

# DAIRY FARM BUSINESS SUMMARY

JULY 2012

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## HUDSON AND CENTRAL NEW YORK REGION 2011



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

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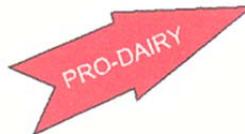
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HUDSON AND CENTRAL NEW YORK REGION  
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# 2011 DAIRY FARM BUSINESS SUMMARY HUDSON AND CENTRAL NEW YORK REGION\*

## 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 Hudson and Central New York Region for 2011.

### 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 2011 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 Hudson and Central New York Region of New York State, with the number of participating farms in parentheses, is comprised of Albany (3), Chenango (2), Columbia (1), Delaware (18), Madison (3), Otsego (5), Rensselaer (6), Saratoga (6), Schenectady (2), Schoharie (5), and Washington (13) counties in New York. Four farms from Addison County in Vermont were also included. This report was written by Wayne A. Knoblauch and George J. Conneman, Professors, Farm Business Management. Linda Putnam was in charge of data preparation. Cathryn Dymond assisted with data and publication preparation. Farm business data were collected by Senior Extension Associate in PRO-DAIRY, Jason Karszes; Cooperative Extension Educators Sandy Buxton, Mariane Kiraly, Kirk Shoen; and Richard Overton, Extension Support Specialist. We also acknowledge the cooperation of Charles Z. Radick, Consultant; Cathy Wickswat and Russell Saville, Cargill Animal Nutrition; and Farm Credit East Association for their assistance in data collection.

## SUMMARY AND ANALYSIS OF THE FARM BUSINESS

### Business Characteristics

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

#### BUSINESS CHARACTERISTICS

68 Hudson and Central New York Region Dairy Farms, 2011

Type of Farm	Number	Milking System	Number
Dairy	65	Bucket & carry	0
Part-time dairy	0	Dumping station	1
Dairy cash-crop	3	Pipeline	27
Certified organic milk producer	0	Herringbone conventional exit	19
Rotational grazing farm	9	Herringbone rapid exit	5
		Parallel	9
		Parabone	3
		Rotary	3
		Other	1
Type of Ownership	Number	Production Records	Number
Owner	61	Testing Service	47
Renter	7	On Farm System	5
		Other	2
		None	13
Type of Business	Number	Business Record System	Number
Sole Proprietorship	35	Account Book	14
Partnership	8	Accounting Service	14
Limited Liability Corporation	21	On-farm computer	40
Subchapter S Corporation	3	Other	0
Subchapter C Corporation	1		
Type of Barn	Number	Breed of Herd	Percent
Stanchion or Tie-Stall	28	Holstein	88
Freestall	36	Jersey	6
Combination	4	Other	7
Milking Frequency	Number		
2 times per day	44		
3 times per day	22		
Other	2		

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

### Income Statement

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

Cash paid is the actual cash outlay during the year and does not necessarily represent the cost of goods and services actually used in 2011.

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**

68 Hudson and Central New York Region Dairy Farms, 2011

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
<u>Hired Labor</u>	\$ 220,510		\$ 216	<<	\$ 893		\$221,187
<u>Feed</u>							
Dairy grain & concentrate	547,861		19,051		-9,836		518,974
Dairy roughage	25,435		-324		-2,304		23,454
Nondairy	37		0		0		37
Professional nutritional services	111		0	<<	-1		110
<u>Machinery</u>							
Machinery hire, rent & lease	32,313		0	<<	1,130		33,444
Machinery repairs & farm vehicle exp.	87,012		419		-2,306		84,286
Fuel, oil & grease	78,544		2,565		-76		75,903
<u>Livestock</u>							
Replacement livestock	2,085		0	<<	0		2,085
Breeding	18,489		11		-160		18,319
Veterinary & medicine	53,516		558		143		53,100
Milk marketing	86,267		0	<<	488		86,755
Bedding	29,538		790		-282		28,467
Milking supplies	32,776		-11		3,091		35,878
Cattle lease & rent	786		0	<<	0		786
Custom boarding	24,874		0	<<	-197		24,678
bST	7,889		-62		-197		7,754
Livestock professional fees	6,304		-18	<<	-96		6,226
Other livestock expense	8,034		333		-928		6,773
<u>Crops</u>							
Fertilizer & lime	41,017		3,439		3,552		41,130
Seeds & plants	40,171		9,470		-330		30,370
Spray, other crop expense	19,998		469		-114		19,415
Crop professional fees	952		-24	<<	0		975
<u>Real Estate</u>							
Land, building & fence repair	24,424		47		-886		23,491
Taxes	18,018		-32	<<	-207		17,843
Rent & lease	24,727		118	<<	-7		24,602
<u>Other</u>							
Insurance	15,550		48	<<	-18		15,484
Utilities (farm share)	38,552		183	<<	-75		38,294
Interest paid	38,619		0	<<	-218		38,401
Other professional fees	7,213		271	<<	55		6,997
Miscellaneous	9,159		145		-222		8,793
Total Operating	\$1,540,781		\$37,662		\$ -9,108		\$1,494,011
Expansion livestock	3,470		0	<<	0		3,470
Extraordinary expense	1,311		0	<<	0		1,311
Machinery depreciation							60,127
Building depreciation							32,779
<b>TOTAL ACCRUAL EXPENSES</b>							<b>\$1,591,698</b>

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 2011 but not paid for. A decrease is subtracted because it represents payment for resources used before 2011.

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**  
68 Hudson and Central New York Region Dairy Farms, 2011

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	\$1,702,525				\$22,719		\$1,725,244
Dairy cattle	77,434		\$18,682		88		96,204
Dairy calves	7,886		-2,825		-1		5,061
Other livestock	11,711		3,484		771		15,966
Crops	26,901		11,467		2,503		40,871
Government receipts	13,702		0 *		244		13,946
Custom machine work	6,042				190		6,232
Gas tax refund	32				0		32
Other	<u>31,282</u>				<u>2,110</u>		33,392
Less nonfarm noncash capital**		(-)	<u>0 **</u>			(-)	<u>0</u>
Total Receipts	\$1,877,516		\$30,808		\$28,624		\$1,936,948

\*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 2011 for the 2012 crop year in excess of funds earned for 2011. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2011 but received in 2010.

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. Payments in January 2012 for milk produced in December 2011 compared to January 2011 payments for milk produced in 2010 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.

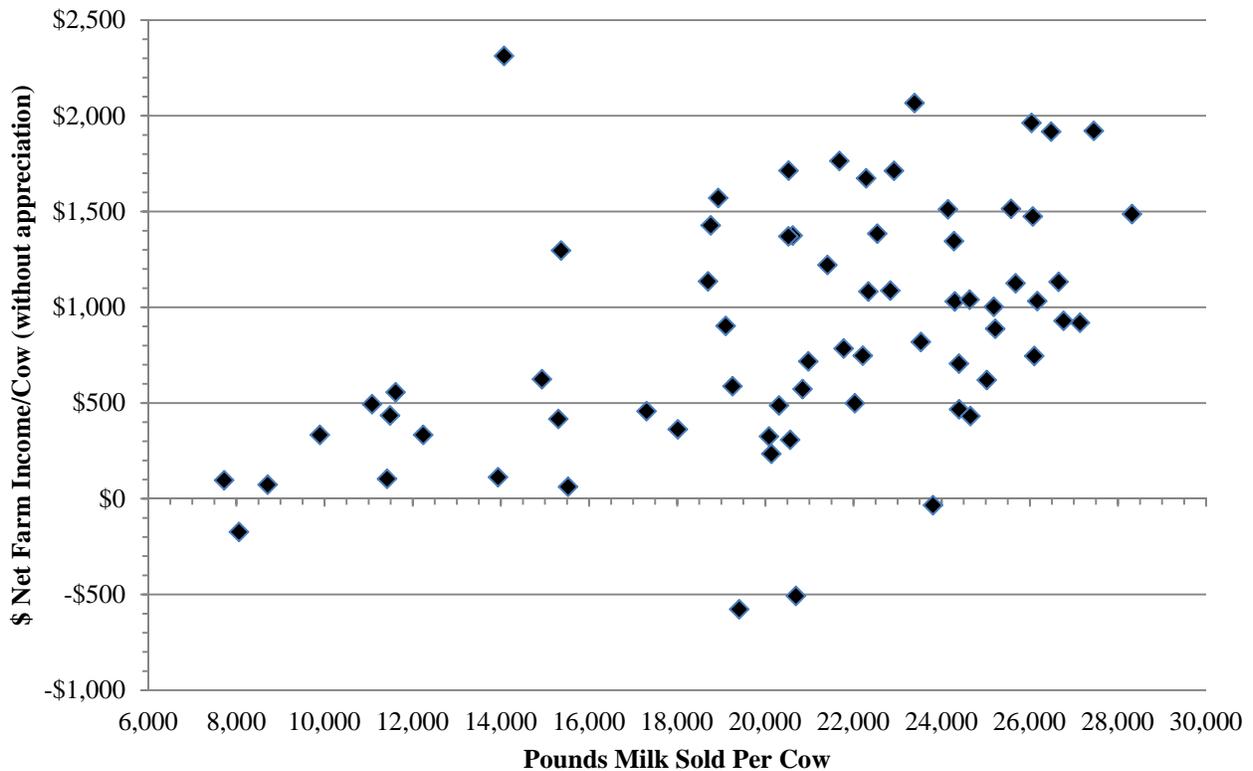
Net farm income is computed both with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than Farm Credit stock required for loan borrowings). Appreciation is a major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

**NET FARM INCOME**  
68 Hudson and Central New York Region Dairy Farms, 2011

Item	Average		My Farm	
	Total	Per Cow	Total	Per Cow
Total accrual receipts	\$ 1,936,948		\$ _____	
Appreciation: Livestock	4,239		_____	
Machinery	13,684		_____	
Real Estate	32,537		_____	
Other Stock & Certificates	2,049		_____	
Total Including Appreciation	\$ 1,989,457		\$ _____	
Total accrual expenses	1,591,698		- _____	
Net Farm Income (with appreciation)	\$ 397,759	\$ 1,205	\$ _____	\$ _____
Net Farm Income (without appreciation)	\$ 345,251	\$ 1,046	\$ _____	\$ _____

