

# DAIRY FARM BUSINESS SUMMARY

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## WESTERN NEW YORK REGION 2010



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

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**WESTERN NEW YORK REGION**  
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## 2010 DAIRY FARM BUSINESS SUMMARY WESTERN 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 Western New York Region for 2010.

#### **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 2010 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 Western New York Region of New York State, with the number of participating farms in parentheses, is comprised of Cayuga (8), Chautauqua (10), Chemung (2), Cortland (4), Erie (4), Genesee (4), Livingston (8), Niagara (1), Onondaga (5), Ontario (7), Orleans (2), Schuyler (2), Steuben (5), Tioga (2), Tompkins (4), and Wyoming (22) counties in New York. This report was written by Wayne A. Knoblauch, Professor, 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 Cornell Cooperative Extension Regional Specialist John Hanchar, Northwestern NY Regional Dairy, Livestock, and Field Crops Program; Senior Extension Associate in PRO-DAIRY, Jason Karszes; James Grace, Extension Educator in Steuben, Chemung and Schuyler Counties; Virginia Carlberg, Extension Educator in Chautauqua County; Joan Petzen, Extension Educator, and Debra Welch, Temporary Agriculture Educator, in Wyoming County; Richard Overton, Extension Support Specialist. We also acknowledge the cooperation of Farm Credit East Association and Dehm Associates 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**  
90 Western New York Region Dairy Farms, 2010

Type of Farm	Number	Milking System	Number
Dairy	84	Bucket & carry	0
Part-time dairy	0	Dumping station	0
Dairy cash-crop	6	Pipeline	10
Certified organic milk producer	0	Herringbone conventional exit	19
Rotational grazing farm	14	Herringbone rapid exit	11
		Parallel	35
		Parabone	5
		Rotary	1
		Other	9
Type of Ownership	Number	Production Records	Number
Owner	87	Testing Service	73
Renter	3	On Farm System	12
		Other	0
		None	5
Type of Business	Number	Business Record System	Number
Sole Proprietorship	28	Account Book	7
Partnership	19	Accounting Service	9
Limited Liability Corporation	31	On-farm computer	74
Subchapter S Corporation	10	Other	0
Subchapter C Corporation	2		
Type of Barn	Number	BST Usage (reporting this is optional)	Number
Stanchion or Tie-Stall	10	Used consistently	7
Freestall	78	Used inconsistently	2
Combination	2	Started Use in 2010	0
		Stopped Use in 2010	0
		Not Used	2
		Average % bst usage of those reporting	41%
Milking Frequency	Number		
2 times per day	41		
3 times per day	43		
Other	6		
Breed of Herd	Percent		
Holstein	94		
Jersey	2		
Other	4		

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 2010.

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**  
90 Western New York Region Dairy Farms, 2010

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
<u>Hired Labor</u>	\$ 414,319		\$ 103	<<	\$ -11		\$414,205
<u>Feed</u>							
Dairy grain & concentrate	778,608		9,799		-20,479		748,330
Dairy roughage	57,610		1,264		-117		56,229
Nondairy	1,905		-1		-2		1,904
Professional nutritional services	1,515		0	<<	3		1,518
<u>Machinery</u>							
Machinery hire, rent & lease	53,950		-147	<<	478		54,576
Machinery repairs & farm vehicle exp.	118,565		548		-686		117,331
Fuel, oil & grease	94,781		585		91		94,287
<u>Livestock</u>							
Replacement livestock	4,164		0	<<	0		4,164
Breeding	32,352		-93		-185		32,261
Veterinary & medicine	98,966		-876		-746		99,096
Milk marketing	128,198		0	<<	635		128,833
Bedding	55,841		495		-401		54,944
Milking supplies	52,700		213		-564		51,923
Cattle lease & rent	2,990		0	<<	-114		2,876
Custom boarding	41,839		73	<<	257		42,023
bST	38,388		-490		39		38,917
Livestock professional fees	9,727		153	<<	-57		9,516
Other livestock expense	11,962		-72		-78		11,956
<u>Crops</u>							
Fertilizer & lime	55,483		5,271		-1,898		48,313
Seeds & plants	70,034		11,731		-2,928		55,376
Spray, other crop expense	27,157		472		-762		25,923
Crop professional fees	5,657		100	<<	-26		5,532
<u>Real Estate</u>							
Land, building & fence repair	48,255		8		-781		47,465
Taxes	34,317		141	<<	721		34,897
Rent & lease	43,705		-221	<<	53		43,979
<u>Other</u>							
Insurance	26,538		159	<<	7		26,386
Utilities (farm share)	58,885		-206	<<	-170		58,922
Interest paid	81,630		14	<<	445		82,060
Other professional fees	16,536		-141	<<	12		16,689
Miscellaneous	16,926		-17		1,490		18,433
Total Operating	<u>\$2,483,503</u>		<u>\$28,863</u>		<u>\$ -25,774</u>		<u>\$2,428,866</u>
Expansion livestock	16,786		0	<<	0		16,786
Extraordinary expense	490		0	<<	0		490
Machinery depreciation							119,528
Building depreciation							<u>85,678</u>
<b>TOTAL ACCRUAL EXPENSES</b>							<u>\$2,651,347</u>

