038	6.68	
1,097	30	1,066	2,202	1,316	7.73	
1,228	32	1,193	2,496	1,543	8.74	
1,418	39	1,397	3,016	1,758	10.12	

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
(12)	(12)	(12)	Total	Per Cow	(4)	(8)
\$1,896	\$12.62	\$20.91	\$70,861	\$1,462	\$38,133	\$95,059
2,895	14.37	24.99	41,125	872	9,259	42,317
3,885	15.88	27.63	19,609	439	-10,914	17,409
4,353	17.04	33.22	10,766	239	-20,832	8,337
4,769	22.83	40.66	-3,376	-67	-38,229	-10,918

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

**FARM BUSINESS CHART FOR LARGE CONVENTIONAL STALL DAIRY FARMS**

16 Conventional Stall Dairy Farms with 60 or More Cows, New York, 2011

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv- alent (14)*	No. of Cows (12)	Pounds Milk Sold (12)	Pounds Milk Sold Per Cow (12)	Tons Hay Crop DM/Acre (11)	Tons Corn Silage Per Acre (11)	Cows Per Worker (14)	Pounds Milk Sold Per Worker (14)
3.54	111	2,141,481	25,602	5.0	23	45	870,097
3.19	86	1,961,529	22,102	3.9	17	34	643,842
3.06	74	1,628,656	19,478	3.3	16	28	593,902
2.56	68	1,266,317	18,345	2.5	14	25	514,001
1.76	63	992,718	14,422	1.8	11	22	376,121

Cost Control						
Grain Bought Per Cow (12)	% Grain is of Milk Receipts (12)	Machinery Costs Per Cow (14)	Labor & Machinery Costs Per Cow (14)	Feed & Crop Expenses Per Cow (12)	Feed & Crop Expenses Per Cwt. Milk (12)	
\$724	20%	\$652	\$1,511	\$1,005	\$6.22	
1,024	27	861	1,870	1,367	6.96	
1,183	28	963	1,983	1,481	7.38	
1,336	30	1,093	2,146	1,599	7.85	
1,587	36	1,371	2,573	2,010	9.11	

Value and Cost of Production			Profitability			
Milk Receipts Per Cow (12)	Operating Cost Producing Milk Per Cwt. (12)	Total Cost Production Per Cwt. (12)	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator (4)	Change in Net Worth w/Appreciation (8)
			Total (4)	Per Cow (12)		
\$3,022	\$13.06	\$19.27	\$133,426	\$1,604	\$75,235	\$136,406
3,832	14.95	21.62	99,750	1,271	59,749	68,749
4,301	16.62	24.02	62,735	869	8,195	28,405
4,747	17.47	26.56	19,942	292	-21,279	1,732
5,367	18.48	29.55	-9,598	-102	-53,596	-20,189

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

**FARM BUSINESS CHART FOR SMALL FREESTALL DAIRY FARMS**

34 Freestall Barn Dairy Farms with 200 Cows or less, New York, 2011

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	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
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
6.69	196	4,816,821	26,525	4.4	25	54	1,130,181
5.48	178	3,827,953	24,433	4.0	21	46	967,628
4.85	163	3,592,270	23,241	3.5	20	42	870,368
4.08	142	3,099,431	22,359	3.0	18	40	807,104
3.47	126	2,740,776	21,306	2.8	18	38	741,724
3.28	115	2,418,826	20,714	2.4	17	35	705,607
2.80	108	2,111,667	20,227	2.1	15	34	677,478
2.44	95	1,708,958	18,346	1.9	13	33	632,015
2.13	79	1,354,314	17,028	1.6	12	28	581,307
1.66	62	1,153,216	14,811	1.3	7	24	488,540

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)	
\$986	21%	\$492	\$1,233	\$1,202	\$5.70	
1,040	23	661	1,491	1,345	6.91	
1,094	27	759	1,639	1,469	7.30	
1,151	30	800	1,719	1,537	7.82	
1,295	31	868	1,761	1,668	8.49	
1,380	32	940	1,809	1,794	9.01	
1,484	34	1,042	1,878	1,908	9.49	
1,576	35	1,109	1,939	1,980	9.74	
1,679	37	1,236	2,145	2,175	10.22	
1,844	39	1,637	2,664	2,487	11.96	