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**  
68 Hudson and Central New York Region Dairy Farms, 2011



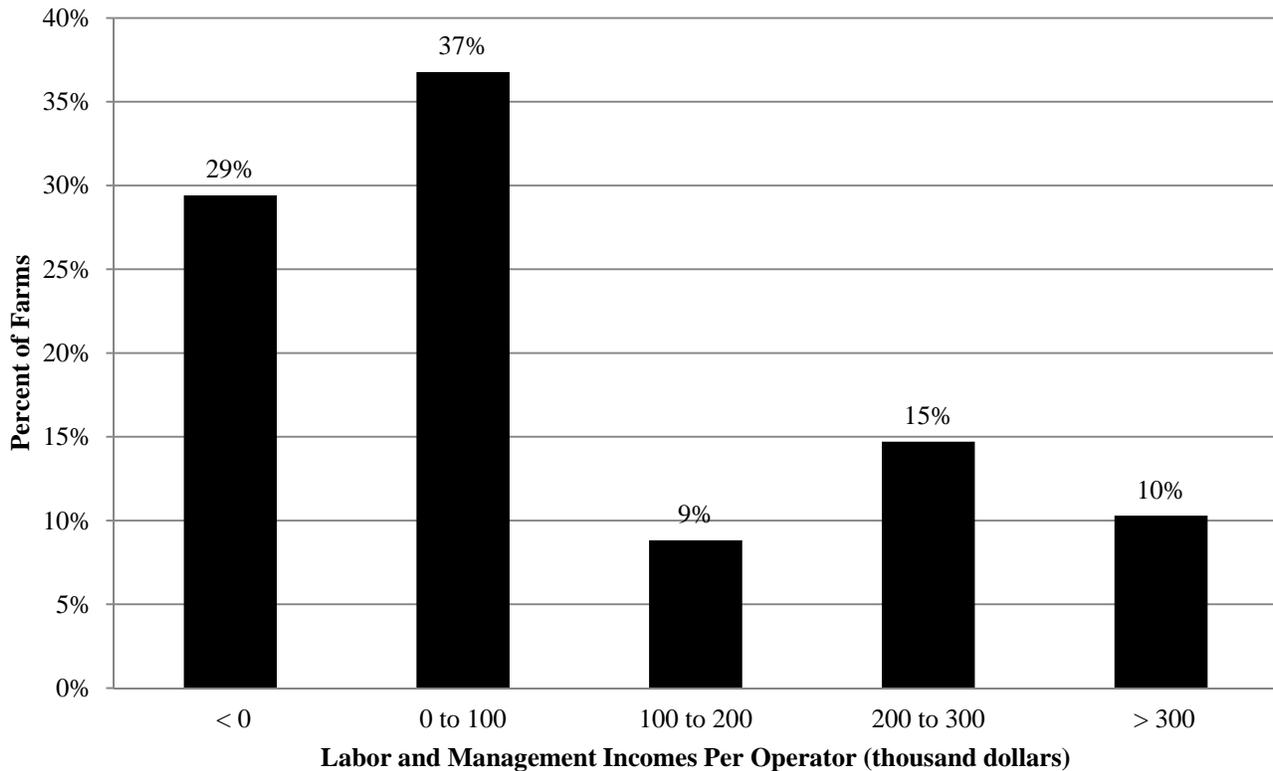
Labor and management income is the return which farm operators receive for their labor and management used in the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and 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**  
68 Hudson and Central New York Region Dairy Farms, 2011

Item	Average	My Farm
Net farm income without appreciation	\$ 345,251	\$ _____
Family labor unpaid @ \$2,550 per month	- 8,415	- _____
Interest on \$1,970,169 average equity capital @ 5% real rate	<u>- 98,508</u>	- _____
Labor & Management Income per farm (1.64 Operators/farm)	\$ 238,327	\$ _____
Labor & Management Income per Operator/Manager	\$ 145,321	\$ _____

Labor and management income per operator averaged \$145,321 on these 68 farms in 2011. The range in labor and management income per operator was from about \$-145,000 to more than \$728,000. Returns to labor and management were less than \$100,000 on 66 percent of the farms. Labor and management incomes per operator were between \$100,000 and \$300,000 on 24 percent of the farms, while 10 percent had labor and management incomes of \$300,000 or more per operator.

**DISTRIBUTION OF LABOR AND MANAGEMENT INCOMES PER OPERATOR**  
68 Hudson and Central New York Region Dairy Farms, 2011



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**  
68 Hudson and Central New York Region Dairy Farms, 2011

Item	Average	My Farm
Net farm income with appreciation	\$ 397,759	\$ _____
Family labor unpaid @ \$2,550 per month	- 8,415	- _____
Value of operators' labor & management	<u>- 75,638</u>	- _____
Return on equity capital with appreciation	\$ 313,706	\$ _____
Interest paid	<u>+ 38,401</u>	+ _____
Return on total capital with appreciation	\$ 352,107	\$ _____
Return on equity capital without appreciation	\$ 261,198	\$ _____
Return on total capital without appreciation	\$ 299,598	\$ _____
Rate of return on average equity capital:		
with appreciation	15.9%	_____ %
without appreciation	13.3%	_____ %
Rate of return on average total capital:		
with appreciation	11.8%	_____ %
without appreciation	10.0%	_____ %
Net Farm Income from Operations Ratio	0.18	_____

**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 2011, lease payments were discounted by 7 percent to obtain their present value.

Advanced government receipts are included as current liabilities. Government payments received in 2011 that are for participation in the 2012 program are the end year balance and payments received in 2010 for participation in the 2011 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.

## 2011 FARM BUSINESS &amp; NONFARM MARKET VALUE BALANCE SHEET

68 Hudson and Central New York Region Dairy Farms, 2011

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 28,514	\$ 34,828	Accounts payable	\$ 71,283	\$ 62,175
Accounts receivable	101,602	130,226	Operating debt	61,797	84,994
Prepaid expenses	1,901	2,664	Short Term	4,873	3,640
Feed & supplies	<u>298,976</u>	<u>347,343</u>	Advanced govt. receipts	0	0
			Current Portion:		
			Intermediate	88,097	97,289
			Long Term	<u>28,054</u>	<u>30,958</u>
Total Current	\$ 430,993	\$ 515,061	Total Current	\$ 254,104	\$ 279,055
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows:			Structured debt		
owned	\$ 443,974	\$ 459,670	1-10 years	\$ 429,882	\$ 390,799
leased	1,286	887	Financial lease		
Heifers	251,299	257,452	(cattle/machinery)	2,215	2,031
Bulls & other livestock	7,751	9,484	Farm Credit stock	<u>1,173</u>	<u>1,092</u>
Mach. & equip. owned	508,224	595,107	Total Intermediate	\$ 433,270	\$ 393,922
Mach. & equip. leased	929	1,144			
Farm Credit stock	1,173	1,092			
Other stock/certificate	<u>62,071</u>	<u>81,763</u>			
Total Intermediate	\$ 1,276,707	\$1,406,599			
<u>Long Term</u>			<u>Long Term</u>		
Land & buildings:			Structured debt		
owned	\$ 1,141,041	\$1,212,721	>10 years	\$ 335,903	\$ 346,530
leased	<u>0</u>	<u>1,831</u>	Financial lease		
Total Long Term	\$ 1,141,041	\$1,214,552	(structures)	<u>0</u>	<u>1,831</u>
			Total Long Term	\$ 335,903	\$ 348,361
Total Farm Assets	\$ 2,848,742	\$3,136,211	Total Farm Liabilities	\$ 1,023,278	\$ 1,021,338
			FARM NET WORTH	\$ 1,825,464	\$ 2,114,873

## Nonfarm Assets, Liabilities &amp; Net Worth (Average of 32 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	\$ 11,376	\$ 13,122	Nonfarm Liabilities	\$ 10,023	\$ 10,340
Cash value life insurance	44,388	45,920			
Nonfarm real estate	284,375	354,219			
Auto (personal share)	4,928	6,881			
Stocks & bonds	38,496	39,542			
Household furnishings	6,375	6,750			
All other nonfarm assets	17,182	17,371			
Total Nonfarm Assets	\$407,120	\$483,804	NONFARM NET WORTH	\$397,096	\$473,464

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

	Jan. 1	Dec. 31
Total Assets	\$ 3,255,862	\$ 3,620,015
Total Liabilities	<u>1,033,301</u>	<u>1,031,678</u>
TOTAL FARM & NONFARM NET WORTH	\$ 2,222,561	\$ 2,588,337

\*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

68 Hudson and Central New York Region Dairy Farms, 2011

Item	Average		My Farm	
<u>Financial Ratios - Farm:</u>				
Percent equity		67%	_____	%
Debt/asset ratio: total		.33	_____	
long-term		.29	_____	
intermediate/current		.35	_____	
Leverage Ratio:		.48	_____	
Current Ratio:		1.85	_____	
Working capital	\$236,006	As % of total expenses:	15%	
<u>Farm Debt Analysis:</u>				
Accounts payable as % of total debt		6%	_____	%
Long-term liabilities as a % of total debt		34%	_____	%
Current & inter. liabilities as a % of total debt		66%	_____	%
Cost of term debt (weighted average)		4.1%	_____	%
<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	\$ 3,054	\$ 3,547	\$ _____	\$ _____
Long-term debt	1,042	1,210	_____	_____
Intermediate & long term	2,220	2,578	_____	_____
Intermediate & current debt	2,013	2,337	_____	_____