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

Change in accounts payable: An increase in accounts payable from beginning to end of year is added when calculating accrual expenses because these expenses were incurred (resources used) in 2010 but not paid for. A decrease is subtracted because it represents payment for resources used before 2010.

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**  
90 Western New York Region Dairy Farms, 2010

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	\$2,664,424				\$37,963		\$2,702,387
Dairy cattle	131,490		\$60,110		-340		191,259
Dairy calves	14,779		1,043		17		15,840
Other livestock	6,501		2,144		733		9,379
Crops	52,833		68,473		2,280		123,586
Government receipts	20,445		101 *		366		20,912
Custom machine work	4,224				-415		3,809
Gas tax refund	485				0		485
Other	<u>48,511</u>				<u>-494</u>		48,017
Less nonfarm noncash capital**		(-)	<u>0</u> **			(-)	<u>0</u>
Total Receipts	\$2,943,693		\$131,871		\$40,110		\$3,115,673

\*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 2010 for the 2011 crop year in excess of funds earned for 2010. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2010 but received in 2009.

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. Payments in January 2011 for milk produced in December 2010 compared to January 2010 payments for milk produced in 2009 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.

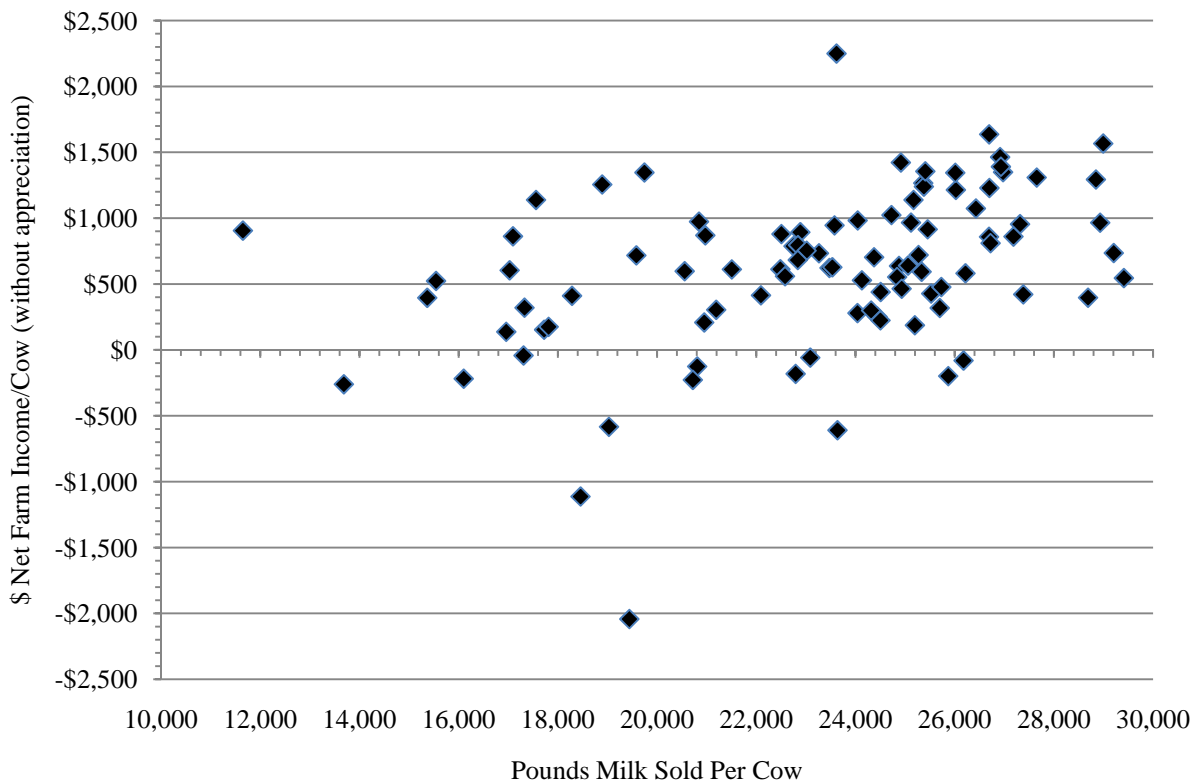
Net farm income is computed both with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than Farm Credit stock required for loan borrowings). Appreciation is a major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