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
			Total	Per Cow		
(12)	(12)	(12)	(4)	(12)	(4)	(8)
\$5,623	\$11.64	\$18.13	\$309,645	\$1,695	\$98,221	\$273,142
5,303	13.76	19.79	189,815	1,462	75,581	135,100
5,032	14.67	20.73	162,624	1,265	66,482	112,881
4,879	15.34	21.57	130,902	1,152	44,943	102,419
4,663	15.92	22.74	112,521	960	38,683	90,235
4,459	16.25	23.26	100,585	817	30,991	73,605
4,360	16.82	24.27	71,173	673	17,544	53,753
4,110	17.83	25.78	55,571	544	129	30,341
3,642	18.44	27.49	33,286	348	-12,266	16,884
3,155	20.59	28.57	4,406	35	-41,130	-78

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

**FARM BUSINESS CHART FOR MEDIUM FREESTALL DAIRY FARMS**

29 Freestall Barn Dairy Farms with 201-500 Cows, New York, 2011

Size of Business			Rates of Production			Labor Efficiency	
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
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
13.43	492	12,342,242	27,586	5.4	24	66	1,560,317
12.24	429	11,055,460	26,199	5.0	20	53	1,275,873
9.66	403	10,177,139	25,507	4.8	19	50	1,174,836
8.73	394	9,696,525	25,132	3.9	18	48	1,101,010
8.08	373	9,247,542	24,724	3.6	17	45	1,081,307
7.25	348	8,248,830	24,486	3.4	16	43	1,027,021
6.67	311	7,450,754	24,005	3.2	15	41	1,005,557
6.02	285	6,800,439	22,954	3.0	14	39	941,534
5.77	248	5,866,675	21,971	2.4	13	36	855,463
4.81	214	4,161,591	18,924	2.0	10	30	736,578

## 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)
\$902	19%	\$492	\$1,088	\$1,170	\$5.54
1,168	24	689	1,384	1,499	6.29
1,337	26	750	1,557	1,729	7.10
1,411	26	824	1,620	1,797	7.26
1,459	28	873	1,669	1,892	7.72
1,550	29	931	1,727	1,947	7.82
1,651	30	984	1,823	2,012	8.09
1,740	33	1,054	1,870	2,043	8.40
1,782	35	1,095	2,014	2,166	8.99
1,984	38	1,223	2,113	2,616	11.60

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
(12)	(12)	(12)	Total	Per Cow	(4)	(8)
\$6,223	\$12.91	\$17.00	\$747,370	\$1,963	\$480,762	\$864,087
5,791	13.89	17.83	603,488	1,547	309,922	637,345
5,572	14.40	18.45	533,428	1,353	249,929	447,768
5,415	15.09	19.24	470,467	1,181	207,696	408,127
5,296	15.57	19.50	388,664	1,035	159,165	357,731
5,171	15.82	20.00	339,929	976	128,026	313,133
5,118	16.94	20.54	290,788	929	94,696	271,778
4,911	17.78	21.26	243,934	883	62,292	169,348
4,697	18.32	21.95	167,617	647	40,786	111,890
4,049	20.55	24.61	41,177	81	-61,315	28,523

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

**FARM BUSINESS CHART FOR LARGE FREESTALL DAIRY FARMS**

81 Freestall Barn Dairy Farms with 500 or More Cows, New York, 2011

Size of Business			Rates of Production			Labor Efficiency	
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
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
47.61	2,200	56,907,808	28,496	5.6	22	60	1,548,611
30.86	1,403	35,558,525	26,903	4.5	20	53	1,364,857
26.14	1,152	30,049,740	26,449	4.2	19	50	1,264,583
23.01	1,020	26,030,101	26,146	3.8	18	48	1,217,166
20.03	923	23,819,465	25,696	3.6	17	46	1,176,958
18.06	825	21,135,870	25,143	3.4	16	45	1,131,272
16.95	731	18,725,448	24,632	3.2	16	43	1,085,596
15.24	652	15,803,407	24,044	3.0	15	42	1,024,229
13.06	569	13,646,139	23,160	2.7	14	39	951,408
10.68	517	11,938,515	21,472	2.2	13	33	780,879

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)	
\$999	19%	\$628	\$1,304	\$1,343	\$5.55	
1,255	24	694	1,458	1,633	6.56	
1,393	26	739	1,515	1,733	6.97	
1,488	27	800	1,558	1,799	7.23	
1,560	28	845	1,646	1,860	7.51	
1,600	29	883	1,690	1,968	7.76	
1,667	30	928	1,754	2,045	7.98	
1,709	32	975	1,837	2,118	8.39	
1,804	33	1,041	1,903	2,225	8.69	
2,037	36	1,149	2,200	2,397	9.39	

