

# DAIRY FARM BUSINESS SUMMARY

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## NORTHERN NEW YORK REGION 2009



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

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**NORTHERN NEW YORK REGION**  
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## 2009 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 2009.

#### **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 2009 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), Essex (1), Franklin (2), Herkimer (2), Jefferson (7), Lewis (13), Montgomery (4), Oneida (6), and St. Lawrence (7) counties in New York. This report was written by Wayne A. Knoblauch, Professor, Farm Business Management. Linda Putnam was in charge of data preparation. Farm business data were collected by Senior Extension Associate in PRO-DAIRY, Jason Karszes; Cooperative Extension Educators Peggy Murray, Frans Vokey, Jessica Prosper, Anita Deming, David Balbian, Sandy Buxton, Jim Manning, and Bonnie Collins; Richard Overton, Extension Support Specialist. We also acknowledge the cooperation of Charles Z. Radick, Consultant; and Cathy Wickswat, Cargill Animal Nutrition, for 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**  
45 Northern New York Region Dairy Farms, 2009

Type of Farm	Number	Milking System	Number
Dairy	43	Bucket & carry	0
Part-time dairy	0	Dumping station	0
Dairy cash-crop	2	Pipeline	13
Certified organic milk producer	0	Herringbone conventional exit	7
Rotational grazing farm	2	Herringbone rapid exit	2
		Parallel	17
		Parabone	0
		Rotary	3
		Other	3
Type of Ownership	Number	Production Records	Number
Owner	44	Testing Service	35
Renter	1	On Farm System	8
		Other	0
		None	2
Type of Business	Number	Business Record System	Number
Sole Proprietorship	13	Account Book	1
Partnership	12	Accounting Service	8
Limited Liability Corporation	18	On-farm computer	36
Subchapter S Corporation	2	Other	0
Subchapter C Corporation	0		
Type of Barn	Number	Breed of Herd	Percent
Stanchion or Tie-Stall	11	Holstein	95
Freestall	30	Jersey	4
Combination	4	Other	1
Milking Frequency	Number		
2 times per day	24		
3 times per day	21		
Other	0		

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, part-time 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 2009.

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**  
45 Northern New York Region Dairy Farms, 2009

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
<u>Hired Labor</u>	\$ 307,128		\$ 20	<<	\$-7		\$ 307,101
<u>Feed</u>							
Dairy grain & concentrate	557,515		-73,996		20,140		651,650
Dairy roughage	17,535		-207		4,319		22,061
Nondairy	0		0		0		0
Professional nutritional services	87		0		0		87
<u>Machinery</u>							
Machinery hire, rent & lease	43,901		0		494		44,395
Machinery repairs & farm vehicle exp.	91,749		31		945		92,663
Fuel, oil & grease	72,816		-2,455		230		75,501
<u>Livestock</u>							
Replacement livestock	5,896		0	<<	0		5,896
Breeding	23,976		-1,333		102		25,411
Veterinary & medicine	73,459		120		1,334		74,673
Milk marketing	94,876		0	<<	352		95,228
Bedding	39,525		-180		686		40,391
Milking supplies	53,531		94		140		53,576
Cattle lease & rent	668		0		0		668
Custom boarding	73,914		444		-463		73,007
bST	29,631		481		92		29,243
Livestock professional fees	3,899		-149		4		4,052
Other livestock expense	8,127		24		46		8,149
<u>Crops</u>							
Fertilizer & lime	56,936		5,793		1,781		59,925
Seeds & plants	40,980		-5,776		-82		46,675
Spray, other crop expense	23,763		350		-255		23,158
Crop professional fees	2,642		0		-63		2,579
<u>Real Estate</u>							
Land, building & fence repair	27,781		-1,934		-64		29,651
Taxes	26,879		0		61		26,940
Rent & lease	21,938		0		47		21,984
<u>Other</u>							
Insurance	21,215		-1,646		43		22,904
Utilities (farm share)	52,326		0		125		52,451
Interest paid	64,016		0		0		64,016
Other professional fees	10,309		-37		15		10,360
Miscellaneous	10,002		17		413		10,398
Total Operating	<u>\$1,857,022</u>		<u>\$ -80,340</u>		<u>\$ 30,434</u>		<u>\$ 1,967,796</u>
Expansion livestock	25,321		0	<<	0		25,321
Extraordinary expense	1,658		0	<<	0		1,658
Machinery depreciation							112,049
Building depreciation							74,831
<b>TOTAL ACCRUAL EXPENSES</b>							<u>\$ 2,181,655</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 2009 but not paid for. A decrease is subtracted because it represents payment for resources used before 2009.

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**  
45 Northern New York Region Dairy Farms, 2009

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	\$ 1,770,667				\$ -14,900		\$ 1,755,767
Dairy cattle	67,133		\$ 71,184		-199		138,118
Dairy calves	8,641		9,031		0		17,672
Other livestock	381		-985		0		-604
Crops	30,727		12,565		1,208		44,499
Government receipts	66,381		0 *		92		66,473
Custom machine work	8,667				-1,986		6,681
Gas tax refund	297				0		297
Other	<u>35,124</u>				<u>231</u>		35,354
Less nonfarm noncash capital**		(-)	<u>0</u> **			(-)	<u>0</u>
Total Receipts	\$ 1,988,016		\$ 91,795		\$ -15,554		\$ 2,064,257

\*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 2009 for the 2010 crop year in excess of funds earned for 2009. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2009 but received in 2008.

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. Payments in January 2010 for milk produced in December 2009 compared to January 2009 payments for milk produced in 2008 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.

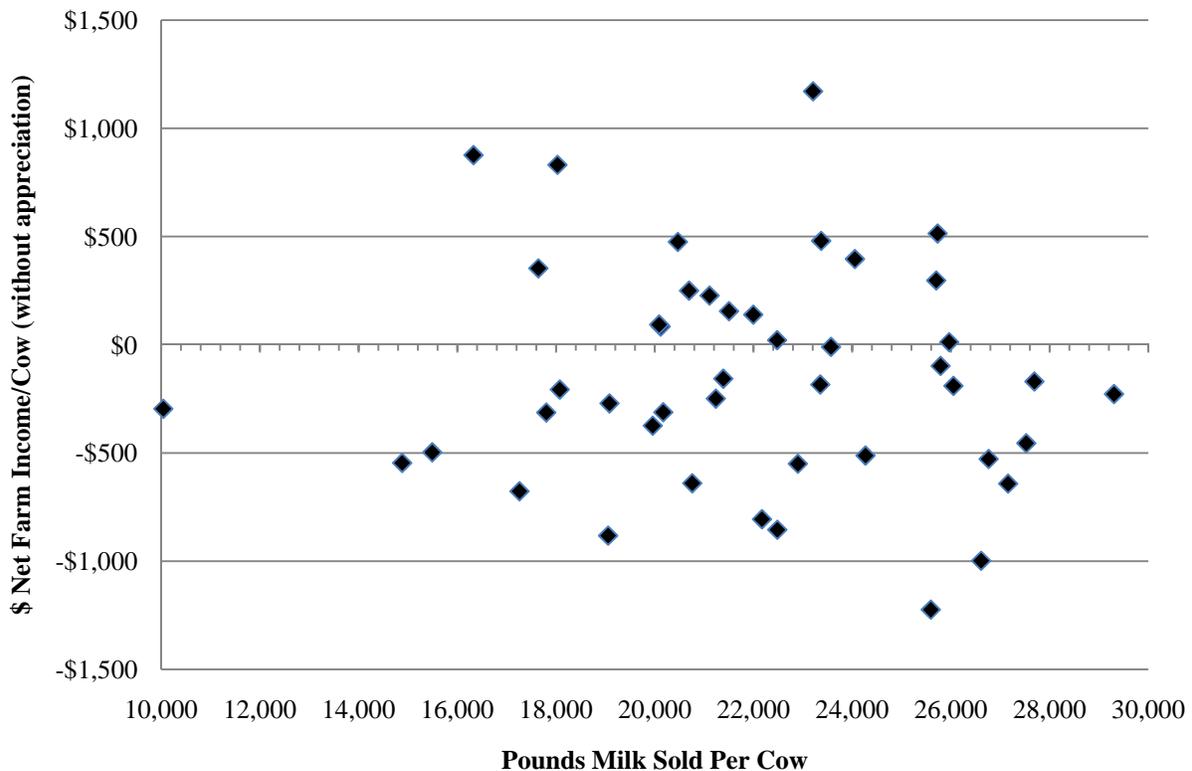
Net farm income is computed both with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than Farm Credit stock required for loan borrowings). Appreciation is a major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

**NET FARM INCOME**  
45 Northern New York Region Dairy Farms, 2009

Item	Average		My Farm	
	Total	Per Cow	Total	Per Cow
Total accrual receipts	\$ 2,064,257		\$ _____	
Appreciation: Livestock	-74,913		_____	
Machinery	26,184		_____	
Real Estate	71,094		_____	
Other Stock & Certificates	12,281		_____	
Total Including Appreciation	\$ 2,098,902		\$ _____	
Total accrual expenses	2,181,655		- _____	
Net Farm Income (with appreciation)	\$ -82,752	\$ -160	\$ _____	\$ _____
Net Farm Income (without appreciation)	\$ -117,397	\$ -227	\$ _____	\$ _____

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**  
45 Northern New York Region Dairy Farms, 2009