**NET FARM INCOME**  
90 Western New York Region Dairy Farms, 2010

Item	Average		My Farm	
	Total	Per Cow	Total	Per Cow
Total accrual receipts	\$ 3,115,673		\$ _____	
Appreciation: Livestock	2,413		_____	
Machinery	21,166		_____	
Real Estate	83,413		_____	
Other Stock & Certificates	557		_____	
Total Including Appreciation	\$ 3,223,222		\$ _____	
Total accrual expenses	2,651,347		- _____	
Net Farm Income (with appreciation)	\$ 571,875	\$ 936	\$ _____	\$ _____
Net Farm Income (without appreciation)	\$ 464,326	\$ 761	\$ _____	\$ _____

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**  
90 Western New York Region Dairy Farms, 2010





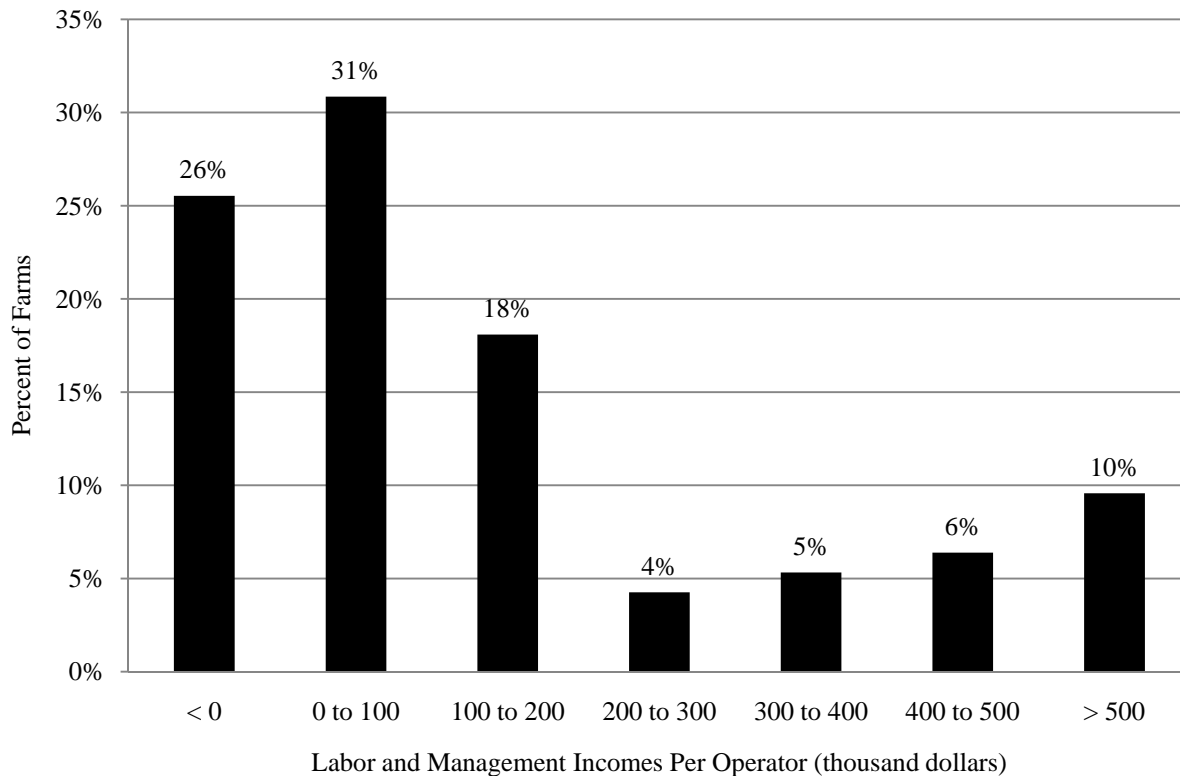
Labor and management income is the return which farm operators receive for their labor and management used in the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and 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**  
90 Western New York Region Dairy Farms, 2010

Item	Average	My Farm
Net farm income without appreciation	\$ 464,326	\$ _____
Family labor unpaid @ \$2,500 per month	- 3,144	- _____
Interest on \$3,580,819 average equity capital @ 5% real rate	<u>- 166,669</u>	- _____
Labor & Management Income per farm (1.91 Operators/farm)	\$ 294,512	\$ _____
Labor & Management Income per Operator/Manager	\$ 154,195	\$ _____

Labor and management income per operator averaged \$154,195 on these 90 farms in 2010. The range in labor and management income per operator was from about \$-244,000 to more than \$1,070,000. Returns to labor and management were less than \$100,000 on 57 percent of the farms. Labor and management incomes per operator were between \$100,000 and \$400,000 on 27 percent of the farms, while 16 percent had labor and management incomes of \$400,000 or more per operator.