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

68 Hudson and Central New York Region Dairy Farms, 2011

Item	Average of Region's Farms	
	Real Estate	Machinery & Equipment
Value beginning of year	\$ 1,141,041	\$ 508,224
Purchases	\$ 125,996*	\$ 136,528
Noncash transfer to farm	+ 0	+ 128
Lost capital	- 49,233	
Sales	- 4,841	- 3,329
Depreciation	- 32,779	- 60,127
Net investment	= 39,144	= 73,199
Appreciation	+ 32,537	+ 13,684
Value end of year	\$ 1,212,721	\$ 595,107

\*\$19,461 land and \$106,535 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)**  
68 Hudson and Central New York Region Dairy Farms, 2011

Item	Average	My Farm
Beginning of year farm net worth	\$1,825,464	\$ _____
Net farm income without appreciation	\$ 345,251	\$ _____
+Nonfarm cash income	+ 7,217	+ _____
-Personal withdrawals & family expenditures excluding nonfarm borrowings	<u>- 87,502</u>	- _____
RETAINED EARNINGS	+ \$ 264,966	+\$ _____
Nonfarm noncash transfers to farm	\$ 128	\$ _____
+Cash used in business from nonfarm capital	+ 25,646	+ _____
-Note or mortgage from farm real estate sold (nonfarm)	<u>- 0</u>	- _____
CONTRIBUTED/WITHDRAWN CAPITAL	+ \$ 25,773	+\$ _____
Appreciation	\$ 52,509	\$ _____
-Lost capital	<u>- 49,233</u>	- _____
CHANGE IN VALUATION EQUITY	+ \$ 3,276	+\$ _____
IMBALANCE/ERROR	<u>- 4,606</u>	- \$ _____
End of year net worth*	= \$2,114,874	=\$ _____
<hr/>		
<u>Change in Net Worth</u>		
Without appreciation	\$ 236,901	\$ _____
With appreciation	\$ 289,410	\$ _____

\*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**

68 Hudson and Central New York Region Dairy Farms, 2011

Item	Average	
<b><u>Cash Flow from Operating Activities</u></b>		
Cash farm receipts	\$ 1,877,516	
- Cash farm expenses	1,540,781	
- Extraordinary expense	<u>1,311</u>	
= Net cash farm income		\$ 335,423
Personal withdrawals & family expenses including nonfarm debt payments	\$ 88,166	
- Nonfarm income	<u>7,217</u>	
- Net cash withdrawals from the farm		\$ <u>80,949</u>
= Net Provided by Operating Activities		\$ 254,475
<b><u>Cash Flow From Investing Activities</u></b>		
Sale of assets: machinery	\$ 3,329	
+ real estate	4,841	
+ other stock & cert.	<u>726</u>	
= Total asset sales		\$ 8,896
Capital purchases: expansion livestock	\$ 3,470	
+ machinery	136,528	
+ real estate	125,996	
+ other stock & cert.	<u>18,369</u>	
- Total invested in farm assets		\$ <u>284,362</u>
= Net Provided by Investment Activities		\$ -275,466
<b><u>Cash Flow From Financing Activities</u></b>		
Money borrowed (intermediate & long term)	\$ 125,587	
+ Money borrowed (short term)	1,060	
+ Increase in operating debt	23,197	
+ Cash from nonfarm capital used in business	25,646	
+ Money borrowed - nonfarm	<u>664</u>	
= Cash inflow from financing		\$ 176,154
Principal payments (intermediate & long term)	\$ 141,949	
+ Principal payments (short term)	2,293	
+ Decrease in operating debt	<u>0</u>	
- Cash outflow for financing		\$ <u>144,242</u>
= Net Provided by Financing Activities		\$ 31,912
<b><u>Cash Flow From Reserves</u></b>		
Beginning farm cash, checking & savings	\$ 28,514	
- Ending farm cash, checking & savings	<u>34,828</u>	
= Net Provided from Reserves		\$ -6,314
Imbalance (error)		\$ 4,606

## 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 2012. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2012 debt payments shown below.

### FARM DEBT PAYMENTS PLANNED

Same 61 Hudson and Central New York Region Dairy Farms, 2010 & 2011

Debt Payments	Average			My Farm		
	2011 Payments		Planned 2012	2011 Payments		Planned 2012
	Planned	Made		Planned	Made	
Long term	\$ 44,005	\$ 48,287	\$ 47,874	\$ _____	\$ _____	\$ _____
Intermediate term	109,514	133,474	111,014	_____	_____	_____
Short term	3,415	2,599	3,891	_____	_____	_____
Operating (net reduction)	3,315	9,198	8,689	_____	_____	_____
Accounts payable (net reduction)	<u>1,721</u>	<u>14,685</u>	<u>0</u>	_____	_____	_____
Total	\$ 161,970	\$ 208,243	\$ 171,468	\$ _____	\$ _____	\$ _____
Per cow	\$ 498	\$ 641		\$ _____	\$ _____	
Per cwt. 2011 milk	\$ 2.11	\$ 2.71		\$ _____	\$ _____	
Percent of total 2011 farm receipts	9%	11%		_____	_____	
Percent of 2011 milk receipts	10%	12%		_____	_____	

The cash flow coverage ratio and debt coverage ratio measure the ability of the farm business to meet its planned debt payment schedule. The ratios show the percentage of payments planned for 2011 (as of December 31, 2010) that could have been made with the amount available for debt service in 2011. Farmers who did not participate in DFBS in 2010 have their 2011 ratios based on planned debt payments for 2012.

### COVERAGE RATIOS

Same 61 Hudson and Central New York Region Dairy Farms, 2010 & 2011

Item	Average	Item	Average
<u>Cash Flow Coverage Ratio</u>		<u>Debt Coverage Ratio</u>	
Cash farm receipts	\$1,850,435	Net farm income (w/o appreciation)	\$344,524
- Cash farm expenses	1,512,017	+ Depreciation	93,948
+ Interest paid (cash)	39,750	+ Interest paid (accrual)	39,507
- Net personal withdrawals from farm*	<u>81,323</u>	- Net personal withdrawals from farm*	<u>81,323</u>
(A) = Amount Available for Debt Service	\$296,846	(A') = Repayment Capacity	\$396,656
(B) = Debt Payments Planned for 2011 (as of December 31, 2010)	\$161,970	(B) = Debt Payments Planned for 2011 (as of December 31, 2010)	\$161,970
(A/B) = Cash Flow Coverage Ratio for 2011	1.83	(A'/B) = Debt Coverage Ratio for 2011	2.45

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

## ANNUAL CASH FLOW WORKSHEET

Item	68 Hudson and Central New York Region Dairy Farms		My Farm	Expected Change	2012 Projection
	Per Cow	Per Cwt.	Per Cow/ Per Cwt.		
Average number of cows	330				
Total cwt. of milk sold		78,098			
<u>Accrual Operating Receipts</u>					
Milk	\$5,226	\$22.09	\$ _____	_____	\$ _____
Dairy cattle	291	1.23	_____	_____	_____
Dairy calves	15	0.06	_____	_____	_____
Other livestock	48	0.20	_____	_____	_____
Crops	124	0.52	_____	_____	_____
Miscellaneous Receipts	<u>162</u>	<u>0.69</u>	_____	_____	_____
Total	\$5,867	\$24.80	\$ _____	_____	\$ _____
<u>Accrual Operating Expenses</u>					
Hired labor	\$ 670	\$ 2.83	\$ _____	_____	\$ _____
Dairy grain & concentrate	1,572	6.65	_____	_____	_____
Dairy roughage	71	0.30	_____	_____	_____
Nondairy feed	0	0.00	_____	_____	_____
Professional nutritional services	0	0.00	_____	_____	_____
Machinery hire, rent & lease	101	0.43	_____	_____	_____
Machinery repair & vehicle expense	255	1.08	_____	_____	_____
Fuel, oil & grease	230	0.97	_____	_____	_____
Replacement livestock	6	0.03	_____	_____	_____
Breeding	55	0.23	_____	_____	_____
Veterinary & medicine	161	0.68	_____	_____	_____
Milk marketing	263	1.11	_____	_____	_____
Bedding	86	0.36	_____	_____	_____
Milking supplies	109	0.46	_____	_____	_____
Cattle lease	2	0.01	_____	_____	_____
Custom boarding	75	0.32	_____	_____	_____
bST expense	23	0.10	_____	_____	_____
Livestock professional fees	19	0.08	_____	_____	_____
Other livestock expense	21	0.09	_____	_____	_____
Fertilizer & lime	125	0.53	_____	_____	_____
Seeds & plants	92	0.39	_____	_____	_____
Spray & other crop expense	59	0.25	_____	_____	_____
Crop professional fees	3	0.01	_____	_____	_____
Land, building & fence repair	71	0.30	_____	_____	_____
Taxes	54	0.23	_____	_____	_____
Real estate rent & lease	75	0.32	_____	_____	_____
Insurance	47	0.20	_____	_____	_____
Utilities	116	0.49	_____	_____	_____
Other professional fees	21	0.09	_____	_____	_____
Miscellaneous	<u>27</u>	<u>0.11</u>	_____	_____	_____
Total Less Interest Paid	\$4,409	\$18.64	\$ _____	_____	\$ _____
<u>Net Accrual Operating Income</u>					
(without interest paid)		<u>Total</u>			
		\$481,338	\$ _____		\$ _____
- Change in livestock /crop inventory*		30,808	_____		_____
- Change in accounts receivable		28,624	_____		_____
- Change in feed & supply inventory**		37,662	_____		_____
+ Change in accounts payable***		-8,890	_____		_____
NET CASH FLOW		\$375,353	\$ _____		\$ _____
- Net family withdrawals		80,218	_____		_____
Available for Farm		\$295,135	\$ _____		_____
- Farm debt payments		203,734	_____		_____
Available for Farm Investment		\$ 91,401	\$ _____		\$ _____
- Capital purchases		284,362	_____		_____
Additional Capital Needed		\$192,961	\$ _____		\$ _____

\*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** 68 Hudson and Central New York Region Dairy Farms, 2011

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	288	468	756	_____	_____	_____
Nontillable	40	16	55	_____	_____	_____
Other nontillable	118	7	125	_____	_____	_____
Total	446	490	936	_____	_____	_____
<u>Crop Yields</u>	<u>Farms</u>	<u>Acres*</u>	<u>Production/Acre</u>	<u>Acres</u>	<u>Production/Acre</u>	
Hay crop	65	406	3.15 tons DM	_____	_____	tons DM
Corn silage	60	294	15.82 tons	_____	_____	tons
			5.37 tons DM	_____	_____	tons DM
Other forage	6	52	4.33 tons DM	_____	_____	tons DM
Total forage	67	661	4.04 tons DM	_____	_____	tons DM
Corn grain	27	141	120 bushels	_____	_____	bushels
Oats	2	16	42 bushels	_____	_____	bushels
Wheat	4	37	44 bushels	_____	_____	bushels
Other crops	11	63		_____		
Tillable pasture	10	98		_____		
Idle	17	86		_____		
Total Tillable Acres	68	756		_____		

\*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were hay crop 388, corn silage 259, corn grain 56, oats 0, tillable pasture 14, and idle 22.