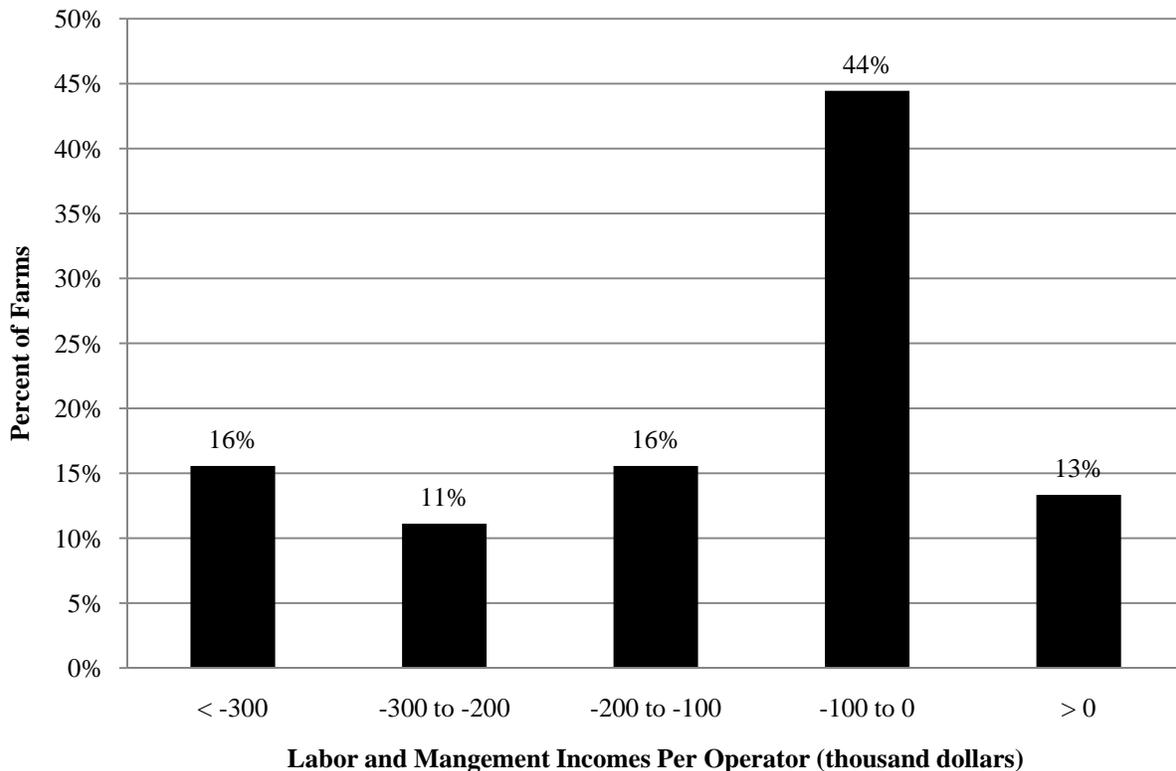
Labor and management income is the return which farm operators receive for their labor and management used in the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and 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**  
45 Northern New York Region Dairy Farms, 2009

Item	Average	My Farm
Net farm income without appreciation	\$ -117,397	\$ _____
Family labor unpaid @ \$2,500 per month	- 3,717	- _____
Interest on \$3,059,211 average equity capital @ 5% real rate	<u>- 153,021</u>	- _____
Labor & Management Income per farm (1.95 Operators/farm)	\$ -274,135	\$ _____
Labor & Management Income per Operator/Manager	\$ -140,582	\$ _____

Labor and management income per operator averaged \$-140,582 on these 45 farms in 2009. The range in labor and management income per operator was from about \$-640,000 to more than \$102,000. Returns to labor and management were less than \$-200,000 on 27 percent of the farms. Labor and management incomes per operator were between \$-200,000 and \$0 on 60 percent of the farms, while 13 percent had labor and management incomes of \$0 or more per operator.

**DISTRIBUTION OF LABOR AND MANAGEMENT INCOMES PER OPERATOR**  
45 Northern New York Region Dairy Farms, 2009



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**  
45 Northern New York Region Dairy Farms, 2009

Item	Average	My Farm
Net farm income with appreciation	\$ -82,752	\$ _____
Family labor unpaid @ \$2,500 per month	- 3,717	- _____
Value of operators' labor & management	<u>- 101,060</u>	- _____
Return on equity capital with appreciation	\$ -187,529	\$ _____
Interest paid	<u>+ 64,016</u>	+ _____
Return on total capital with appreciation	\$ -123,513	\$ _____
Return on equity capital without appreciation	\$ -222,174	\$ _____
Return on total capital without appreciation	\$ -158,158	\$ _____
Rate of return on average equity capital:		
with appreciation	-6.1%	_____ %
without appreciation	-7.3%	_____ %
Rate of return on average total capital:		
with appreciation	-2.6%	_____ %
without appreciation	-3.3%	_____ %
Net Farm Income from Operations Ratio	-0.06	_____

**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 2009, lease payments were discounted by 8.15 percent to obtain their present value.

Advanced government receipts are included as current liabilities. Government payments received in 2009 that are for participation in the 2010 program are the end year balance and payments received in 2008 for participation in the 2009 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.

## 2009 FARM BUSINESS &amp; NONFARM MARKET VALUE BALANCE SHEET

45 Northern New York Region Dairy Farms, 2009

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 30,922	\$ 40,460	Accounts payable	\$ 32,052	\$ 62,486
Accounts receivable	167,503	151,948	Operating debt	126,893	93,765
Prepaid expenses	9,822	8,514	Short Term	4,655	17,075
Feed & supplies	<u>549,405</u>	<u>482,998</u>	Advanced govt. receipts	0	0
Total Current	\$ 757,712	\$ 683,920	Current Portion:		
			Intermediate	106,900	122,162
			Long Term	<u>37,000</u>	<u>39,455</u>
			Total Current	\$ 307,500	\$ 334,943
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows:			Structured debt		
owned	\$ 755,003	\$ 760,496	1-10 years	\$ 483,349	\$ 699,549
leased	0	0	Financial lease		
Heifers	424,207	424,020	(cattle/machinery)	1,594	2,091
Bulls & other livestock	3,673	2,683	Farm Credit stock	<u>929</u>	<u>926</u>
Mach. & equip. owned	807,438	826,751	Total Intermediate	\$ 485,873	\$ 702,567
Mach. & equip. leased	1,594	2,091			
Farm Credit stock	929	926			
Other stock/certificate	<u>56,241</u>	<u>74,576</u>			
Total Intermediate	\$ 2,049,084	\$2,091,544			
<u>Long Term</u>			<u>Long Term</u>		
Land & buildings:			Structured debt		
owned	\$ 1,955,112	\$2,059,347	>10 years	\$ 806,646	\$ 840,769
leased	<u>1,380</u>	<u>994</u>	Financial lease		
Total Long Term	\$ 1,956,492	\$2,060,341	(structures)	<u>1,380</u>	<u>994</u>
			Total Long Term	\$ 808,026	\$ 841,763
Total Farm Assets	\$ 4,763,288	\$4,835,804	Total Farm Liabilities	\$ 1,601,398	\$ 1,879,273
			FARM NET WORTH	\$ 3,161,890	\$ 2,956,532

## Nonfarm Assets, Liabilities &amp; Net Worth (Average of 14 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	\$ 26,859	\$ 27,410	Nonfarm Liabilities	\$ 3,071	\$ 3,592
Cash value life insurance	45,632	57,411			
Nonfarm real estate	429	429			
Auto (personal share)	6,495	6,571			
Stocks & bonds	74,601	92,279			
Household furnishings	5,000	5,000			
All other nonfarm assets	<u>5,907</u>	<u>5,889</u>			
Total Nonfarm Assets	\$164,922	\$194,988	NONFARM NET WORTH	\$161,852	\$191,395

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

	Jan. 1	Dec. 31
Total Assets	\$ 4,928,210	\$ 5,030,792
Total Liabilities	<u>1,604,469</u>	<u>1,882,865</u>
TOTAL FARM & NONFARM NET WORTH	\$ 3,323,741	\$ 3,147,927

\*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**  
45 Northern New York Region Dairy Farms, 2009

Item	Average		My Farm	
<u>Financial Ratios - Farm:</u>				
Percent equity		61%	_____	%
Debt/asset ratio: total		.39	_____	
long-term		.41	_____	
intermediate/current		.37	_____	
Leverage Ratio:		.64	_____	
Current Ratio:		2.04		
Working capital	\$348,977	As % of total expenses:	16%	
<u>Farm Debt Analysis:</u>				
Accounts payable as % of total debt		3%	_____	%
Long-term liabilities as a % of total debt		45%	_____	%
Current & inter. liabilities as a % of total debt		55%	_____	%
Cost of term debt (weighted average)		4.4%	_____	%
<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	\$ 3,497	\$ 2,864	\$ _____	\$ _____
Long-term debt	1,567	1,283	_____	_____
Intermediate & long term	2,874	2,353	_____	_____
Intermediate & current debt	1,931	1,581	_____	_____

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**  
45 Northern New York Region Dairy Farms, 2009