**DISTRIBUTION OF LABOR AND MANAGEMENT INCOMES PER OPERATOR**  
90 Western New York Region Dairy Farms, 2010



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**  
90 Western New York Region Dairy Farms, 2010

Item	Average	My Farm
Net farm income with appreciation	\$ 571,875	\$ _____
Family labor unpaid @ \$2,500 per month	- 3,144	- _____
Value of operators' labor & management	<u>- 112,685</u>	- _____
Return on equity capital with appreciation	\$ 456,046	\$ _____
Interest paid	<u>+ 82,060</u>	+ _____
Return on total capital with appreciation	\$ 538,106	\$ _____
Return on equity capital without appreciation	\$ 348,497	\$ _____
Return on total capital without appreciation	\$ 430,557	\$ _____
Rate of return on average equity capital:		
with appreciation	12.7%	_____ %
without appreciation	9.7%	_____ %
Rate of return on average total capital:		
with appreciation	9.7%	_____ %
without appreciation	7.7%	_____ %
Net Farm Income from Operations Ratio	0.15	_____

**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 2010, lease payments were discounted by 7 percent to obtain their present value.

Advanced government receipts are included as current liabilities. Government payments received in 2010 that are for participation in the 2011 program are the end year balance and payments received in 2009 for participation in the 2010 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.

## 2010 FARM BUSINESS &amp; NONFARM MARKET VALUE BALANCE SHEET

90 Western New York Region Dairy Farms, 2010

Farm Assets			Farm Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 58,840	\$ 59,000	Accounts payable	\$ 107,863	\$ 82,088
Accounts receivable	182,625	222,735	Operating debt	142,165	96,037
Prepaid expenses	4,350	4,377	Short Term	4,444	3,041
Feed & supplies	<u>523,811</u>	<u>621,120</u>	Advanced govt. receipts	1,059	959
			Current Portion:		
			Intermediate	132,721	148,204
			Long Term	<u>63,576</u>	<u>69,335</u>
Total Current	\$ 769,626	\$ 907,232	Total Current	\$ 451,829	\$ 399,666
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows:			Structured debt		
owned	\$ 811,074	\$ 849,872	1-10 years	\$ 874,262	\$ 805,657
leased	1,216	637	Financial lease		
Heifers	481,752	502,667	(cattle/machinery)	8,737	5,844
Bulls & other livestock	11,335	17,332	Farm Credit stock	<u>767</u>	<u>757</u>
Mach. & equip. owned	926,149	960,698	Total Intermediate	\$ 883,765	\$ 812,259
Mach. & equip. leased	7,520	5208			
Farm Credit stock	767	757			
Other stock/certificate	<u>146,416</u>	<u>172,235</u>			
Total Intermediate	\$ 2,386,229	\$2,509,405			
<u>Long Term</u>			<u>Long Term</u>		
Land & buildings:			Structured debt		
owned	\$ 2,204,668	\$2,359,330	>10 years	\$ 656,690	\$ 770,643
leased	<u>258</u>	<u>188</u>	Financial lease		
Total Long Term	\$ 2,204,926	\$2,359,518	(structures)	<u>258</u>	<u>188</u>
			Total Long Term	\$ 656,948	\$ 770,831
Total Farm Assets	\$ 5,360,781	\$5,776,155	Total Farm Liabilities	\$ 1,992,543	\$ 1,982,756
			FARM NET WORTH	\$ 3,368,238	\$ 3,793,400
Nonfarm Assets, Liabilities & Net Worth (Average of 29 farms reporting)					
Assets			Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
Personal cash, checking & savings	\$ 8,085	\$ 8,062	Nonfarm Liabilities	\$ 713	\$ 848
Cash value life insurance	35,950	38,056			
Nonfarm real estate	2,759	2,759			
Auto (personal share)	5,913	5,534			
Stocks & bonds	13,225	16,545			
Household furnishings	8,759	8,724			
All other nonfarm assets	18,025	32,830			
Total Nonfarm Assets	\$92,714	\$112,420	NONFARM NET WORTH	\$92,001	\$111,572
Farm & Nonfarm Assets, Liabilities, and Net Worth*				Jan. 1	Dec. 31
Total Assets				\$ 5,453,495	\$ 5,888,575
Total Liabilities				<u>1,993,256</u>	<u>1,983,604</u>
TOTAL FARM & NONFARM NET WORTH				\$ 3,460,239	\$ 3,904,971

\*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**  
90 Western New York Region Dairy Farms, 2010