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
(12)	(12)	(12)	Total	Per Cow	(4)	(8)
\$6,272	\$12.42	\$16.20	\$3,175,353	\$2,034	\$1,101,533	\$3,052,327
5,958	13.62	17.46	1,805,062	1,771	739,309	1,881,286
5,740	14.32	17.91	1,493,130	1,612	532,546	1,493,201
5,596	14.89	18.36	1,301,607	1,369	477,512	1,172,062
5,508	15.49	18.79	1,034,126	1,160	398,694	1,023,672
5,420	16.10	19.23	919,036	1,050	304,255	918,412
5,328	16.58	19.49	803,853	939	246,846	793,469
5,200	17.13	20.05	657,193	828	194,751	706,356
4,935	17.61	20.48	525,373	729	156,770	547,226
4,683	18.43	22.48	271,438	415	30,792	311,863

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

## 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 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 desired 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. Goals should be Timed with a designated date by which the goal will be achieved.

Goal setting on a dairy farm should be 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 3)

**Accrual Receipts** - (defined on page 4)

**Annual Cash Flow Statement** - (defined on page 11)

**Appreciation** - (defined on page 5)

**Asset Turnover Ratio** - The ratio of total farm income to total farm assets, calculated by dividing total accrual operating receipts plus appreciation by average total farm assets.

**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 the percentage of herd, on average, that was supplemented 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 13)

**Cash Paid** - (defined on page 2)

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

**Change in Accounts Payable** - (defined on page 3)

**Change in Accounts Receivable** - (defined on page 4)

**Change in Inventory** - (defined on page 2)

**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 8 & 9 of the data entry form.

**Culling Rate** - (defined on page 17)

**Current Portion** - (defined on page 7)

**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 Coverage Ratio** – (defined on page 13)

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

**Debt to Asset Ratios** - (defined on page 9)

**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 14.

**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 equivalents.

**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 6)

**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 9)

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

**Net Farm Income** - (defined on page 5)

**Net Farm Income from Operations Ratio** - (defined on page 7)

**Net Milk Receipts** – Accrual milk receipts less milk marketing expense.

**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 18)

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

**Opportunity Costs** - 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; DHIC, registration fees and transfers.

**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 the costs including the opportunity costs of the owner/manager's labor, management, and equity capital.

**Purchased Inputs Cost of Producing Milk** - (defined on page 18)

**Renter** - Farm business owner/operator owns no tillable land and commonly rents all other farm real estate.

**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 7)

**Return on Total Capital** - (defined on page 7)

**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 18)

**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. Calculated as current farm assets at end year less current farm liabilities at end year.

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## OTHER A.E.M. EXTENSION BULLETINS

EB No	Title	Fee (if applicable)	Author(s)
2013-15	Dairy Farm Business Summary, Hudson and Central New York Region, 2012	(\$12.00)	Knoblauch, W., Conneman, G., Dymond, C., Karszes, J., Howland, B., Buxton, S., Kiraly, M., and K. Shoen
2013-14	Eastern Broccoli Crop Budgets		Atallah, S. and M. Gómez
2013-13	Dairy Farm Business Summary, New York Small Herd Farms, 120 Cows or Fewer, 2012	(\$16.00)	Knoblauch, W., Dymond, C., Karszes, J. and M. Kiraly
2013-12	Dairy Farm Business Summary, Western New York Region, 2012	(\$12.00)	Knoblauch, W., Dymond, C., Karszes, J., Hanchar, J., Grace, J., Carlberg, V. and J. Petzen
2013-11	Dairy Farm Business Summary, New York Large Herd Farms, 300 Cows or Larger, 2012	(\$16.00)	Karszes, J., Knoblauch, W. and C. Dymond
2013-10	Milking Center Cost Study, New York State, 2010-2011		Howland, B., Karszes, J. and K. Skellie
2013-09	Marketing Module 8 - Promotion		Gómez, M. and S. Cuellar-Healey
2013-09i	Marketing Module 8 - Promotion Example		Cuellar-Healey, S. and M. Gómez
2013-09ii	Marketing Module 8 - Promotion Teaching Slides		Cuellar-Healey, S. and M. Gómez
2013-08i	Marketing Module 7 - Placement/Distribution Example		Cuellar-Healey, S. and M. Gómez
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