Item	Average of Region's Farms	
	Real Estate	Machinery & Equipment
Value beginning of year	\$ 1,955,112	\$ 807,438
Purchases	\$ 162,190*	\$ 105,364
Gift & inheritance	+ 0	+ 1,167
Lost capital	- 49,593	
Sales	- 4,625	- 1,352
Depreciation	- 74,831	- 112,049
Net investment	= 33,141	= -6,871
Appreciation	+ 71,094	+ 26,184
Value end of year	\$ 2,059,347	\$ 826,751

\*\$48,987 land and \$113,203 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)

45 Northern New York Region Dairy Farms, 2009

Item	Average	My Farm
Beginning of year farm net worth	\$3,161,890	\$ _____
Net farm income without appreciation	\$ -117,397	\$ _____
+Nonfarm cash income	+ 5,949	+ _____
-Personal withdrawals & family expenditures excluding nonfarm borrowings	<u>- 109,461</u>	- _____
RETAINED EARNINGS	+ \$ -220,909	+\$ _____
Nonfarm noncash transfers to farm	\$ 1,167	\$ _____
+Cash used in business from nonfarm capital	+ 31,919	+ _____
-Note or mortgage from farm real estate sold (nonfarm)	<u>- 4,188</u>	- _____
CONTRIBUTED/WITHDRAWN CAPITAL	+ \$ 28,897	+\$ _____
Appreciation	\$ 34,645	\$ _____
-Lost capital	<u>- 49,593</u>	- _____
CHANGE IN VALUATION EQUITY	+ \$ -14,948	+\$ _____
IMBALANCE/ERROR	<u>- -1,601</u>	- \$ _____
End of year net worth*	= \$2,956,532	=\$ _____
<hr/>		
<u>Change in Net Worth</u>		
Without appreciation	\$ -240,003	\$ _____
With appreciation	\$ -205,358	\$ _____

\*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**  
45 Northern New York Region Dairy Farms, 2009

Item	Average	
<b><u>Cash Flow from Operating Activities</u></b>		
Cash farm receipts	\$ 1,988,016	
- Cash farm expenses	1,857,022	
- Extraordinary expense	<u>1,658</u>	
= Net cash farm income		\$ 129,336
Personal withdrawals & family expenses including nonfarm debt payments	\$ 110,001	
- Nonfarm income	<u>5,949</u>	
- Net cash withdrawals from the farm		<u>\$ 104,051</u>
= Net Provided by Operating Activities		\$ 25,285
<b><u>Cash Flow From Investing Activities</u></b>		
Sale of assets: machinery	\$ 1,352	
+ real estate	437	
+ other stock & cert.	<u>923</u>	
= Total asset sales		\$ 2,712
Capital purchases: expansion livestock	\$ 25,321	
+ machinery	105,364	
+ real estate	162,190	
+ other stock & cert.	<u>6,977</u>	
- Total invested in farm assets		<u>\$ 299,852</u>
= Net Provided by Investment Activities		\$ -297,140
<b><u>Cash Flow From Financing Activities</u></b>		
Money borrowed (intermediate & long term)	\$ 421,495	
+ Money borrowed (short term)	13,794	
+ Increase in operating debt	0	
+ Cash from nonfarm capital used in business	31,919	
+ Money borrowed - nonfarm	<u>540</u>	
= Cash inflow from financing		\$ 467,747
Principal payments (intermediate & long term)	\$ 153,479	
+ Principal payments (short term)	1,374	
+ Decrease in operating debt	<u>33,128</u>	
- Cash outflow for financing		<u>\$ 187,981</u>
= Net Provided by Financing Activities		\$ 279,766
<b><u>Cash Flow From Reserves</u></b>		
Beginning farm cash, checking & savings		\$ 30,922
- Ending farm cash, checking & savings		<u>40,460</u>
= Net Provided from Reserves		\$ -9,538
Imbalance (error)		<u>\$ -1,626</u>

## 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 2010. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2010 debt payments shown below.

### FARM DEBT PAYMENTS PLANNED

Same 37 Northern New York Region Dairy Farms, 2008 & 2009

Debt Payments	Average			My Farm		
	2009 Payments		Planned 2010	2009 Payments		Planned 2010
	Planned	Made		Planned	Made	
Long term	\$ 87,197	\$ 84,068	\$ 86,793	\$ _____	\$ _____	\$ _____
Intermediate term	145,912	166,282	174,740	_____	_____	_____
Short term	3,449	949	8,471	_____	_____	_____
Operating (net reduction)	12,203	69,274	23,759	_____	_____	_____
Accounts payable (net reduction)	0	946	12,703	_____	_____	_____
Total	\$ 248,761	\$ 321,519	\$ 306,465	\$ _____	\$ _____	\$ _____
Per cow	\$ 413	\$ 534		\$ _____	\$ _____	
Per cwt. 2009 milk	\$ 1.65	\$ 2.14		\$ _____	\$ _____	
Percent of total 2009 farm receipts	11%	13%		_____	_____	
Percent of 2009 milk receipts	12%	16%		_____	_____	

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 2009 (as of December 31, 2008) that could have been made with the amount available for debt service in 2009. Farmers who did not participate in DFBS in 2008 have their 2009 ratios based on planned debt payments for 2010.

### COVERAGE RATIOS

Same 37 Northern New York Region Dairy Farms, 2008 & 2009

Item	Average	Item	Average
<u>Cash Flow Coverage Ratio</u>		<u>Debt Coverage Ratio</u>	
Cash farm receipts	\$2,330,896	Net farm income (w/o appreciation)	\$-129,743
- Cash farm expenses	2,168,553	+ Depreciation	219,343
+ Interest paid (cash)	73,877	+ Interest paid (accrual)	73,877
- Net personal withdrawals from farm*	<u>123,303</u>	- Net personal withdrawals from farm*	<u>123,303</u>
(A) = Amount Available for Debt Service	\$112,917	(A') = Repayment Capacity	\$40,174
(B) = Debt Payments Planned for 2009 (as of December 31, 2008)	\$248,761	(B) = Debt Payments Planned for 2009 (as of December 31, 2008)	\$248,761
(A/B) = Cash Flow Coverage Ratio for 2009	0.45	(A'/B) = Debt Coverage Ratio for 2009	0.16

\*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.

14  
**ANNUAL CASH FLOW WORKSHEET**

Item	45 Northern New York Region Dairy Farms		My Farm	Expected Change	2010 Projection
	Per Cow	Per Cwt.	Per Cow/ Per Cwt.		
Average number of cows	518				
Total cwt. of milk sold		128,204			
<u>Accrual Operating Receipts</u>					
Milk	\$3,391	\$13.70	\$ _____	_____	\$ _____
Dairy cattle	267	1.08	_____	_____	_____
Dairy calves	34	0.14	_____	_____	_____
Other livestock	-1	0.00	_____	_____	_____
Crops	86	0.35	_____	_____	_____
Miscellaneous Receipts	210	0.85	_____	_____	_____
Total	\$3,987	\$16.10	\$ _____	_____	\$ _____
<u>Accrual Operating Expenses</u>					
Hired labor	\$ 593	\$ 2.40	\$ _____	_____	\$ _____
Dairy grain & concentrate	1,258	5.08	_____	_____	_____
Dairy roughage	43	0.17	_____	_____	_____
Nondairy feed	0	0.00	_____	_____	_____
Professional nutritional services	0	0.00	_____	_____	_____
Machinery hire, rent & lease	86	0.35	_____	_____	_____
Machinery repair & vehicle expense	179	0.72	_____	_____	_____
Fuel, oil & grease	146	0.59	_____	_____	_____
Replacement livestock	11	0.05	_____	_____	_____
Breeding	49	0.20	_____	_____	_____
Veterinary & medicine	144	0.58	_____	_____	_____
Milk marketing	184	0.74	_____	_____	_____
Bedding	78	0.32	_____	_____	_____
Milking supplies	103	0.42	_____	_____	_____
Cattle lease	1	0.01	_____	_____	_____
Custom boarding	141	0.57	_____	_____	_____
bST expense	56	0.23	_____	_____	_____
Livestock professional fees	8	0.03	_____	_____	_____
Other livestock expense	16	0.06	_____	_____	_____
Fertilizer & lime	102	0.41	_____	_____	_____
Seeds & plants	90	0.36	_____	_____	_____
Spray & other crop expense	45	0.18	_____	_____	_____
Crop professional fees	5	0.02	_____	_____	_____
Land, building & fence repair	57	0.23	_____	_____	_____
Taxes	52	0.21	_____	_____	_____
Real estate rent & lease	42	0.17	_____	_____	_____
Insurance	44	0.18	_____	_____	_____
Utilities	101	0.41	_____	_____	_____
Other professional fees	20	0.08	_____	_____	_____
Miscellaneous	20	0.08	_____	_____	_____
Total Less Interest Paid	\$3,677	\$14.85	\$ _____	_____	\$ _____
<u>Net Accrual Operating Income</u>					
		<u>Total</u>			
(without interest paid)	\$ 160,477		\$ _____	_____	\$ _____
- Change in livestock /crop inventory*	91,795		_____	_____	_____
- Change in accounts receivable	-15,554		_____	_____	_____
- Change in feed & supply inventory**	-80,340		_____	_____	_____
+ Change in accounts payable***	30,434		_____	_____	_____
NET CASH FLOW	\$ 195,010		\$ _____	_____	\$ _____
- Net family withdrawals	103,264		_____	_____	_____
Available for Farm	\$ 91,746		\$ _____	_____	_____
- Farm debt payments	275,897		_____	_____	_____
Available for Farm Investment	\$-184,151		\$ _____	_____	\$ _____
- Capital purchases	299,852		_____	_____	_____
Additional Capital Needed	\$ 484,003		\$ _____	_____	\$ _____