Item	Average		My Farm	
<u>Financial Ratios - Farm:</u>				
Percent equity		66%	_____	%
Debt/asset ratio: total		.34	_____	
long-term		.33	_____	
intermediate/current		.35	_____	
Leverage Ratio:		.52	_____	
Current Ratio:		2.27		
Working capital	\$507,566	As % of total expenses:	19%	
<u>Farm Debt Analysis:</u>				
Accounts payable as % of total debt		4%	_____	%
Long-term liabilities as a % of total debt		39%	_____	%
Current & inter. liabilities as a % of total debt		61%	_____	%
Cost of term debt (weighted average)		4.2%	_____	%
<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	\$ 3,185	\$ 3,276	\$ _____	\$ _____
Long-term debt	1,238	1,274	_____	_____
Intermediate & long term	2,543	2,616	_____	_____
Intermediate & current debt	1,947	2,003	_____	_____

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**  
90 Western New York Region Dairy Farms, 2010

Item	Average of Region's Farms	
	Real Estate	Machinery & Equipment
Value beginning of year	\$ 2,204,668	\$ 926,149
Purchases	\$ 210,411*	\$ 144,193
Gift & inheritance	+ 0	+ 0
Lost capital	- 48,697	
Sales	- 4,787	- 11,282
Depreciation	- 85,678	- 119,528
Net investment	= 71,249	= 13,384
Appreciation	+ 83,413	+ 21,166
Value end of year	\$ 2,359,330	\$ 960,698

\*\$75,085 land and \$135,326 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)**  
90 Western New York Region Dairy Farms, 2010

Item	Average	My Farm
Beginning of year farm net worth	\$3,368,238	\$ _____
Net farm income without appreciation	\$ 464,326	\$ _____
+Nonfarm cash income	+ 5,082	+ _____
-Personal withdrawals & family expenditures excluding nonfarm borrowings	<u>- 139,428</u>	- _____
RETAINED EARNINGS	+ \$ 329,980	+\$ _____
Nonfarm noncash transfers to farm	\$ 0	\$ _____
+Cash used in business from nonfarm capital	+ 35,949	+ _____
-Note or mortgage from farm real estate sold (nonfarm)	<u>- 0</u>	- _____
CONTRIBUTED/WITHDRAWN CAPITAL	+ \$ 35,949	+\$ _____
Appreciation	\$ 107,549	\$ _____
-Lost capital	<u>- 48,697</u>	- _____
CHANGE IN VALUATION EQUITY	+ \$ 58,853	+\$ _____
IMBALANCE/ERROR	<u>- -380</u>	- \$ _____
End of year net worth*	= \$3,793,400	=\$ _____
<hr/>		
<u>Change in Net Worth</u>		
Without appreciation	\$ 317,612	\$ _____
With appreciation	\$ 425,161	\$ _____

\*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**  
90 Western New York Region Dairy Farms, 2010

Item	Average	
<b><u>Cash Flow from Operating Activities</u></b>		
Cash farm receipts	\$ 2,943,693	
- Cash farm expenses	2,483,503	
- Extraordinary expense	<u>490</u>	
= Net cash farm income		\$ 459,700
Personal withdrawals & family expenses including nonfarm debt payments	\$ 139,945	
- Nonfarm income	<u>5,082</u>	
- Net cash withdrawals from the farm		\$ <u>134,863</u>
= Net Provided by Operating Activities		\$ 324,838
<b><u>Cash Flow From Investing Activities</u></b>		
Sale of assets: machinery	\$ 11,282	
+ real estate	4,787	
+ other stock & cert.	<u>4,541</u>	
= Total asset sales		\$ 20,610
Capital purchases: expansion livestock	\$ 16,786	
+ machinery	144,193	
+ real estate	210,411	
+ other stock & cert.	<u>29,803</u>	
- Total invested in farm assets		\$ <u>401,192</u>
= Net Provided by Investment Activities		\$ -380,582
<b><u>Cash Flow From Financing Activities</u></b>		
Money borrowed (intermediate & long term)	\$ 304,822	
+ Money borrowed (short term)	1,548	
+ Increase in operating debt	0	
+ Cash from nonfarm capital used in business	35,949	
+ Money borrowed - nonfarm	<u>517</u>	
= Cash inflow from financing		\$ 342,836
Principal payments (intermediate & long term)	\$ 238,232	
+ Principal payments (short term)	2,952	
+ Decrease in operating debt	<u>46,127</u>	
- Cash outflow for financing		\$ <u>287,311</u>
= Net Provided by Financing Activities		\$ 55,525
<b><u>Cash Flow From Reserves</u></b>		
Beginning farm cash, checking & savings		\$ 58,840
- Ending farm cash, checking & savings		<u>59,000</u>
= Net Provided from Reserves		\$ -160
Imbalance (error)		\$ -380

## 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 2011. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2011 debt payments shown below.