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** 67 Hudson and Central New York Region Dairy Farms, 2011

Item	Average*	My Farm
Total tillable acres per cow	2.29	_____
Total forage acres per cow	1.98	_____
Harvested forage dry matter, tons per cow	7.98	_____

\*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 16 farms in the region.

**CROP RELATED ACCRUAL EXPENSES**

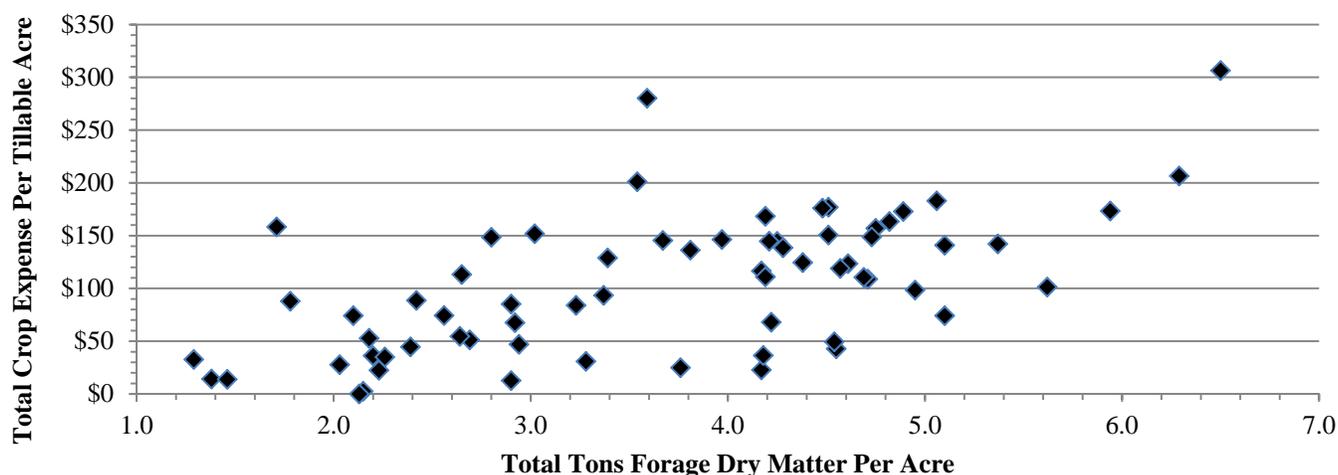
Hudson and Central New York Region Dairy Farms Reporting, 2011\*

Item	Average 67 Farms		My Farm	
	Total Per Tillable Acre		Total Per Tillable Acre	
Number of farms reporting	67		_____	
Average number of acres	767		_____	
Fertilizer & lime expenses	\$	47.12	\$	_____
Seeds & plants		34.24		_____
Spray & other crop expenses		<u>22.70</u>		_____
Total	\$	104.06	\$	_____

\* Excludes farms that do not harvest forages.

**CROP EXPENSE PER ACRE AND TOTAL FORAGE PRODUCTION PER ACRE**

67 Hudson and Central New York Region Dairy Farms, 2011\*



\* Excludes farms that do not harvest forages.

Most machinery costs are associated with crop production and should be analyzed with the crop enterprise. Total machinery expenses include the major fixed costs (interest and depreciation), as well as the accrual operating costs. Although machinery costs have not been allocated to individual crops, they are shown below per total tillable acre.

**ACCRUAL MACHINERY EXPENSES**

67 Hudson and Central New York Region Dairy Farms, 2011\*

Machinery Expense	Average		My Farm	
	Total Expenses	Per Tillable Acre	Total Expenses	Per Tillable Acre
Fuel, oil & grease	\$ 77,036	\$ 100.45	\$ _____	\$ _____
Mach. repair & vehicle expense	85,517	111.50	_____	_____
Machine hire, rent & lease	33,891	44.19	_____	_____
Interest (5%)	28,029	36.55	_____	_____
Depreciation	<u>60,975</u>	<u>79.50</u>	_____	_____
Total	\$285,448	\$372.19	\$ _____	\$ _____

\*Excludes farms that do not harvest forages.

**Dairy Analysis**

Analysis of the dairy enterprise can reveal strengths and weaknesses of the dairy farm business. Information on this page should be used in conjunction with DHI and other dairy production information. Changes in dairy herd size and market values that occur during the year are identified in the table below. The change in inventory value without appreciation is attributed to physical changes in herd size and quality. Any change in inventory is included as an accrual farm receipt when calculating all of the profitability measures on pages 6 and 7.

**DAIRY HERD INVENTORY**

68 Hudson and Central New York Region Dairy Farms, 2011

Item	Dairy Cows		Bred		Heifer Open		Calves	
	No.	Value	No.	Value	No.	Value	No.	Value
Beg. year (owned)	321	\$ 443,974	97	\$ 130,614	97	\$ 77,275	87	\$ 43,410
+ Change w/o apprec.		11,290		5,382		2,010		-2825
+ Appreciation		<u>4,405</u>		<u>1,094</u>		<u>989</u>		<u>-497</u>
End year (owned)	330	\$ 459,670	102	\$ 137,090	98	\$ 80,274	83	\$ 40,088
End including leased	334							
Average number	330		281	(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**

68 Hudson and Central New York Region Dairy Farms, 2011

Item	Average	My Farm
Total milk sold, pounds	7,809,805	_____
Milk sold per cow, pounds	23,655	_____
Average milk plant test, percent butterfat	3.75%	_____

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**

68 Hudson and Central New York Region Dairy Farms, 2011

Item	Average		My Farm	
	Number	Percent*	Number	Percent*
Cows sold for beef	90	27.2	_____	_____
Cows sold for dairy	4	1.2	_____	_____
Cows died	19	5.6	_____	_____
Culling rate**		33.0		_____

\*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**

68 Hudson and Central New York Region Dairy Farms, 2011

Item	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
<u>Accrual Cost of Producing Milk</u>						
Operating costs	\$ 1,285,776	\$ 3,895	\$ 16.46	\$ _____	\$ _____	\$ _____
Purchased inputs costs	\$ 1,379,993	\$ 4,180	\$ 17.67	\$ _____	\$ _____	\$ _____
Total Costs	\$ 1,562,555	\$ 4,733	\$ 20.01	\$ _____	\$ _____	\$ _____
<u>Accrual Receipts</u>						
<u>From Milk</u>						
Net Milk Receipts	\$1,725,244	\$ 5,226	\$ 22.09	\$ _____	\$ _____	\$ _____
Net Farm Income	\$1,638,489	\$ 4,963	\$ 20.98	\$ _____	\$ _____	\$ _____
without Appreciation	\$ 345,251	\$ 1,046	\$ 4.42	\$ _____	\$ _____	\$ _____
with Appreciation	\$ 397,759	\$ 1,205	\$ 5.09	\$ _____	\$ _____	\$ _____

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**

68 Hudson and Central New York Region Dairy Farms, 2011

Item	Average		My Farm	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrate	\$ 1,572	\$ 6.65	\$ _____	\$ _____
Purchased dairy roughage	71	0.30	_____	_____
Total Purchased Dairy Feed	\$ 1,643	\$ 6.95	\$ _____	\$ _____
Purchased grain & concentrate as % of milk receipts		28%	_____	%
Purchased feed & crop expense	\$ 1,921	\$ 8.12	\$ _____	\$ _____
Purchased feed & crop expense as % of milk receipts		36%	_____	%
Breeding	\$ 55	\$ 0.23	\$ _____	\$ _____
Veterinary & medicine	161	0.68	_____	_____
Milk marketing	263	1.11	_____	_____
Bedding	86	0.36	_____	_____
Milking supplies	109	0.46	_____	_____
Cattle lease	2	0.01	_____	_____
Custom boarding	75	0.32	_____	_____
bST expense	23	0.10	_____	_____
Livestock professional fees	19	0.08	_____	_____
Other livestock expense	21	0.09	_____	_____

**Capital and Labor Efficiency Analysis**

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

**CAPITAL EFFICIENCY**  
68 Hudson and Central New York Region Dairy Farms, 2011

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	\$358,380	\$9,064	\$3,960	\$10,392
Real estate		3,567		4,090
Machinery & equipment	66,192	1,674	731	

**Ratios**

Asset turnover	Operating Expense	Interest Expense	Depreciation Expense
0.66	0.75	0.02	0.05