\*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

45 Northern New York Region Dairy Farms, 2009

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	656	533	1,189	_____	_____	_____
Nontillable	45	11	56	_____	_____	_____
Other nontillable	<u>219</u>	<u>3</u>	<u>222</u>	_____	_____	_____
Total	920	547	1,467	_____	_____	_____
<u>Crop Yields</u>	<u>Farms</u>	<u>Acres*</u>	<u>Production/Acre</u>	<u>Acres</u>	<u>Production/Acre</u>	
Hay crop	45	574	3.13 tons DM	_____	_____	tons DM
Corn silage	41	456	18.78 tons	_____	_____	tons
			6.22 tons DM	_____	_____	tons DM
Other forage	4	36	1.26 tons DM	_____	_____	tons DM
Total forage	45	992	4.42 tons DM	_____	_____	tons DM
Corn grain	28	233	128 bushels	_____	_____	bushels
Oats	4	45	61 bushels	_____	_____	bushels
Wheat	2	81	51 bushels	_____	_____	bushels
Other crops	11	143		_____		
Tillable pasture	7	36		_____		
Idle	9	26		_____		
Total Tillable Acres	45	1,189		_____		

\*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were hay crop 574, corn silage 415, corn grain 145, oats 4, tillable pasture 6, and idle 5.

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

45 Northern New York Region Dairy Farms, 2009

Item	Average*	My Farm
Total tillable acres per cow	2.30	_____
Total forage acres per cow	1.92	_____
Harvested forage dry matter, tons per cow	8.46	_____

\*Excludes farms that do not harvest forages.

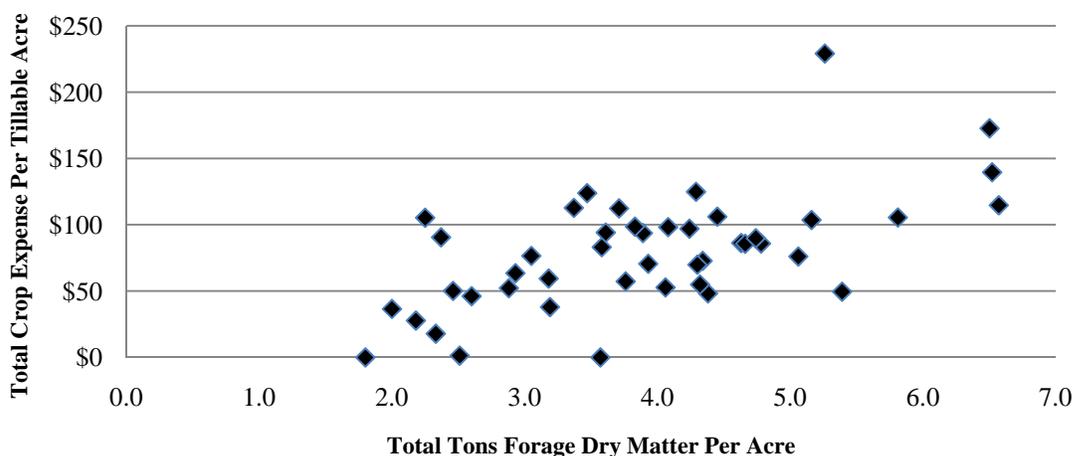
**Cropping Analysis** (continued)

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. Rotational grazing was used on two farms in the region.

**CROP RELATED ACCRUAL EXPENSES**  
45 Northern New York Region Dairy Farms, 2009

Item	Average 45 Farms		My Farm	
	Total Per Tillable Acre		Total Per Tillable Acre	
Number of farms reporting	45		_____	
Average number of acres	1,189		_____	
Fertilizer & lime expenses	\$	44.51	\$	_____
Seeds & plants		39.26		_____
Spray & other crop expenses		<u>21.65</u>		_____
Total	\$	105.42	\$	_____

**CROP EXPENSE PER ACRE AND TOTAL FORAGE PRODUCTION  
PER ACRE**  
45 Northern New York Dairy Farms, 2009



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**  
45 Northern New York Region Dairy Farms, 2009

Machinery Expense	Average		My Farm	
	Total Expenses	Per Tillable Acre	Total Expenses	Per Tillable Acre
Fuel, oil & grease	\$ 75,501	\$ 63.51	\$ _____	\$ _____
Mach. repair & vehicle expense	92,663	77.95	_____	_____
Machine hire, rent & lease	44,395	37.34	_____	_____
Interest (5%)	40,947	34.44	_____	_____
Depreciation	<u>112,049</u>	<u>94.25</u>	_____	_____
Total	\$365,555	\$307.49	\$ _____	\$ _____

**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**  
45 Northern New York Region Dairy Farms, 2009

Item	Dairy Cows		Bred		Heifer Open		Calves	
	No.	Value	No.	Value	No.	Value	No.	Value
Beg. year (owned)	502	\$755,002	149	\$227,758	143	\$136,736	121	\$ 59,713
+ Change w/o apprec.		47,771		16,029		7,384		9,031
+ Appreciation		<u>-42,278</u>		<u>-11,176</u>		<u>-13,062</u>		<u>-8,393</u>
End year (owned)	537	\$760,496	162	\$232,611	151	\$131,058	143	\$ 60,351
End including leased	537							
Average number	518		405	(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**  
45 Northern New York Region Dairy Farms, 2009

Item	Average	My Farm
Total milk sold, pounds	12,820,438	_____
Milk sold per cow, pounds	24,759	_____
Average milk plant test, percent butterfat	3.63%	_____

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**  
45 Northern New York Region Dairy Farms, 2009

Item	Average		My Farm	
	Number	Percent*	Number	Percent*
Cows sold for beef	132	25.4	_____	_____
Cows sold for dairy	3	0.5	_____	_____
Cows died	31	6.0	_____	_____
Culling rate**		31.0		_____

\*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**

45 Northern New York Region Dairy Farms, 2009

Item	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
<u>Accrual Cost of Producing Milk</u>						
Operating costs	\$ 1,684,626	\$ 3,253	\$ 13.14	\$ _____	\$ _____	\$ _____
Purchased inputs costs	\$ 1,873,164	\$ 3,618	\$ 14.61	\$ _____	\$ _____	\$ _____
Total Costs	\$ 2,130,962	\$ 4,115	\$ 16.62	\$ _____	\$ _____	\$ _____
<u>Accrual Receipts</u>						
<u>From Milk</u>	\$1,755,767	\$ 3,391	\$ 13.70	\$ _____	\$ _____	\$ _____
Net Milk Receipts	\$1,660,538	\$ 2,798	\$ 12.95	\$ _____	\$ _____	\$ _____
Net Farm Income without Apprec.	\$ -117,397	\$ -227	\$ -0.92	\$ _____	\$ _____	\$ _____
Net Farm Income with Appreciation	\$ -82,752	\$ -160	\$ -0.65	\$ _____	\$ _____	\$ _____

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**

45 Northern New York Region Dairy Farms, 2009

Item	Average		My Farm	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrate	\$ 1,259	\$ 5.08	\$ _____	\$ _____
Purchased dairy roughage	43	.17	_____	_____
Total Purchased Dairy Feed	\$ 1,301	\$ 5.25	\$ _____	\$ _____
Purchased grain & concentrate as % of milk receipts		37%	_____ %	_____ %
Purchased feed & crop expense	\$ 1,543	\$ 6.23	\$ _____	\$ _____
Purchased feed & crop expense as % of milk receipts		46%	_____ %	_____ %
Breeding	\$ 49	\$ .20	\$ _____	\$ _____
Veterinary & medicine	144	.58	_____	_____
Milk marketing	184	.74	_____	_____
Bedding	78	.32	_____	_____
Milking supplies	103	.42	_____	_____
Cattle lease	1	.01	_____	_____
Custom boarding	141	.57	_____	_____
bST expense	56	.23	_____	_____
Livestock professional fees	8	.03	_____	_____
Other livestock expense	16	.06	_____	_____

**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**  
45 Northern New York Region Dairy Farms, 2009

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	\$415,186	\$9,269	\$4,037	\$7,313
Real estate		3,879		3,060
Machinery & equipment	70,842	1,582	689	
<u>Ratios</u>				
Asset turnover	Operating Expense	Interest Expense	Depreciation Expense	
.44	.94	.03	.09	
<u>My Farm</u>				
Farm capital	\$ _____	\$ _____	\$ _____	\$ _____
Real estate	_____	_____	_____	_____
Machinery & equipment	_____	_____	_____	_____
<u>Ratios</u>				
Asset turnover	Operating Expense	Interest Expense	Depreciation Expense	
_____	_____	_____	_____	

**LABOR FORCE INVENTORY**  
45 Northern New York Region Dairy Farms, 2009

Labor Force	Months	Age	Years of Education	Value of Labor & Management
Operator number 1	13.1	51	14	\$50,380
Operator number 2	8.8	46	14	34,191
Operator number 3	3.3	47	15	12,333
Operator number 4	1.0	44	12	4,156
Family paid	2.0			
Family unpaid	1.5			
Hired	<u>109.0</u>			
Total	138.7	/ 12 = 11.56 Worker Equivalent 1.95 Operator/Manager Equivalent		
<u>My Farm: Total</u>				
Operator's	_____	/ 12 = ____ Worker Equivalent		
	_____	/ 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**  
45 Northern New York Region Dairy Farms, 2009