### FARM DEBT PAYMENTS PLANNED

Same 83 Western New York Region Dairy Farms, 2009 & 2010

Debt Payments	Average			My Farm		
	2010 Payments		Planned 2011	2010 Payments		Planned 2011
	Planned	Made		Planned	Made	
Long term	\$ 79,009	\$ 109,980	\$ 105,680	\$ _____	\$ _____	\$ _____
Intermediate term	192,219	217,044	187,664	_____	_____	_____
Short term	2,687	3,243	1,329	_____	_____	_____
Operating (net reduction)	10,167	53,230	5,707	_____	_____	_____
Accounts payable (net reduction)	5,283	36,279	1,084	_____	_____	_____
Total	\$ 289,365	\$ 419,775	\$ 301,464	\$ _____	\$ _____	\$ _____
Per cow	\$ 458	\$ 665		\$ _____	\$ _____	
Per cwt. 2010 milk	\$ 1.84	\$ 2.67		\$ _____	\$ _____	
Percent of total 2010 farm receipts	9%	13%		_____	_____	
Percent of 2010 milk receipts	10%	15%		_____	_____	

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 2010 (as of December 31, 2009) that could have been made with the amount available for debt service in 2010. Farmers who did not participate in DFBS in 2009 have their 2010 ratios based on planned debt payments for 2011.

### COVERAGE RATIOS

Same 83 Western New York Region Dairy Farms, 2009 & 2010

Item	Average	Item	Average
<u>Cash Flow Coverage Ratio</u>		<u>Debt Coverage Ratio</u>	
Cash farm receipts	\$3,056,677	Net farm income (w/o appreciation)	\$489,852
- Cash farm expenses	2,571,710	+ Depreciation	212,470
+ Interest paid (cash)	83,420	+ Interest paid (accrual)	83,978
- Net personal withdrawals from farm*	<u>138,156</u>	- Net personal withdrawals from farm*	<u>138,156</u>
(A) = Amount Available for Debt Service	\$430,232	(A') = Repayment Capacity	\$648,143
(B) = Debt Payments Planned for 2010 (as of December 31, 2009)	\$289,365	(B) = Debt Payments Planned for 2010 (as of December 31, 2009)	\$289,365
(A/B) = Cash Flow Coverage Ratio for 2010	1.49	(A'/B) = Debt Coverage Ratio for 2010	2.24

\*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	90 Western New York Region Dairy Farms		My Farm	Expected Change	2011 Projection
	Per Cow	Per Cwt.	Per Cow/ Per Cwt.		
Average number of cows	611				
Total cwt. of milk sold		151,677			
<u>Accrual Operating Receipts</u>					
Milk	\$4,426	\$17.82	\$ _____	_____	\$ _____
Dairy cattle	313	1.26	_____	_____	_____
Dairy calves	26	0.10	_____	_____	_____
Other livestock	15	0.06	_____	_____	_____
Crops	202	0.81	_____	_____	_____
Miscellaneous Receipts	120	0.48	_____	_____	_____
Total	\$5,103	\$20.54	\$ _____	_____	\$ _____
<u>Accrual Operating Expenses</u>					
Hired labor	\$ 678	\$ 2.73	\$ _____	_____	\$ _____
Dairy grain & concentrate	1,226	4.93	_____	_____	_____
Dairy roughage	92	0.37	_____	_____	_____
Nondairy feed	3	0.01	_____	_____	_____
Professional nutritional services	2	0.01	_____	_____	_____
Machinery hire, rent & lease	89	0.36	_____	_____	_____
Machinery repair & vehicle expense	192	0.77	_____	_____	_____
Fuel, oil & grease	154	0.62	_____	_____	_____
Replacement livestock	7	0.03	_____	_____	_____
Breeding	53	0.21	_____	_____	_____
Veterinary & medicine	162	0.65	_____	_____	_____
Milk marketing	211	0.85	_____	_____	_____
Bedding	90	0.36	_____	_____	_____
Milking supplies	85	0.34	_____	_____	_____
Cattle lease	5	0.02	_____	_____	_____
Custom boarding	69	0.28	_____	_____	_____
bST expense	64	0.26	_____	_____	_____
Livestock professional fees	16	0.06	_____	_____	_____
Other livestock expense	20	0.08	_____	_____	_____
Fertilizer & lime	79	0.32	_____	_____	_____
Seeds & plants	91	0.37	_____	_____	_____
Spray & other crop expense	42	0.17	_____	_____	_____
Crop professional fees	9	0.04	_____	_____	_____
Land, building & fence repair	78	0.31	_____	_____	_____
Taxes	57	0.23	_____	_____	_____
Real estate rent & lease	72	0.29	_____	_____	_____
Insurance	43	0.17	_____	_____	_____
Utilities	97	0.39	_____	_____	_____
Other professional fees	27	0.11	_____	_____	_____
Miscellaneous	30	0.12	_____	_____	_____
Total Less Interest Paid	\$3,844	\$15.47	\$ _____	_____	\$ _____
<u>Net Accrual Operating Income</u>					
(without interest paid)		Total			
		\$768,868	\$ _____		\$ _____
- Change in livestock /crop inventory*		131,871	_____	_____	_____
- Change in accounts receivable		40,110	_____	_____	_____
- Change in feed & supply inventory**		28,863	_____	_____	_____
+ Change in accounts payable***		-26,219	_____	_____	_____
NET CASH FLOW		\$541,806	\$ _____		\$ _____
- Net family withdrawals		133,434	_____	_____	_____
Available for Farm		\$408,372	\$ _____		_____
- Farm debt payments		419,412	_____	_____	_____
Available for Farm Investment		\$-11,040	\$ _____		\$ _____
- Capital purchases		401,192	_____	_____	_____
Additional Capital Needed		\$412,233	\$ _____		\$ _____