**My Farm**

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

**Ratios**

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

**LABOR FORCE INVENTORY**

68 Hudson and Central New York Region Dairy Farms, 2011

Labor Force	Months	Age	Years of Education	Value of Labor & Management
Operator number 1	13.0	51	14	\$42,078
Operator number 2	6.0	51	14	22,613
Operator number 3	2.0	36	16	8,170
Operator number 4	0.9	7	16	2,777
Family paid	2.7			
Family unpaid	3.3			
Hired	<u>72.3</u>			
Total	100.2	/ 12 = 8.35 Worker Equivalent 1.64 Operator/Manager Equivalent		
<b>My Farm: Total</b>	_____	/ 12 = ____ Worker Equivalent		
Operator's	_____	/ 12 = ____ Operator/Manager Equivalent		

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

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

### LABOR EFFICIENCY

68 Hudson and Central New York Region Dairy Farms, 2011

Labor Efficiency	Average		My Farm	
	Total	Per Worker	Total	Per Worker
Cows, average number	330	40	_____	_____
Milk sold, pounds	7,809,805	935,493	_____	_____
Tillable acres	756	91	_____	_____

### LABOR AND MACHINERY COSTS

68 Hudson and Central New York Region Dairy Farms, 2011

Labor Costs	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Value of operator(s) labor (\$2,550/month)	\$ 55,718	\$ 169	\$ 0.71	\$ _____	\$ _____	\$ _____
Family unpaid (\$2,550/month)	8,415	25	0.11	_____	_____	_____
Hired	<u>221,187</u>	<u>670</u>	<u>2.83</u>	_____	_____	_____
Total Labor	\$ 285,319	\$ 864	\$ 3.65	\$ _____	\$ _____	\$ _____
Machinery Cost	<u>\$ 281,395</u>	<u>\$ 852</u>	<u>\$ 3.60</u>	\$ _____	\$ _____	\$ _____
Total Labor & Mach.	\$ 566,714	\$ 1,717	\$ 7.26	\$ _____	\$ _____	\$ _____
Hired labor expense per hired worker equivalent			\$ 35,376	\$ _____		
Hired labor expense as % of milk sales			12.8%	_____%		

## 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 61 Hudson and Central New York Region Dairy Farms, 2010 & 2011

Selected Factors	Average of 61 Farms*		My Farm		Goal
	2010	2011	2010	2011	
<u>Size of Business</u>					
Average number of cows	318	325	_____	_____	_____
Average number of heifers	271	274	_____	_____	_____
Milk sold, pounds	7,518,144	7,687,388	_____	_____	_____
Worker equivalent	8.03	8.30	_____	_____	_____
Total tillable acres	734	761	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, pounds	23,669	23,655	_____	_____	_____
Hay DM per acre, tons	3.0	3.3	_____	_____	_____
Corn silage per acre, tons	17.7	15.7	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	40	39	_____	_____	_____
Milk sold/worker, pounds	936,257	926,191	_____	_____	_____
<u>Cost Control</u>					
Grain & conc. purchased as % of milk sales	29%	29%	_____ %	_____ %	_____ %
Dairy feed & crop expense per cwt. milk	\$ 6.57	\$ 8.05	\$ _____	\$ _____	\$ _____
Labor & mach. costs/cow	\$ 1,568	\$ 1,743	\$ _____	\$ _____	\$ _____
Operating cost of producing cwt. of milk	\$ 14.73	\$ 16.38	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency**</u>					
Farm capital per cow	\$ 8,756	\$ 9,177	\$ _____	\$ _____	\$ _____
Mach. & equipment per cow	\$ 1,664	\$ 1,753	\$ _____	\$ _____	\$ _____
Asset turnover ratio	0.56	0.66	_____	_____	_____
<u>Profitability</u>					
Net farm income w/o apprec.	\$ 173,178	\$ 344,524	\$ _____	\$ _____	\$ _____
Net farm income w/apprec.	\$ 214,356	\$ 395,316	\$ _____	\$ _____	\$ _____
Labor & mgmt. income per operator/manager	\$ 48,310	\$ 145,325	\$ _____	\$ _____	\$ _____
Rate of return on equity capital w/appreciation	7.8	16.0	_____ %	_____ %	_____ %
Rate of return on all capital w/appreciation	6.2	11.8	_____ %	_____ %	_____ %
<u>Financial Summary</u>					
Farm net worth, end year	\$1,787,554	\$ 2,085,794	\$ _____	\$ _____	\$ _____
Debt to asset ratio	0.37	0.33	_____	_____	_____
Farm debt per cow	\$ 3,278	\$ 3,133	\$ _____	\$ _____	\$ _____

\*Farms participating both years.

\*\*Average for the year.

**RECEIPTS AND EXPENSES PER COW AND PER CWT.**  
Same 61 Hudson and Central New York Region Dairy Farms, 2010 & 2011

Item	2010		2011	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	318		325	
Cwt. of Milk Sold		75,181		76,874
<b><u>ACCRUAL OPERATING RECEIPTS</u></b>				
Milk	\$4,279	\$18.08	\$5,229	\$22.11
Dairy cattle	243	1.03	285	1.21
Dairy calves	37	0.16	16	0.07
Other livestock	14	0.06	55	0.23
Crops	73	0.31	147	0.62
Miscellaneous receipts	<u>123</u>	<u>0.52</u>	<u>166</u>	<u>0.70</u>
Total Receipts	\$4,769	\$20.15	\$5,898	\$24.93
<b><u>ACCRUAL OPERATING EXPENSES</u></b>				
Hired labor	\$ 642	\$ 2.71	\$ 671	\$ 2.84
Dairy grain & concentrate	1,235	5.22	1,539	6.51
Dairy roughage	72	0.30	71	0.30
Nondairy feed	0	0.00	0	0.00
Professional nutritional services	1	0.00	0	0.00
Machine hire, rent & lease	85	0.36	101	0.43
Machinery repair & vehicle expense	219	0.92	261	1.10
Fuel, oil & grease	174	0.74	236	1.00
Replacement livestock	8	0.03	6	0.02
Breeding	54	0.23	55	0.23
Veterinary & medicine	142	0.60	161	0.68
Milk marketing	268	1.13	269	1.14
Bedding	81	0.34	81	0.34
Milking supplies	91	0.38	103	0.44
Cattle lease	1	0.01	3	0.01
Custom boarding	63	0.27	75	0.32
bST expense	44	0.19	26	0.11
Livestock professional fees	14	0.06	20	0.08
Other livestock expense	27	0.11	23	0.10
Fertilizer & lime	107	0.45	132	0.56
Seeds & plants	87	0.37	98	0.42
Spray & other crop expense	46	0.19	61	0.26
Crop professional fees	8	0.03	3	0.01
Land, building & fence repair	47	0.20	74	0.31
Taxes	52	0.22	56	0.24
Real estate rent & lease	71	0.30	72	0.31
Insurance	41	0.17	48	0.20
Utilities	113	0.48	115	0.49
Interest paid	125	0.53	122	0.51
Other professional fees	21	0.09	20	0.08
Miscellaneous	<u>27</u>	<u>0.11</u>	<u>28</u>	<u>0.12</u>
Total Operating Expenses	\$3,965	\$16.75	\$4,533	\$19.16
Expansion Livestock	12	0.05	12	0.05
Extraordinary Expense	1	0.00	4	0.02
Machinery Depreciation	165	0.70	187	0.79
Real Estate Depreciation	<u>81</u>	<u>0.34</u>	<u>102</u>	<u>0.43</u>
Total Expenses	\$4,224	\$17.84	\$4,838	\$20.45
Net Farm Income Without Appreciation	\$ 545	\$ 2.30	\$1,060	\$ 4.48

### 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**

68 Hudson and Central New York Region Dairy Farms, 2011

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)
22.30	971	24,369,896	26,435	4.8	21	49	1,132,077
12.06	460	10,971,369	24,203	3.6	17	40	935,772
4.26	154	3,002,238	21,629	2.8	15	35	744,823
2.73	79	1,486,083	19,041	2.2	13	29	548,424
1.65	41	628,130	11,845	1.5	9	22	312,786

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)	
\$549	18%	\$538	\$1,304	\$829	\$5.50	
1,094	26	734	1,645	1,400	7.24	
1,358	30	865	1,835	1,709	8.08	
1,646	32	1,032	2,047	2,010	8.83	
1,915	37	1,388	2,593	2,315	9.99	

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Producing Milk Per Cwt.	Net Farm Income with Appreciation	Net Farm Income w/o Appreciation	Labor & Mgt. Income Per Operator	Change in Net Worth with Appreciation
(12)	(12)	(12)	(4)	(4)	(4)	(8)
\$5,853	\$12.19	\$17.87	\$1,301,005	\$1,179,291	\$419,048	\$1,007,327
5,301	14.80	19.69	507,880	429,976	155,396	361,739
4,674	16.73	21.47	166,218	133,392	55,611	95,747
4,108	17.78	24.63	73,673	52,408	4,161	40,764
2,609	19.65	32.85	12,406	-3,188	-47,048	-2,082

\*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** 30 New York Dairy Farms, 2011

<u>Animals Entering Herd</u>	Average
Number calving in 2011 for first time	284
Animals purchased, % <sup>1</sup>	9.8%
Animals raised by farm, % <sup>2</sup>	90.2%
<u>Current Heifer Inventory</u>	
Raised on dairy, %	81.1%
Raised by a custom grower, %	18.9%

<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, 284 animals calved for the first time in 2011. The breakdown on these animals for source was 9.8 percent purchased and 90.2 percent raised by the farm. Of the current heifer inventory, 81.1 percent were raised on the dairy and 18.9 percent were raised by a custom grower. There is increased interest in evaluating the dairy replacement enterprise.