Labor Efficiency	Average		My Farm	
	Total	Per Worker	Total	Per Worker
Cows, average number	518	45	_____	_____
Milk sold, pounds	12,820,438	1,108,955	_____	_____
Tillable acres	1,189	103	_____	_____

**LABOR AND MACHINERY COSTS**  
45 Northern New York Region Dairy Farms, 2009

Labor Costs	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Value of operator(s) labor (\$2,500/month)	\$ 65,625	\$ 127	\$ .51	\$ _____	\$ _____	\$ _____
Family unpaid (\$2,500/month)	3,725	7	.03	_____	_____	_____
Hired	<u>307,101</u>	<u>593</u>	<u>2.40</u>	_____	_____	_____
Total Labor	\$ 376,451	\$ 727	\$ 2.94	\$ _____	\$ _____	\$ _____
Machinery Cost	<u>\$ 365,555</u>	<u>\$ 706</u>	<u>\$ 2.85</u>	\$ _____	\$ _____	\$ _____
Total Labor & Mach.	\$ 742,006	\$ 1,433	\$ 5.79	\$ _____	\$ _____	\$ _____
Hired labor expense per hired worker equivalent			\$ 33,203	\$ _____		
Hired labor expense as % of milk sales			17.5%	_____%		

**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 37 Northern New York Region Dairy Farms, 2008 & 2009

Selected Factors	Average of 85 Farms*		My Farm		Goal
	2008	2009	2008	2009	
<b><u>Size of Business</u></b>					
Average number of cows	560	602	_____	_____	_____
Average number of heifers	469	478	_____	_____	_____
Milk sold, pounds	13,727,407	15,052,160	_____	_____	_____
Worker equivalent	12.63	13.28	_____	_____	_____
Total tillable acres	1,291	1,366	_____	_____	_____
<b><u>Rates of Production</u></b>					
Milk sold per cow, pounds	24,492	25,013	_____	_____	_____
Hay DM per acre, tons	3.3	3.2	_____	_____	_____
Corn silage per acre, tons	18.9	19.2	_____	_____	_____
<b><u>Labor Efficiency</u></b>					
Cows per worker	44	45	_____	_____	_____
Milk sold/worker, pounds	1,086,889	1,133,446	_____	_____	_____
<b><u>Cost Control</u></b>					
Grain & conc. purchased as % of milk sales	29%	37%	_____ %	_____ %	_____ %
Dairy feed & crop expense per cwt. milk	\$ 6.95	\$ 6.23	\$ _____	\$ _____	\$ _____
Labor & mach. costs/cow	\$ 1,602	\$ 1,430	\$ _____	\$ _____	\$ _____
Operating cost of producing cwt. of milk	\$ 14.75	\$ 13.09	\$ _____	\$ _____	\$ _____
<b><u>Capital Efficiency**</u></b>					
Farm capital per cow	\$ 9,560	\$ 9,284	\$ _____	\$ _____	\$ _____
Mach. & equipment per cow	\$ 1,540	\$ 1,562	\$ _____	\$ _____	\$ _____
Asset turnover ratio	0.57	0.44	_____	_____	_____
<b><u>Profitability</u></b>					
Net farm income w/o apprec.	\$ 390,844	\$ -129,743	\$ _____	\$ _____	\$ _____
Net farm income w/apprec.	\$ 413,748	\$ -84,637	\$ _____	\$ _____	\$ _____
Labor & mgmt. income per operator/manager	\$ 97,051	\$ -148,700	\$ _____	\$ _____	\$ _____
Rate of return on equity capital w/appreciation	8.2	-5.6	_____ %	_____ %	_____ %
Rate of return on all capital w/appreciation	7.1	-2.3	_____ %	_____ %	_____ %
<b><u>Financial Summary</u></b>					
Farm net worth, end year	\$3,723,953	\$ 3,453,397	\$ _____	\$ _____	\$ _____
Debt to asset ratio	.33	.39	_____	_____	_____
Farm debt per cow	\$ 3,145	\$ 3,482	\$ _____	\$ _____	\$ _____

\*Farms participating both years.

\*\*Average for the year.

**RECEIPTS AND EXPENSES PER COW AND PER CWT.**  
Same 37 Northern New York Region Dairy Farms, 2008 & 2009

Item	2008		2009	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	560		602	
Cwt. of Milk Sold		137,274		150,522
<b><u>ACCRUAL OPERATING RECEIPTS</u></b>				
Milk	\$4,708	\$19.22	\$3,425	\$13.69
Dairy cattle	363	1.48	274	1.10
Dairy calves	38	0.15	35	0.14
Other livestock	5	0.02	-1	-0.01
Crops	187	0.76	87	0.35
Miscellaneous receipts	<u>96</u>	<u>0.39</u>	<u>206</u>	<u>0.82</u>
Total Receipts	\$5,396	\$22.03	\$4,025	\$16.09
<b><u>ACCRUAL OPERATING EXPENSES</u></b>				
Hired labor	\$ 619	\$ 2.53	\$ 606	\$ 2.42
Dairy grain & concentrate	1,376	5.62	1,271	5.08
Dairy roughage	31	0.13	42	0.17
Nondairy feed	0	0.00	0	0.00
Professional nutritional services	0	0.00	0	0.00
Machine hire, rent & lease	96	0.39	82	0.33
Machinery repair & vehicle expense	211	0.86	180	0.72
Fuel, oil & grease	236	0.96	146	0.58
Replacement livestock	15	0.06	4	0.02
Breeding	60	0.25	50	0.20
Veterinary & medicine	151	0.62	145	0.58
Milk marketing	195	0.80	182	0.73
Bedding	75	0.31	80	0.32
Milking supplies	112	0.46	104	0.42
Cattle lease	0	0.00	1	0.01
Custom boarding	137	0.56	145	0.58
bST expense	50	0.21	57	0.23
Livestock professional fees	7	0.03	8	0.03
Other livestock expense	12	0.05	15	0.06
Fertilizer & lime	145	0.59	104	0.41
Seeds & plants	90	0.37	92	0.37
Spray & other crop expense	54	0.22	45	0.18
Crop professional fees	5	0.02	5	0.02
Land, building & fence repair	99	0.41	58	0.23
Taxes	48	0.20	51	0.21
Real estate rent & lease	50	0.21	44	0.17
Insurance	42	0.17	44	0.18
Utilities	102	0.42	100	0.40
Interest paid	134	0.55	123	0.49
Other professional fees	24	0.10	20	0.08
Miscellaneous	<u>27</u>	<u>0.11</u>	<u>20</u>	<u>0.08</u>
Total Operating Expenses	\$4,206	\$17.17	\$3,823	\$15.29
Expansion Livestock	94	0.38	49	0.20
Extraordinary Expense	1	0.00	3	0.01
Machinery Depreciation	232	0.95	217	0.87
Real Estate Depreciation	<u>166</u>	<u>0.68</u>	<u>147</u>	<u>0.59</u>
Total Expenses	\$4,699	\$19.18	\$4,239	\$16.96
Net Farm Income Without Appreciation	697	2.85	-216	-0.86

### 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**

45 Northern New York Region Dairy Farms, 2009

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)
31.40	1,561	40,910,316	26,986	4.5	24	58	1,392,312
13.22	548	13,155,719	24,318	3.5	20	46	1,095,989
6.83	263	5,861,979	21,920	2.8	18	40	912,295
4.02	143	2,889,874	20,044	2.4	16	33	650,570
2.22	73	1,284,303	16,172	1.9	11	24	449,449

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)	
\$672	27%	\$445	\$1,134	\$853	\$4.57	
953	33	630	1,333	1,226	5.62	
1,077	37	708	1,449	1,348	6.24	
1,257	41	788	1,599	1,548	6.69	
1,585	49	1,006	2,097	1,851	7.90	

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)
\$3,727	\$9.41	\$14.94	\$187,319	\$149,361	\$10,013	\$47,002
3,324	11.60	16.13	44,658	22,024	-28,149	-29,299
3,030	12.98	17.32	-24,212	-36,318	-71,239	-78,042
2,637	13.90	18.53	-83,488	-139,947	-173,366	-196,801
2,120	16.07	21.91	-538,037	-582,107	-437,311	-769,649

\*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**

32 New York Dairy Farms, 2009

<u>Animals Entering Herd</u>	Average
Number calving in 2009 for first time	267
Animals purchased, % <sup>1</sup>	3.9%
Animals raised by farm, % <sup>2</sup>	96.1%
<u>Current Heifer Inventory</u>	
Raised on dairy, %	86.4%
Raised by a custom grower, %	13.5%

<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, 267 animals calved for the first time in 2009. The breakdown on these animals for source was 3.9 percent purchased and 96.1 percent raised by the farm. Of the current heifer inventory, 86.4 percent were raised on the dairy and 13.5 percent were being 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, 31 Northern New York farms provided data 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 new line item in this section is the expenses associated with utilizing forward contracting or hedging programs to market milk, such as commission 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 12 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**  
31 Northern New York Region Dairy Farms, 2009