\*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**

90 Western New York Region Dairy Farms, 2010

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	605	571	1,176	_____	_____	_____
Nontillable	22	2	24	_____	_____	_____
Other nontillable	111	5	116	_____	_____	_____
Total	738	578	1,316	_____	_____	_____
<u>Crop Yields</u>	<u>Farms</u>	<u>Acres*</u>	<u>Production/Acre</u>	<u>Acres</u>	<u>Production/Acre</u>	
Hay crop	84	553	3.93 tons DM	_____	_____	tons DM
Corn silage	78	473	20.30 tons	_____	_____	tons
			7.12 tons DM	_____	_____	tons DM
Other forage	7	148	2.36 tons DM	_____	_____	tons DM
Total forage	85	993	5.30 tons DM	_____	_____	tons DM
Corn grain	56	236	150 bushels	_____	_____	bushels
Oats	10	51	58 bushels	_____	_____	bushels
Wheat	18	135	63 bushels	_____	_____	bushels
Other crops	32	112		_____	_____	
Tillable pasture	15	91		_____	_____	
Idle	16	53		_____	_____	
Total Tillable Acres	90	1,176		_____	_____	

\*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were hay crop 516, corn silage 410, corn grain 147, oats 6, tillable pasture 15, and idle 9.

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**

85 Western New York Region Dairy Farms, 2010

Item	Average*	My Farm
Total tillable acres per cow	1.95	_____
Total forage acres per cow	1.56	_____
Harvested forage dry matter, tons per cow	8.28	_____

\*Excludes farms that do not harvest forages.

**Cropping Analysis** (continued)

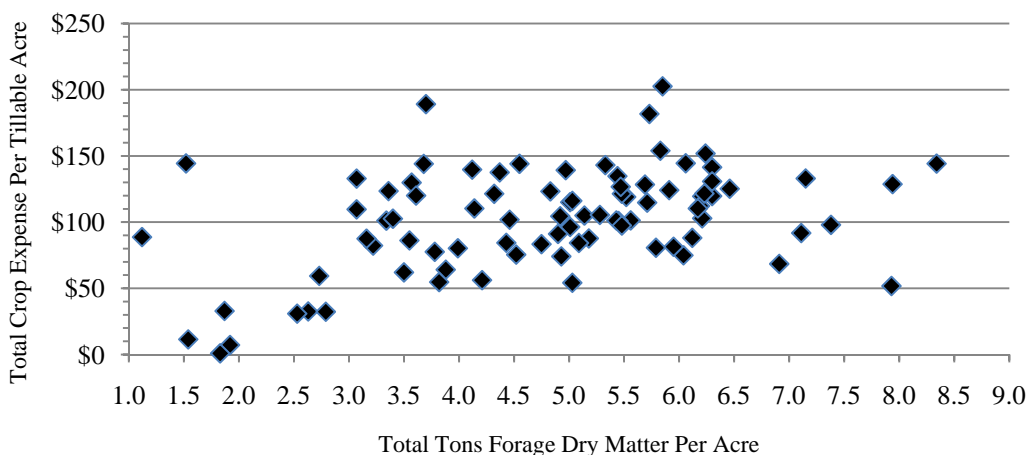
Crop input costs per tillable acre are reported in the table below. The chart below shows the relationship between total forage dry matter and total crop input costs. Rotational grazing was used on fourteen farms in the region.