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

Starting January 1<sup>st</sup>, 2000, the northeast switched to multiple components pricing, which changed the format of the milk check and how farmers received payment for their milk. To examine the breakdown of the gross milk income and the marketing expenses, 46 Hudson and Central 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**  
46 Hudson and Central New York Region Dairy Farms, 2011

	Pounds	Percent	Price/Pound	Total	\$/Cwt of Milk
<b>BASE FARM PRICE</b>					
Butterfat	387,552	3.76%	\$2.14	\$830,868	\$8.06
Protein	319,170	3.09%	\$2.96	\$945,097	\$9.16
Solids	591,817	5.74%	\$0.34	\$202,601	\$1.96
<b>Total Component Contribution</b>					\$19.18
<b>PPD</b>	10,314,221			\$181,632	\$1.76
<b>Base Farm Price</b>					\$20.94
<b>Premiums</b>					
Quality				\$29,980	\$0.29
Volume				\$33,959	\$0.33
Market Premiums				\$60,577	\$0.59
<b>Total Premiums</b>					\$1.21
<b>BASE FARM PRICE + PREMIUM</b>					\$22.15
<hr style="border-top: 1px dashed black;"/>					
<b>Deductions</b>					
Promotion				\$15,529	\$0.15
Hauling + Stop Charges.				\$89,386	\$0.87
Market Fees & Coop Dues				\$7,128	\$0.07
<b>Total Deductions</b>					\$1.09
<b>BASE FARM PRICE + PREMIUMS - DEDUCTIONS</b>					\$21.06
<b>Marketing Programs</b>					
Futures Contracts, Forward Contracting, Etc.				-\$3,968	-\$0.04
<b>Total Marketing Income</b>					-\$0.04
<b>Patronage Dividends</b>				\$8,972	\$0.09
<b>NET PRICE RECEIVED ON FARM, ALL SOURCES</b>					\$21.11
<b>PPD - Hauling, \$ per cwt.</b>					\$0.89
<b>PPD - Hauling + Market Premiums, \$ per cwt.</b>					\$1.48
<b>Net Marketing Value (PPD + Total Premiums - Total Deductions), \$ per cwt.</b>					\$1.88

**MILK PRICE INFORMATION BY QUINTILE\***  
(Each Category Sorted Independently)  
46 Hudson and Central New York Region Dairy Farms, 2011

	Lowest Quintile	←—————→			Highest Quintile
Butterfat, %	3.64	3.70	3.80	3.87	4.10
Protein, %	3.03	3.07	3.11	3.14	3.29
Other Solids, %	5.64	5.71	5.73	5.74	5.77
Butterfat, \$ per Cwt.	7.60	7.93	8.10	8.35	8.92
Protein, \$ per Cwt.	8.81	9.07	9.19	9.30	10.03
Other solids, \$ per Cwt.	1.87	1.94	1.97	1.98	2.13
<b>Total Component Value per Cwt.</b>	<b>\$18.51</b>	<b>\$18.97</b>	<b>\$19.31</b>	<b>\$19.60</b>	<b>\$20.78</b>
PPD, \$ per Cwt.	1.10	1.55	1.72	1.84	2.11
<b>Base Farm Price per Cwt.</b>	<b>\$20.03</b>	<b>\$20.60</b>	<b>\$20.94</b>	<b>\$21.33</b>	<b>\$22.55</b>
Quality, \$ per Cwt.	-0.01	0.09	0.20	0.28	0.51
Volume, \$ per Cwt.	0.00	0.00	0.09	0.30	0.61
Market premium, \$ per Cwt.	0.15	0.37	0.55	0.74	1.50
<b>Total Premium, \$ per Cwt.</b>	<b>0.35</b>	<b>0.77</b>	<b>1.09</b>	<b>1.33</b>	<b>1.81</b>
<b>Base Farm Price + Premiums per Cwt.</b>	<b>\$21.09</b>	<b>\$21.73</b>	<b>\$22.03</b>	<b>\$22.50</b>	<b>\$23.37</b>
Promotion, \$ per Cwt.	0.15	0.15	0.15	0.15	0.16
Hauling, \$ per Cwt.	0.50	0.73	0.88	1.08	1.42
Market fees & coop dues per Cwt.	0.01	0.05	0.07	0.10	0.23
<b>Total Marketing Expenses per Cwt.</b>	<b>\$0.72</b>	<b>\$0.95</b>	<b>\$1.16</b>	<b>\$1.31</b>	<b>\$1.69</b>
<b>Base + Premiums – Deductions per Cwt.</b>	<b>\$19.80</b>	<b>\$20.71</b>	<b>\$21.06</b>	<b>\$21.34</b>	<b>\$22.04</b>
Futures contract, forward contracting, \$ per Cwt.	-0.22	0.00	0.00	0.00	0.02
<b>Total Marketing Income, \$ per Cwt.</b>	<b>\$-0.22</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.02</b>
<b>Patronage Dividends, \$ per Cwt.</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.03</b>	<b>\$0.35</b>
<b>Net Price Received From All Sources, \$ per Cwt.</b>	<b>\$19.79</b>	<b>\$20.64</b>	<b>\$21.02</b>	<b>\$21.43</b>	<b>\$22.23</b>
<b>PPD - Hauling, \$ per cwt.</b>	<b>0.03</b>	<b>0.71</b>	<b>0.85</b>	<b>1.01</b>	<b>1.18</b>
<b>PPD - Hauling + Market Premiums, \$ per cwt.</b>	<b>0.53</b>	<b>1.12</b>	<b>1.45</b>	<b>1.74</b>	<b>2.21</b>
<b>Net Marketing Value (PPD + Total Premiums - Total Deductions), \$ per cwt.</b>	<b>0.33</b>	<b>1.36</b>	<b>1.72</b>	<b>2.05</b>	<b>2.44</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 204 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

204 New York Dairy Farms, 2010

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)
34.6	1,715	44,507,767	28,024	5.9	27	65	1,496,743
21.9	992	25,065,046	26,486	4.4	23	51	1,239,084
16.5	722	18,382,622	25,611	4.0	22	48	1,131,389
12.4	548	12,786,314	24,763	3.7	20	44	1,052,995
8.3	385	8,896,608	23,569	3.4	19	42	991,796
-----							
5.7	233	5,098,220	22,603	3.1	18	38	888,445
4.3	150	2,980,442	21,295	2.7	18	36	749,166
3.2	105	1,958,629	19,859	2.2	17	32	656,722
2.4	70	1,322,994	17,279	1.9	15	29	530,202
1.7	46	824,194	13,227	1.3	11	21	361,659

### 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)
\$569	18%	\$427	\$1,019	\$800	\$4.47
846	23	561	1,292	1,114	5.53
967	26	623	1,394	1,251	5.86
1,079	27	671	1,478	1,363	6.10
1,169	29	717	1,531	1,452	6.33
-----					
1,234	30	755	1,603	1,518	6.53
1,288	31	803	1,661	1,595	6.79
1,357	33	872	1,796	1,677	7.14
1,436	35	954	1,951	1,782	7.76
1,575	41	1,164	2,354	2,007	9.55

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

**FARM BUSINESS CHART FOR  
FARM MANAGEMENT COOPERATORS**  
204 New York Dairy Farms, 2010

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)
\$5,056	\$19.76	\$1,742	\$10.09	\$2,903	\$14.79
4,718	18.65	2,307	11.64	3,547	15.81
4,520	18.29	2,647	12.46	3,786	16.67
4,370	18.07	2,898	13.16	3,958	17.45
4,189	17.85	3,081	13.74	4,116	17.83
4,013	17.71	3,246	14.13	4,265	18.76
3,778	17.52	3,428	14.66	4,442	19.67
3,491	17.31	3,612	15.43	4,625	21.11
3,125	17.03	3,872	16.60	4,863	23.11
2,402	16.49	4,272	19.05	5,330	28.67

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)
\$1,585,864	\$1,366	0.29	\$1,900,618	\$1,938	\$1,164,968	\$608,745
662,211	1,070	0.23	829,592	1,295	422,477	233,448
437,842	874	0.19	601,181	1,098	263,930	126,152
300,908	754	0.16	387,604	936	140,197	71,428
183,729	653	0.14	248,959	798	79,500	42,780
114,646	542	0.12	154,252	695	41,512	25,059
68,027	409	0.09	89,447	556	8,766	6,299
41,582	278	0.06	49,752	391	-14,134	-9,501
11,394	97	0.02	17,122	137	-46,357	-35,267
-78,221	-466	-0.14	-60,960	-421	-166,013	-110,938

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**  
204 New York Dairy Farms, 2010

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)
\$43	\$1,196	7.39	12.09	3%	\$ 161	65%	32.07
236	861	2.17	3.43	6	1,038	36	4.79
332	741	1.65	2.33	8	1,871	28	3.30
448	661	1.42	1.89	10	2,417	22	2.63
548	595	1.22	1.59	12	2,904	18	2.18
632	511	1.05	1.27	14	3,392	14	1.85
742	433	0.85	1.00	15	3,900	11	1.50
858	348	0.73	0.72	17	4,395	7	1.19
1,006	206	0.43	0.23	20	5,065	-2	0.85
1,601	-178	-0.59	-0.50	31	6,936	-19	0.35
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%	0.02	0.00	0.63	0.00	0.02	
0.12	90	0.10	0.00	0.68	0.01	0.04	
0.23	82	0.18	0.01	0.72	0.01	0.05	
0.30	78	0.25	0.10	0.75	0.02	0.05	
0.44	72	0.31	0.21	0.77	0.02	0.06	
0.61	63	0.37	0.33	0.79	0.03	0.07	
0.72	59	0.42	0.44	0.81	0.04	0.07	
0.87	54	0.50	0.53	0.84	0.04	0.09	
1.17	47	0.60	0.63	0.88	0.05	0.10	
3.03	33	0.79	0.95	1.01	0.09	0.15	
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)	
0.82	\$1,796	\$616	\$5,927	\$1,559,343	31%	19%	
0.68	2,600	996	7,238	647,486	17	12	
0.62	3,022	1,324	8,088	436,905	13	9	
0.55	3,332	1,528	8,673	271,545	10	8	
0.52	3,755	1,719	9,280	163,158	8	6	
0.48	4,207	1,892	9,915	77,763	5	5	
0.44	4,755	2,109	10,545	37,984	3	3	
0.39	5,643	2,282	11,585	16,650	0	1	
0.31	6,902	2,710	13,138	-4,658	-6	-2	
0.21	11,328	4,163	18,676	-136,008	-42	-10	

\*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 47 cows on the small conventional farms to 952 cows on the largest freestall farms.