	Pounds	Percent	Price/Pound	Total	\$/Cwt of Milk
<b>BASE FARM PRICE</b>					
Butterfat	539,836	3.63%	\$1.26	\$679,205	\$4.57
Protein	459,213	3.09%	\$2.22	\$1,018,585	\$6.85
Solids	847,367	5.70%	\$0.06	\$50,964	\$0.34
<b>Total Component Contribution</b>					\$11.77
<b>PPD</b>	14,863,575			\$116,939	\$0.79
<b>Base Farm Price</b>					\$12.55
<b>Premiums</b>					
Quality				\$38,895	\$0.26
Volume				\$43,157	\$0.29
Market Premiums				\$69,954	\$0.47
<b>Total Premiums</b>					\$1.02
<b>BASE FARM PRICE + PREMIUM</b>					
					\$13.57
<b>Deductions</b>					
Promotion				\$22,364	\$0.15
Hauling + Stop Charges.				\$75,846	\$0.51
Market Fees & Coop Dues				\$22,450	\$0.15
<b>Total Deductions</b>					\$0.81
<b>BASE FARM PRICE + PREMIUMS - DEDUCTIONS</b>					
					\$12.76
<b>Marketing Programs</b>					
Futures Contracts, Forward Contracting, Etc.				\$3,521	\$0.02
<b>Total Marketing Income</b>					\$0.02
<b>Patronage Dividends</b>				\$10,051	\$0.17
<b>NET PRICE RECEIVED ON FARM, ALL SOURCES</b>					
					\$12.85
<b>PPD - Hauling, \$ per cwt.</b>					\$0.28
<b>PPD - Hauling + Market Premiums, \$ per cwt.</b>					\$0.75
<b>Net Marketing Value (PPD + Total Premiums - Total Deductions), \$ per cwt.</b>					\$1.00

**MILK PRICE INFORMATION BY QUINTILE\***

(Each Category Sorted Independently)

31 Northern New York Region Dairy Farms, 2009

	Lowest Quintile				Highest Quintile
Butterfat, %	3.51	3.63	3.70	3.77	3.84
Protein, %	2.94	3.04	3.09	3.14	3.23
Other Solids, %	5.59	5.68	5.70	5.73	5.77
Butterfat, \$ per Cwt.	4.42	4.57	4.65	4.73	4.85
Protein, \$ per Cwt.	6.53	6.72	6.86	6.97	7.20
Other solids, \$ per Cwt.	0.27	0.33	0.35	0.36	0.37
<b>Total Component Value per Cwt.</b>	<b>\$11.35</b>	<b>\$11.69</b>	<b>\$11.82</b>	<b>\$12.00</b>	<b>\$12.29</b>
PPD, \$ per Cwt.	0.56	0.67	0.71	0.78	1.20
<b>Base Farm Price per Cwt.</b>	<b>\$12.08</b>	<b>\$12.42</b>	<b>\$12.59</b>	<b>\$12.77</b>	<b>\$13.16</b>
Quality, \$ per Cwt.	0.04	0.15	0.25	0.34	0.45
Volume, \$ per Cwt.	0.00	0.08	0.12	0.40	0.62
Market premium, \$ per Cwt.	0.00	0.15	0.23	0.48	1.04
Total Premium, \$ per Cwt.	<b>0.38</b>	<b>0.60</b>	<b>0.80</b>	<b>0.97</b>	<b>1.48</b>
<b>Base Farm Price + Premiums per Cwt.</b>	<b>\$12.72</b>	<b>\$13.13</b>	<b>\$13.35</b>	<b>\$13.66</b>	<b>\$14.35</b>
Promotion, \$ per Cwt.	0.15	0.15	0.15	0.15	0.15
Hauling, \$ per Cwt.	0.19	0.29	0.38	0.50	1.05
Market fees & coop dues per Cwt.	0.05	0.11	0.13	0.17	0.28
<b>Total Marketing Expenses per Cwt.</b>	<b>\$0.45</b>	<b>\$0.55</b>	<b>\$0.69</b>	<b>\$0.87</b>	<b>\$1.29</b>
<b>Base + Premiums – Deductions per Cwt.</b>	<b>\$12.08</b>	<b>\$12.41</b>	<b>\$12.70</b>	<b>\$12.90</b>	<b>\$13.31</b>
Futures contract, forward contracting, \$ per Cwt.	0.00	0.00	0.00	0.00	0.39
<b>Total Marketing Income, \$ per Cwt.</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.68</b>
<b>Patronage Dividends, \$ per Cwt.</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.02</b>	<b>\$0.09</b>	<b>\$0.31</b>
<b>Net Price Received From All Sources, \$ per Cwt.</b>	<b>\$12.20</b>	<b>\$12.56</b>	<b>\$12.83</b>	<b>\$13.10</b>	<b>\$13.70</b>
PPD - Hauling, \$ per cwt.	<b>0.06</b>	<b>0.20</b>	<b>0.32</b>	<b>0.45</b>	<b>0.54</b>
PPD - Hauling + Market Premiums, \$ per cwt.	<b>0.23</b>	<b>0.54</b>	<b>0.62</b>	<b>0.77</b>	<b>1.25</b>
<b>Net Marketing Value (PPD + Total Premiums - Total Deductions), \$ per cwt.</b>	<b>0.38</b>	<b>0.74</b>	<b>0.81</b>	<b>0.97</b>	<b>1.42</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 224 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

224 New York Dairy Farms, 2008

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)
32.8	1,533	39,079,582	27,697	6.1	26	59	1,326,776
20.0	889	22,462,174	25,870	4.5	24	50	1,157,759
14.5	611	14,559,571	25,141	4.0	22	45	1,076,028
10.2	418	9,850,776	24,024	3.6	20	43	997,782
6.4	268	6,021,499	22,918	3.2	19	41	901,438
-----							
4.6	174	3,611,005	21,728	2.9	18	37	811,553
3.7	120	2,377,960	20,580	2.6	18	33	693,912
3.0	88	1,660,416	19,188	2.2	17	30	597,784
2.2	61	1,124,937	17,039	1.9	15	26	483,790
1.5	41	685,993	13,434	1.4	11	19	338,064

### 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)
\$634	19%	\$513	\$1,152	\$866	\$4.95
959	24	622	1,380	1,201	6.06
1,095	27	699	1,525	1,364	6.52
1,203	29	745	1,601	1,501	6.97
1,320	30	794	1,661	1,628	7.27
-----					
1,369	32	854	1,735	1,719	7.60
1,436	33	914	1,820	1,812	7.93
1,531	35	975	1,958	1,914	8.29
1,637	36	1,047	2,119	2,019	9.03
1,825	44	1,279	2,502	2,227	10.86

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

**FARM BUSINESS CHART FOR  
FARM MANAGEMENT COOPERATORS**  
224 New York Dairy Farms, 2008

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)
\$5,365	\$21.41	\$1,884	\$11.32	\$3,081	\$16.12
5,015	20.29	2,583	13.04	3,768	17.60
4,821	19.82	2,899	13.89	3,987	18.32
4,624	19.58	3,166	14.44	4,214	19.16
4,431	19.39	3,291	15.10	4,454	19.83
-----					
4,233	19.22	3,457	15.72	4,604	20.50
3,978	19.05	3,641	16.39	4,761	21.63
3,756	18.87	3,841	16.92	4,960	23.00
3,294	18.64	4,132	17.66	5,192	24.67
2,654	18.09	4,549	20.42	5,734	30.18

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)
\$1,346,592	\$1,434	0.28	\$1,458,571	\$1,591	\$920,860	\$468,664
572,148	1,115	0.22	668,588	1,204	345,048	182,305
343,548	918	0.19	426,417	1,022	192,506	104,268
210,965	762	0.15	252,603	870	98,620	56,724
139,296	637	0.13	138,473	726	48,388	29,921
-----						
79,180	489	0.10	81,064	575	16,947	12,975
40,234	378	0.08	48,498	444	-1,848	-1,568
25,534	243	0.05	32,757	318	-23,654	-17,104
7,719	76	0.02	18,529	141	-55,848	-42,482
-77,207	-474	-0.15	-61,730	-421	-198,298	-132,376

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**  
224 New York Dairy Farms, 2008

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)
\$143	\$1,336	6.35	7.84	1%	\$148	50%	39.50
276	1,032	2.54	2.91	4	975	33	5.40
371	888	1.97	2.13	7	1,665	27	3.44
462	779	1.65	1.77	9	2,156	22	2.65
529	710	1.44	1.40	10	2,557	18	2.29
595	646	1.20	1.12	12	3,090	14	1.91
650	514	1.01	0.89	13	3,563	10	1.56
720	413	0.83	0.54	15	3,970	6	1.20
841	275	0.60	0.10	17	4,480	0	0.93
1,348	-175	-0.73	-1.26	25	6,127	-14	-0.10

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	0.64	0.00	0.02	
0.10	91	0.08	0.00	0.69	0.01	0.04	
0.20	84	0.16	0.01	0.73	0.02	0.04	
0.27	79	0.22	0.09	0.75	0.02	0.05	
0.36	75	0.26	0.19	0.78	0.02	0.06	
0.47	69	0.31	0.29	0.80	0.03	0.07	
0.58	64	0.37	0.39	0.82	0.03	0.07	
0.73	59	0.44	0.49	0.85	0.04	0.08	
0.94	52	0.53	0.61	0.89	0.05	0.10	
1.75	38	0.71	0.91	1.03	0.08	0.16	

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)
0.81	\$1,557	\$708	\$6,228	\$777,839	23%	15%
0.70	2,522	1,006	7,389	355,241	14	11
0.65	2,865	1,261	7,985	200,304	10	8
0.60	3,170	1,451	8,546	98,920	8	7
0.55	3,579	1,670	9,149	45,034	5	5
0.50	4,002	1,895	9,774	19,198	2	3
0.45	4,584	2,097	10,751	4,250	0	1
0.40	5,364	2,331	11,819	-13,122	-2	0
0.34	6,416	2,668	13,177	-48,343	-5	-2
0.23	12,244	3,784	19,391	-296,970	-16	-9

\*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 44 cows on the small conventional farms to 839 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, and the greatest 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 2008 State Summary\*. As herd size increases, the net farm income profitability generally increases (page 48)\*. Net farm income without appreciation averaged \$28,655 per farm for the less than 50 cow farms and \$894,127 per farm for those with more than 900 cows. Return to all capital without appreciation also generally increased as herd size increased.