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

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

### **Herd Size Comparisons**

A detailed comparison of profitability, financial situation and business analysis factors across herd sizes is contained on pages 48-60 of the 2010 State Summary\*. In most years, as herd size increases, the net farm income increases (page 48)\*; and that was generally the case for 2010. Net farm income without appreciation averaged \$24,201 per farm for the less than 60 cow farms and \$1,030,251 per farm for those with more than 900 cows. Return to all capital without appreciation generally increased as herd size increased. With herd sizes between 60 and 200 cows, many farms find it difficult to find a low cost combination of technology and labor to produce milk. Thus profits are lower for these herds than other herd sizes.

Assets, liabilities and financial measures are presented on pages 55-58\*. All herd size categories saw an increase in net worth during 2010. The largest herd size category experienced an increase in net worth of \$962,958. However, percent equity went down as assets increased. The largest herds had the lowest percent equity; while the smaller herds averaged 79 percent.

Crop yields showed little relationship to herd size, but fertilizer and lime expenses, and machinery cost per tillable acre generally increased as herd size increased (pages 59-60)\*. The farms with more than 900 cows averaged more milk sold per cow than any other size category (page 60). With 25,649 pounds of milk sold per cow, farms in the largest herd size group averaged 9.6 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 462,320 pounds at the lowest herd size category up to 1,257,575 pounds at the largest size category.

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\*Wayne A. Knoblauch, Linda D. Putnam, Jason Karszes, Richard Overton, and Cathryn Dymond, Dairy Farm Management Business Summary, New York State, 2010, Charles H. Dyson School of Applied Economics and Management, Cornell University, R.B. 2011-03, November 2011.

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

191 New York Dairy Farms, 2010

Item	Farms with:	Conventional		Freestall		
		<= 60 Cows	>60 Cows	<=200 Cows	200-400 Cows	≥400 Cows
Number of farms		21	20	40	24	86
<u>Cropping Program Analysis</u>						
Total Tillable acres		168	306	329	578	1,838
Tillable acres rented*		78	133	148	274	941
Hay crop acres*		119	206	196	302	815
Corn silage acres*		22	54	73	171	695
Hay crop, tons DM/acre		2.3	2.3	2.7	3.4	3.7
Corn silage, tons/acre		16.6	16.6	18.0	19.4	19.8
Oats, bushels/acre		59	72	38	66	61
Forage DM per cow, tons		8.5	8.5	8.5	8.0	8.4
Tillable acres/cow		3.6	3.4	2.9	2.1	2.0
Fertilizer & lime expense/tillable acre		\$31.42	\$32.28	\$42.13	\$51.52	\$45.28
Total machinery costs		\$37,544	\$76,399	\$106,885	\$202,067	\$677,234
Machinery cost/tillable acre		\$224	\$250	\$294	\$343	\$365
<u>Dairy Analysis</u>						
Number of cows		47	91	121	287	952
Number of heifers		37	80	103	240	814
Milk sold, lbs.		888,253	1,734,049	2,468,402	6,817,365	24,100,315
Milk sold/cow, lbs.		18,803	18,972	20,400	23,771	25,314
Operating cost of producing milk/cwt.		\$12.75	\$14.82	\$13.98	\$13.75	\$13.74
Total cost of producing milk/cwt.		\$22.22	\$22.25	\$20.58	\$17.20	\$16.73
Price/cwt. milk sold		\$17.43	\$17.78	\$17.93	\$17.61	\$17.81
Purchased dairy feed/cow		\$911	\$1,101	\$1,151	\$1,347	\$1,353
Purchased dairy feed/cwt. milk		\$4.85	\$5.80	\$5.64	\$5.67	\$5.34
Purchased grain & concentrate as % of milk receipts		27%	32%	31%	30%	28%
Purchased feed & crop expense/cwt milk		\$5.97	\$6.92	\$6.85	\$6.51	\$6.26
<u>Capital Efficiency</u>						
Farm capital/worker		\$307,030	\$390,183	\$413,623	\$376,921	\$414,620
Farm capital/cow		\$12,414	\$13,148	\$12,101	\$8,924	\$8,884
Farm capital/tillable acre owned		\$6,516	\$6,951	\$8,059	\$8,419	\$9,430
Real estate/cow		\$6,433	\$6,712	\$6,068	\$3,541	\$3,653
Machinery investment/cow		\$2,551	\$2,716	\$2,240	\$1,656	\$1,492
Asset turnover ratio		0.30	0.30	0.38	0.55	0.59
<u>Labor Efficiency</u>						
Worker equivalent		1.91	3.08	3.54	6.79	20.40
Operator/manager equivalent		1.15	1.49	1.68	1.81	2.20
Milk sold/worker, lbs.		465,054	563,155	697,946	1,004,277	1,181,629
Cows/worker		25	30	34	42	47
Labor cost/cow		\$1,169	\$990	\$853	\$764	\$765
Labor cost/tillable acre		\$329	\$296	\$313	\$379	\$396
<u>Profitability &amp; Balance Sheet Analysis</u>						
Net farm income (without appreciation)		\$30,230	\$23,315	\$56,065	\$193,822	\$660,267
Labor & management income/operator		\$-4,757	\$-20,590	\$-3,142	\$60,275	\$185,017
Rate return on all capital with appreciation		-2.7%	-0.7%	3.4%	7.6%	9.5%
Farm debt/cow		\$2,191	\$2,938	\$3,228	\$3,136	\$3,230
Percent equity		83%	78%	73%	66%	64%

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

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

21 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 2010

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)
2.92	58	1,276,649	23,771	3.5	29	34	758,563
2.43	58	1,172,320	22,491	3.3	27	31	661,782
2.12	54	1,077,961	21,336	3.1	21	31	639,207
2.04	52	1,025,694	21,045	2.3	19	29	535,368
2.00	48	978,780	20,294	2.1	18	27	477,429
1.71	47	947,012	19,624	2.0	17	26	435,784
1.61	45	804,192	17,800	1.9	16	23	416,288
1.58	43	759,890	16,273	1.8	15	21	378,501
1.54	42	664,765	14,133	1.8	14	20	340,272
1.42	35	412,933	11,421	1.4	7	18	250,944

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)	
\$301	14%	\$472	\$1,342	\$474	\$3.57	
756	20	557	1,658	861	4.80	
815	24	642	1,777	1,032	5.42	
838	27	734	1,841	1,091	5.98	
866	28	781	1,984	1,122	6.09	
908	30	821	2,072	1,167	6.29	
989	30	859	2,131	1,237	6.35	
1,087	31	949	2,194	1,314	6.45	
1,135	32	1,036	2,402	1,400	6.62	
1,271	38	1,322	2,746	1,544	7.97	

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)
\$4,269	\$9.56	\$16.90	\$71,165	\$1,443	\$44,228	\$506,688
3,982	10.00	19.12	64,502	1,278	30,390	39,894
3,699	11.72	20.35	58,785	1,045	19,179	30,817
3,564	12.53	20.45	40,083	842	11,493	25,658
3,472	12.81	21.25	36,154	768	5,000	18,301
3,349	13.30	23.35	33,634	715	-2,226	12,601
3,159	13.90	25.09	27,553	597	-12,694	9,584
3,000	14.74	26.25	7,004	169	-20,472	5,291
2,440	16.10	28.25	1,516	19	-33,448	4,230
1,932	17.93	37.23	-15,321	-330	-63,685	-26,137

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

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

20 Conventional Stall Dairy Farms with 60 or More Cows, New York, 2010

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)
5.00	152	2,762,000	27,347	3.9	27	51	912,168
3.88	130	2,283,563	23,788	3.4	25	39	738,186
3.67	111	2,184,928	22,497	3.1	23	34	671,856
3.57	97	2,006,849	20,993	2.9	21	32	644,946
3.12	83	1,645,642	20,666	2.7	20	31	605,805
3.00	76	1,564,481	19,037	2.5	19	29	546,554
2.54	70	1,455,059	18,007	2.4	17	27	529,442
2.38	69	1,308,703	16,855	1.8	14	26	519,824
2.04	66	1,195,825	14,104	1.5	12	24	376,587
1.61	62	933,444	11,252	1.5	9	20	330,702

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)
\$283	13%	\$432	\$1,083	\$406	\$3.52	\$3.52
582	18	532	1,390	1,055	5.28	5.28
955	26	599	1,606	1,226	6.18	6.18
1,077	28	705	1,713	1,328	6.47	6.47
1,186	30	824	1,823	1,358	6.68	6.68
1,230	33	913	1,844	1,425	6.79	6.79
1,232	36	946	1,936	1,513	7.02	7.02
1,347	38	993	2,105	1,623	7.61	7.61
1,419	43	1,004	2,372	1,675	9.17	9.17
1,520	54	1,296	2,436	1,838	10.90	10.90

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)
\$4,605	\$10.78	\$18.22	\$100,004	\$1,046	\$32,625	\$137,440
4,259	12.18	19.09	77,881	787	11,561	67,408
3,975	12.53	19.53	65,603	747	3,707	39,427
3,773	13.46	19.96	49,788	676	-2,385	22,879
3,566	13.79	20.80	39,815	575	-4,510	14,081
3,476	14.37	23.18	26,484	295	-10,470	5,223
3,282	15.73	23.93	13,953	197	-25,378	-4,773
3,063	16.23	25.55	-8,795	-57	-45,760	-24,297
2,561	19.62	26.83	-54,972	-432	-82,510	-48,332
2,034	22.03	28.62	-76,605	-936	-123,467	-91,995

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

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

40 Freestall Barn Dairy Farms with Less than 200 Cows, New York, 2010

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
6.07	190	4,725,179	26,405	5.3	28	50	1,055,653
4.90	175	3,804,032	23,423	4.0	22	41	876,946
4.67	157	3,167,510	22,319	3.9	21	38	804,418
3.97	136	2,783,554	21,252	3.4	20	37	754,088
3.36	121	2,516,572	20,843	2.8	19	36	725,369
-----							
2.94	110	2,027,717	19,832	2.5	18	35	647,466
2.77	103	1,849,636	18,375	2.1	17	33	630,221
2.56	89	1,524,976	17,061	1.9	16	32	566,899
2.31	76	1,282,058	16,035	1.8	14	28	484,425
1.84	54	1,002,784	13,842	1.2	13	22	388,365

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)	
\$772	19%	\$445	\$1,144	\$967	\$5.16	
809	23	572	1,332	1,087	5.76	
852	26	640	1,410	1,170	5.87	
923	29	693	1,498	1,243	6.16	
1,026	31	755	1,574	1,306	6.51	
-----						
1,113	32	806	1,636	1,416	7.17	
1,196	34	851	1,840	1,492	7.69	
1,244	36	901	1,935	1,578	8.33	
1,370	38	1,095	2,018	1,819	9.35	
1,560	43	1,267	2,416	2,214	10.72	

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)
\$4,560	\$9.59	\$15.66	\$209,917	\$1,316	\$76,728	\$379,149
4,191	10.78	17.38	133,589	965	35,870	153,977
4,068	12.15	19.05	107,287	822	18,172	79,789
3,885	13.06	20.34	73,133	612	9,357	55,325
3,660	13.59	21.20	51,504	480	-197	28,243
-----						
3,448	14.41	21.78	39,876	372	-13,907	15,246
3,305	15.81	22.42	25,633	233	-24,441	1,334
3,111	16.62	23.36	-1,505	-6	-36,815	-9,593
2,935	17.80	24.51	-15,693	-207	-52,884	-19,044
2,560	20.99	31.86	-63,084	-898	-132,540	-40,442

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

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

24 Freestall Barn Dairy Farms with 200-400 Cows, New York, 2010

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)
11.07	394	10,108,286	28,054	5.3	26	59	1,417,815
9.38	373	9,735,132	26,132	4.5	24	52	1,280,350
7.95	354	9,003,062	25,346	4.3	22	50	1,068,038
7.10	316	7,647,603	25,087	4.2	22	49	1,056,410
6.63	302	7,512,291	24,614	4.0	20	46	1,039,255
6.50	289	6,991,047	23,694	3.5	19	44	1,002,528
6.08	277	6,074,655	23,236	3.0	18	42	975,350
5.85	235	5,386,844	22,589	2.9	17	41	955,482
5.54	228	5,057,669	21,233	2.3	16	36	899,635
4.42	204	4,021,473	18,648	2.2	14	31	699,125

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)
\$790	21%	\$409	\$1,007	\$1,041	\$4.60	\$4.60
1,050	25	591	1,195	1,380	5.58	5.58
1,157	27	647	1,362	1,444	5.95	5.95
1,187	28	668	1,495	1,476	6.32	6.32
1,254	30	728	1,523	1,516	6.65	6.65
1,301	31	732	1,548	1,589	6.94	6.94
1,333	34	780	1,640	1,687	7.04	7.04
1,385	35	834	1,675	1,760	7.56	7.56
1,490	35	896	1,707	1,812	8.25	8.25
1,534	38	1,024	1,939	2,153	9.22	9.22

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)
\$5,159	\$9.92	\$14.83	\$511,541	\$1,383	\$326,433	\$567,942
4,735	11.44	15.66	384,065	1,282	149,963	315,496
4,456	12.83	16.29	313,777	1,016	107,639	230,283
4,341	13.81	17.21	241,857	865	102,212	191,157
4,274	13.98	17.47	216,179	819	60,052	164,993
4,236	14.34	17.73	170,820	764	47,743	116,270
4,101	14.82	18.03	160,186	575	35,858	88,118
3,927	15.44	18.75	126,994	437	25,106	76,875
3,745	16.89	19.79	65,511	221	2,263	56,182
3,119	18.38	21.34	-27,605	-130	-70,032	-54,552

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

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

86 Freestall Barn Dairy Farms with 400 or More Cows, New York, 2010

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)
43.74	2,284	59,966,661	28,811	6.8	27	65	1,694,744
29.83	1,413	36,099,171	27,096	5.0	23	55	1,363,265
25.29	1,161	29,786,059	26,606	4.4	22	51	1,295,414
22.62	1,031	25,353,444	26,272	4.1	21	49	1,227,454
19.52	874	22,600,037	25,799	3.8	20	48	1,163,775
17.31	757	19,211,437	25,199	3.6	19	45	1,136,260
15.73	681	17,442,545	24,636	3.4	18	43	1,074,506
13.61	599	14,392,855	23,800	3.1	18	41	1,033,424
11.73	513	12,150,541	22,780	2.7	17	38	972,226
9.01	439	10,089,736	20,339	1.8	14	34	790,652

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)	
\$893	21%	\$509	\$1,158	\$1,161	\$4.91	
1,061	24	597	1,312	1,357	5.60	
1,150	26	641	1,387	1,452	5.92	
1,230	27	682	1,450	1,526	6.12	
1,275	29	708	1,499	1,579	6.31	
1,320	29	740	1,536	1,632	6.48	
1,369	30	771	1,599	1,694	6.66	
1,426	32	811	1,625	1,748	6.89	
1,472	33	900	1,701	1,839	7.15	
1,604	36	1,000	1,834	1,945	7.66	

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)
\$5,197	\$11.22	\$14.46	\$2,234,741	\$1,394	\$859,013	\$2,328,601
4,890	12.11	15.38	1,201,729	1,164	458,433	1,140,254
4,760	12.70	15.93	955,047	953	328,702	770,457
4,673	13.28	16.53	664,495	815	208,706	624,084
4,570	13.91	16.94	538,211	691	147,774	549,585
4,477	14.27	17.42	454,927	616	121,212	421,766
4,376	14.73	17.66	375,934	505	81,022	334,082
4,212	15.10	18.09	291,223	392	47,354	244,836
4,023	15.85	18.91	191,318	275	24,018	115,061
3,731	17.15	20.06	-36,631	-8	-109,008	-212,634

\*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.

**bST Usage** - An estimate of the percentage of herd, on average, that was supplemented with bovine somatotropin during the year.

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

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

**Cash Flow Coverage Ratio** - (defined on page 13)

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

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

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

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

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

**Cost of Term Debt** - A weighted average of the cost of borrowed capital to the farm. Calculate by multiplying end of year principal of each loan that is borrowed by the interest rate for each loan at that time. Add up each amount that is calculated for each loan and then divide by total amount of borrowed funds. Do not include accounts payable, operating debt or advanced government receipts. This information is found on pages 8 & 9 of the data entry form.

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

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

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

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

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

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

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

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

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

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

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

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

**Farm Debt Payments as Percent of Milk Sales** - Amount of milk income committed to debt repayment, calculated by dividing planned debt payments by total milk receipts. A reliable measure of repayment ability, see page 14.

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

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

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

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

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

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

**Labor and Management Income** - (defined on page 6)

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

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

**Leverage Ratio** - (defined on page 9)

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

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

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

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

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

**Operating Costs of Producing Milk** - (defined on page 18)

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

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

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

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

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

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

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

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

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

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

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

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

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

**Total Costs of Producing Milk** - (defined on page 18)

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

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

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## OTHER A.E.M. EXTENSION BULLETINS

EB No	Title	Fee (if applicable)	Author(s)
2012-04	Dairy Farm Business Summary, New York Small Herd Farms, 120 Cows or Fewer, 2011	(\$16.00)	Knoblauch, W., Putnam, L., Karszes, J., Kiraly, M. and C. Dymond
2012-03	Dairy Farm Business Summary, Western New York Region, 2011	(\$12.00)	Wayne A. Knoblauch, Linda D. Putnam, Jason Karszes, John Hanchar, James Grace, Virginia Carlberg, Joan Petzen, Richard Overton and Cathryn Dymond
2012-02	Dairy Farm Business Summary, New York Large Herd Farms, 300 Cows or Larger, 2011	(\$16.00)	Karszes, J., Knoblauch, W., and L. Putnam
2012-01	Dairy Farm Business Summary, New York Organic Dairy Farms, 2010	(\$16.00)	Knoblauch, W., Overton, R., Putnam, L. and C. Dymond
2011-10	Examining the Costs of Producing Processing Snap Beans and Green Peas in New York State		Ho, S., Rickard, B., Kikkert, J., Klotzbach, K., Reiners, S. and M. Smith
2011-09	Dairy Farm Business Summary, New York Dairy Farm Renters, 2010	(\$16.00)	Knoblauch, W., Putnam, L. and C. Dymond
2011-08	New York Economic Outlook, 2012		Extension Staff
2011-07	Dairy Farm Business Summary, Northern New York Region, 2010		Knoblauch, W., Putnam, L., Karszes, J., Murray, P., Vokey, F., Hayes, C., Deming, A., Balbian, D., Buxton, S., Manning, J., Collins, B., Overton, R. and C. Dymond
2011-06	Dairy Farm Business Summary, Intensive Grazing Farms, New York, 2010		Conneman, G., Karszes, J., Grace, J., Murray, P., Carlberg, V., Benson, A., Staehr, A., Glazier, N., Overton, R., Dymond, C. and L. Putnam
2011-05	Dairy Farm Business Summary, Hudson and Central NY Region, 2010	(\$12.00)	Knoblauch, W., Conneman, G., Putnam, L., Karszes, J., Buxton, S., Kiraly, M. Shoen, K., Westenbroek, P., Walsh, J., Overton, R. and C. Dymond
2011-04	Dairy Farm Business Summary, New York Small Herd Farms, 120 Cows or Fewer, 2010	(\$16.00)	Knoblauch, W., Putnam, L., Karszes, J., Kiraly, M. and C. Dymond
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