Assets, liabilities and financial measures are presented on pages 55-58\*. All but one herd size category saw an increase in farm net worth during 2008. The largest herd size category experienced an increase in net worth of \$325,434. However, percent equity generally went down as assets increased. The largest herds had the lowest percent equity; while the smaller herds averaged 82 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 (Table 50). With 25,338 pounds of milk sold per cow, farms in the largest herd size group averaged 10.2 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 438,645 pounds at the lowest herd size category up to 1,187,893 pounds at the largest size category.

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\*Wayne A. Knoblauch, Linda D. Putnam, and Jason Karszes, Dairy Farm Management Business Summary, New York, 2008, Department of Applied Economics and Management, Cornell University, R.B. 2009-01, November 2009.

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

209 New York Dairy Farms, 2008

Item	Farms with:	Conventional		Freestall		
		<= 60 Cows	>60 Cows	<=150 Cows	151-300 Cows	≥300 Cows
Number of farms		28	25	32	33	91
<u>Cropping Program Analysis</u>						
Total Tillable acres		148	275	260	575	1,677
Tillable acres rented*		70	113	127	295	862
Hay crop acres*		112	177	168	276	753
Corn silage acres*		14	54	59	158	621
Hay crop, tons DM/acre		2.0	2.3	2.8	3.1	3.8
Corn silage, tons/acre		16	16.3	18.3	18.2	20.3
Oats, bushels/acre		56	65	65	57	67
Forage DM per cow, tons		7.2	8.9	9.4	9.0	8.5
Tillable acres/cow		3.5	3.3	2.9	2.8	2.0
Fertilizer & lime expense/tillable acre		\$35.17	\$38.96	\$43.94	\$67.91	\$52.35
Total machinery costs		\$36,614	\$74,760	\$87,600	\$188,402	\$661,071
Machinery cost/tillable acre		\$239	\$269	\$297	\$328	\$394
<u>Dairy Analysis</u>						
Number of cows		44	85	98	207	839
Number of heifers		36	75	82	170	708
Milk sold, lbs.		810,642	1,667,050	1,874,904	4,495,717	20,976,580
Milk sold/cow, lbs.		18,576	19,511	19,071	21,759	25,011
Operating cost of producing milk/cwt.		\$14.17	\$16.74	\$15.70	\$15.15	\$15.18
Total cost of producing milk/cwt.		\$23.61	\$23.52	\$22.57	\$19.94	\$18.31
Price/cwt. milk sold		\$19.26	\$19.75	\$19.72	\$19.17	\$19.20
Purchased dairy feed/cow		\$1,142	\$1,250	\$1,405	\$1,306	\$1,532
Purchased dairy feed/cwt. milk		\$6.15	\$6.41	\$7.37	\$6.00	\$6.12
Purchased grain & concentrate as % of milk receipts		30%	32%	33%	30%	30%
Purchased feed & crop expense/cwt milk		\$7.15	\$7.50	\$8.53	\$7.48	\$7.15
<u>Capital Efficiency</u>						
Farm capital/worker		\$325,442	\$325,868	\$328,683	\$405,246	\$396,365
Farm capital/cow		\$13,423	\$11,328	\$10,197	\$9,885	\$8,918
Farm capital/tillable acre owned		\$7,569	\$5,958	\$7,550	\$7,273	\$9,177
Real estate/cow		\$7,270	\$5,256	\$4,468	\$4,018	\$3,424
Machinery investment/cow		\$2,451	\$2,213	\$1,940	\$1,844	\$1,453
Asset turnover ratio		0.31	0.37	0.44	0.49	0.62
<u>Labor Efficiency</u>						
Worker equivalent		1.80	2.97	3.05	5.04	18.86
Operator/manager equivalent		1.09	1.33	1.56	1.75	2.07
Milk sold/worker, lbs.		450,148	560,510	614,387	892,007	1,111,980
Cows/worker		24	29	32	41	44
Labor cost/cow		\$1,159	951	\$916	\$777	\$818
Labor cost/tillable acre		\$342	\$296	\$346	\$279	\$409
<u>Profitability &amp; Balance Sheet Analysis</u>						
Net farm income (without appreciation)		\$29,002	\$24,437	\$42,268	\$117,777	\$558,256
Labor & management income/operator		\$-3,900	\$-16,583	\$-1,300	\$21,991	\$148,631
Rate return on all capital with appreciation		-0.6%	-1.2%	1.21%	3.4%	8.4%
Farm debt/cow		\$2,295	\$2,300	\$2,434	\$2,773	\$3,062
Percent equity		83%	80%	77%	72%	66%

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

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

28 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 2008

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)
2.88	60	1,133,862	25,439	3.6	25	45	819,641
2.67	54	1,050,363	23,057	2.6	22	35	771,282
2.39	52	1,016,316	22,177	2.2	20	32	655,772
2.04	50	1,000,533	20,471	2.1	17	29	553,922
1.82	47	936,226	20,011	2.0	16	26	474,086
1.58	45	856,797	19,031	2.0	15	24	432,346
1.47	42	796,058	17,997	2.0	14	22	377,183
1.42	39	700,175	15,491	1.8	13	20	344,999
1.30	33	462,020	14,261	1.7	12	18	315,972
1.08	23	341,718	11,402	1.5	10	15	224,700

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)	
\$494	18%	\$504	\$1,320	\$572	\$4.15	
714	21	590	1,567	904	5.33	
819	24	617	1,799	1,038	5.87	
927	28	710	1,902	1,148	6.27	
1,035	29	839	2,037	1,229	6.74	
1,105	30	930	2,161	1,377	7.07	
1,231	32	1,019	2,273	1,528	7.58	
1,368	34	1,065	2,402	1,728	8.59	
1,464	42	1,161	2,556	1,935	10.00	
1,929	53	1,245	3,105	2,254	11.54	

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)
\$4,892	\$10.94	\$18.48	\$73,153	\$1,381	\$36,723	\$41,598
4,577	12.28	20.82	58,303	1,296	25,217	28,550
4,406	12.97	21.65	44,824	1,033	17,904	24,793
4,070	13.49	22.51	34,422	904	8,753	18,716
3,752	13.73	23.40	31,646	750	4,598	13,386
3,654	14.17	24.31	29,137	698	-3,198	4,726
3,413	15.13	24.91	26,562	588	-4,764	-939
2,903	16.30	26.48	19,822	472	-14,948	-4,994
2,685	17.20	32.37	12,464	311	-28,034	-15,179
2,241	17.74	37.80	-15,834	-663	-58,592	-47,298

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

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

25 Conventional Stall Dairy Farms with More Than 60 Cows, New York, 2008

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)
4.30	132	2,565,738	26,074	4.4	26	52	952,241
3.92	109	2,300,217	24,714	4.0	25	43	833,627
3.62	102	2,211,757	23,018	3.2	22	42	724,289
3.51	99	1,848,498	22,665	2.8	20	36	671,010
3.42	86	1,762,869	21,206	2.7	18	32	631,629
3.12	85	1,634,115	19,199	2.6	17	29	623,430
2.89	77	1,459,410	17,845	2.5	16	28	580,964
2.44	70	1,357,649	16,895	2.1	15	26	491,001
2.11	67	1,227,908	16,088	1.9	15	21	437,037
1.72	68	1,086,954	15,121	1.4	11	17	279,205

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)	
\$613	15%	\$522	\$1,174	\$944	\$4.60	
942	25	624	1,462	1,085	5.83	
1,069	30	742	1,647	1,233	6.74	
1,126	31	825	1,765	1,316	7.19	
1,229	33	919	1,914	1,440	7.55	
1,389	34	969	2,005	1,587	7.78	
1,452	36	1,036	2,120	1,707	7.86	
1,564	37	1,082	2,244	1,831	9.07	
1,647	43	1,196	2,448	1,928	9.39	
1,774	55	1,392	2,553	2,047	12.32	

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)
\$5,090	\$12.41	\$18.34	\$108,180	\$1,422	\$71,675	\$73,056
4,826	13.82	20.44	84,803	1,280	19,669	46,508
4,563	14.95	21.80	69,998	968	10,703	34,745
4,305	15.67	22.54	47,961	544	7,011	33,104
4,080	16.56	23.64	41,232	444	3,032	21,650
3,897	17.61	24.72	31,889	338	-7,800	6,171
3,681	18.43	25.77	19,292	217	-30,012	-6,608
3,303	19.32	26.81	3,397	39	-49,045	-20,877
3,156	21.16	28.02	-26,252	-326	-54,247	-46,718
2,965	23.41	30.91	-59,464	-631	-86,937	-74,973

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

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

32 Freestall Barn Dairy Farms with 150 or Less Cows, New York, 2008

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)
4.72	142	3,038,165	24,143	5.3	25	54	985,482
4.27	128	2,621,967	22,730	4.7	22	45	867,912
3.78	122	2,500,310	21,502	4.0	20	39	736,455
3.48	114	2,318,454	20,972	3.3	20	35	667,616
3.26	104	2,026,110	19,797	3.0	18	33	599,694
3.09	96	1,770,963	18,935	2.6	18	30	568,110
2.75	91	1,648,134	18,431	2.4	17	29	537,099
2.39	85	1,491,443	16,715	2.0	16	28	505,801
2.11	70	1,223,254	14,822	1.7	14	27	484,630
1.51	56	714,322	11,768	1.2	10	25	382,187

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)	
\$605	23%	\$409	\$1,076	\$840	\$5.76	
887	27	599	1,346	1,212	6.87	
1,092	31	650	1,558	1,421	7.61	
1,260	33	720	1,642	1,501	8.19	
1,335	34	783	1,687	1,618	8.46	
1,353	35	854	1,772	1,740	9.07	
1,371	36	896	1,955	1,822	9.34	
1,397	37	1,000	2,049	1,940	9.87	
1,511	38	1,167	2,237	2,056	10.74	
1,659	42	1,466	2,535	2,271	12.12	

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
			Total	Per Cow		
(12)	(12)	(12)	(4)	(12)	(4)	(8)
\$4,590	\$10.77	\$17.18	\$167,055	\$1,444	\$97,341	\$174,828
4,446	14.25	19.79	129,532	1,122	42,953	88,112
4,362	15.01	20.63	72,508	832	23,772	50,653
4,020	15.20	22.13	45,653	520	10,569	20,785
3,910	15.98	22.72	33,327	332	-1,772	12,980
3,835	16.43	23.38	28,293	248	-6,683	9,679
3,525	16.78	23.99	20,979	228	-14,067	5,207
3,281	17.07	25.41	14,526	170	-22,855	-2,639
2,955	18.22	28.18	6,298	67	-36,296	-25,570
2,466	22.65	34.28	-52,058	-654	-57,882	-57,421

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

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

33 Freestall Barn Dairy Farms with 151-300 Cows, New York, 2008

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)
7.36	278	7,176,719	27,103	7.0	29	60	1,247,970
6.59	254	5,820,432	25,495	4.7	25	55	1,114,505
6.17	239	5,602,646	24,277	4.0	23	52	1,054,051
5.42	230	5,029,286	23,068	3.6	21	48	997,473
5.09	219	4,663,184	22,155	3.2	19	42	967,149
4.88	202	4,345,222	21,258	3.0	18	40	929,109
4.70	191	4,102,740	20,560	2.5	17	38	846,682
4.43	180	3,843,664	19,837	2.3	16	36	754,320
3.80	162	3,243,073	18,578	2.1	14	34	696,412
3.21	153	2,447,759	15,638	1.2	10	31	606,982

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	Feed & Crop Expenses Per Cwt. Milk
(12)	(12)	(14)	(14)	(12)	(12)	(12)
\$623	17%	\$593	\$1,151	\$821	\$4.48	\$4.48
938	24	720	1,389	1,240	6.13	6.13
1,055	27	790	1,523	1,391	6.55	6.55
1,187	29	833	1,611	1,599	7.28	7.28
1,266	30	886	1,665	1,717	8.00	8.00
1,343	32	927	1,784	1,769	8.18	8.18
1,379	34	971	1,823	1,864	8.28	8.28
1,422	36	1,007	1,896	1,932	8.51	8.51
1,532	38	1,052	2,005	2,013	8.91	8.91
1,908	40	1,344	2,183	2,201	10.34	10.34

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)
\$5,135	\$10.29	\$15.70	\$395,626	\$1,685	\$176,178	\$260,998
4,977	12.59	17.95	234,334	1,147	81,267	166,236
4,654	14.27	19.29	210,396	909	58,981	110,196
4,502	15.13	19.69	160,334	688	45,943	96,181
4,302	15.73	20.26	116,567	561	24,543	59,925
4,069	16.36	20.71	98,847	455	17,437	25,814
3,969	16.93	21.48	69,667	358	4,006	13,372
3,825	17.60	22.33	40,423	200	-13,082	-2,327
3,518	18.16	23.78	10,482	64	-30,256	-80,452
2,916	20.41	25.96	-43,569	-278	-119,823	-267,334

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

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

91 Freestall Barn Dairy Farms with 300 or More Cows, New York, 2008

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)
40.30	2,019	51,009,186	28,787	6.8	26	56	1,443,325
28.93	1,245	32,113,692	26,903	4.9	24	51	1,244,520
23.56	1,052	27,010,448	26,129	4.3	22	48	1,191,250
20.82	915	22,767,153	25,703	4.0	21	46	1,145,727
17.27	752	19,505,571	25,335	3.8	20	44	1,109,855
15.69	657	15,987,491	24,684	3.6	20	43	1,058,967
13.68	569	13,699,103	24,059	3.3	19	42	1,024,107
11.86	466	11,295,704	23,305	3.1	18	41	970,167
10.26	418	9,740,588	22,319	2.9	18	37	894,884
7.55	349	8,070,836	20,610	2.2	15	32	800,062

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)	
\$1,067	23%	\$574	\$1,235	\$1,375	\$5.66	
1,193	26	671	1,385	1,491	6.25	
1,314	28	710	1,491	1,592	6.69	
1,355	29	739	1,552	1,669	6.95	
1,420	30	767	1,602	1,729	7.16	
1,507	31	807	1,646	1,841	7.37	
1,559	32	858	1,695	1,897	7.63	
1,625	33	912	1,753	1,973	7.85	
1,698	35	974	1,861	2,097	8.17	
1,840	37	1,088	2,082	2,265	8.86	

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)
\$5,629	\$12.22	\$15.78	\$1,887,971	\$1,405	\$692,856	\$1,135,029
5,196	13.45	16.82	1,039,969	1,102	329,736	558,075
5,063	14.04	17.51	783,841	978	250,878	429,314
4,950	14.41	17.97	551,204	852	167,602	352,923
4,834	15.03	18.22	444,975	749	134,288	291,503
4,728	15.59	18.55	360,114	627	108,639	186,631
4,606	16.15	19.20	291,916	493	67,941	109,671
4,455	16.72	19.72	214,414	385	31,966	221
4,301	17.26	20.26	156,958	240	-31,395	-76,560
4,050	18.19	21.49	-78,095	-69	-187,505	-483,862

\*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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Worksheet for Setting Goals (Continued)

II. Goals

What	How	When	Who is Responsible
_____	_____	_____	_____
_____	_____	_____	_____
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_____	_____	_____	_____

Summarize Your Business Performance

The Farm Business and Financial Analysis Charts on pages 23 and 27-29 can be used to help identify strengths and weaknesses of your farm business. Identify three major strengths and three areas of your farm business that need improvement.

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

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Needs improvement: \_\_\_\_\_

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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.

**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)
2010-05	Dairy Farm Business Summary, Western NY Region, 2009	(\$12.00)	Knoblauch, W., Putnam, L., Karszes, J., Hanchar, J., Grace, J., Carlberg, V., Petzen, J., Welch, D., Ames, M., Overton, R. and K. Skellie
2010-04	Dairy Farm Business Summary, New York Large Herd Farms, 300 Cows or Larger, 2009	(\$16.00)	Karszes, J., Knoblauch, W. and L. Putnam
2010-03	The Effectiveness of Farm-to-Chef Marketing of Local Foods: an Empirical Assessment from Columbia County, NY"		Schmit, T., Lucke, A. and S. Hadcock
2010-02	Business Planning for the Agriculture Sector: A guide to business plan development for Start-up to Mid-Size Operations	(\$12.00)	Perry, J. and R. Overton
2010-01	When to Exit Dairy Farming: The Value of Waiting		Tauer, L. and J. Dressler
2009-22	Marketing the Unique Story of Your Farm Business for Success		Schmit, T., Hulcoop, L. and R. Weybright
2009-21	Dairy Farm Business Summary, New York Dairy Farm Renters, 2008	(\$16.00)	Knoblauch, W. and L. Putnam
2009-20	New York Economic Handbook 2010	(\$10.00)	Extension Staff
2009-19	Fruit Farm Business Summary, Lake Ontario Region New York, 2008		White, G., DeMaree, A. and J. Neyhard
2009-18	2009 Federal Reference Manual for Regional Schools, Income Tax Management and Reporting for Small Businesses and Farms	(\$25.00)	Bouchard, G. and J. Bennett
2009-17	2009 New York State Reference Manual for Regional Schools, Income Tax Management and Reporting for Small Businesses and Farms	(\$25.00)	Bennett J. and K. Bennett
2009-16	Bedded Pack Management System Case Study		Thurgood, J., Bagley, P., Comer, C., Flaherty, D., Karszes, J. and M. Kiraly
2009-15	Dairy Farm Business Summary, Northern New York Region, 2008	(\$12.00)	Knoblauch, W., Putnam, L., Karszes, J., Murray, P., Vokey, F., Ames, M., Deming, A. and J. Prosper

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