**CROP RELATED ACCRUAL EXPENSES**  
Western New York Region Dairy Farms Reporting, 2010

Item	Average 85 Farms		My Farm	
	Total Per Tillable Acre		Total Per Tillable Acre	
Number of farms reporting	85		_____	
Average number of acres	1,241		_____	
Fertilizer & lime expenses	\$	43.81	\$	_____
Seeds & plants	44.88		_____	
Spray & other crop expenses	<u>19.67</u>		_____	
Total	\$	108.36	\$	_____

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

85 Western New York Region Dairy Farms, 2010



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**  
85 Western New York Region Dairy Farms, 2010\*

Machinery Expense	Average		My Farm	
	Total Expenses	Per Tillable Acre	Total Expenses	Per Tillable Acre
Fuel, oil & grease	\$ 98,849	\$ 79.68	\$ _____	\$ _____
Mach. repair & vehicle expense	123,251	99.35	_____	_____
Machine hire, rent & lease	56,835	45.82	_____	_____
Interest (5%)	48,190	38.85	_____	_____
Depreciation	<u>125,347</u>	<u>101.04</u>	_____	_____
Total	\$452,473	\$364.74	\$ _____	\$ _____

\*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**  
90 Western New York Region Dairy Farms, 2010

Item	Dairy Cows		Bred		Heifer Open		Calves	
	No.	Value	No.	Value	No.	Value	No.	Value
Beg. year (owned)	585	\$ 811,074	186	\$ 254,468	176	\$ 151,815	147	\$ 75,469
+ Change w/o apprec.		38,062		8,796		13,252		1,043
+ Appreciation		<u>736</u>		<u>-1,721</u>		<u>1,355</u>		<u>-1,810</u>
End year (owned)	613	\$ 849,872	193	\$ 261,543	190	\$ 166,422	149	\$ 74,702
End including leased	623							
Average number	611		525	(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**  
90 Western New York Region Dairy Farms, 2010

Item	Average	My Farm
Total milk sold, pounds	15,167,733	_____
Milk sold per cow, pounds	24,844	_____
Average milk plant test, percent butterfat	3.52%	_____

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

**ANIMALS LEAVING THE HERD**  
90 Western New York Region Dairy Farms, 2010

Item	Average		My Farm	
	Number	Percent*	Number	Percent*
Cows sold for beef	175	28.6	_____	_____
Cows sold for dairy	6	1.0	_____	_____
Cows died	42	6.9	_____	_____
Culling rate**		35.0		_____

\*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**

90 Western New York Region Dairy Farms, 2010

Item	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
<u>Accrual Cost of Producing Milk</u>						
Operating costs	\$ 2,032,366	\$ 3,329	\$ 13.40	\$ _____	\$ _____	\$ _____
Purchased inputs costs	\$ 2,238,061	\$ 3,666	\$ 14.76	\$ _____	\$ _____	\$ _____
Total Costs	\$ 2,520,560	\$ 4,128	\$ 16.62	\$ _____	\$ _____	\$ _____
<u>Accrual Receipts</u>						
<u>From Milk</u>	\$2,702,387	\$ 4,426	\$ 17.82	\$ _____	\$ _____	\$ _____
Net Milk Receipts	\$2,573,554	\$ 4,215	\$ 16.97	\$ _____	\$ _____	\$ _____
Net Farm Income without Apprec.	\$ 464,326	\$ 761	\$ 3.06	\$ _____	\$ _____	\$ _____
Net Farm Income with Appreciation	\$ 571,875	\$ 937	\$ 3.77	\$ _____	\$ _____	\$ _____

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**

90 Western New York Region Dairy Farms, 2010

Item	Average		My Farm	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrate	\$ 1,226	\$ 4.93	\$ _____	\$ _____
Purchased dairy roughage	92	.37	_____	_____
Total Purchased Dairy Feed	\$ 1,318	\$ 5.30	\$ _____	\$ _____
Purchased grain & concentrate as % of milk receipts		28%	_____ %	_____ %
Purchased feed & crop expense	\$ 1,539	\$ 6.20	\$ _____	\$ _____
Purchased feed & crop expense as % of milk receipts		37%	_____ %	_____ %
Breeding	\$ 53	\$ .21	\$ _____	\$ _____
Veterinary & medicine	162	.65	_____	_____
Milk marketing	211	.85	_____	_____
Bedding	90	.36	_____	_____
Milking supplies	85	.34	_____	_____
Cattle lease	5	.02	_____	_____
Custom boarding	69	.28	_____	_____
bST expense	64	.26	_____	_____
Livestock professional fees	16	.06	_____	_____
Other livestock expense	20	.08	_____	_____

**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**  
90 Western New York Region Dairy Farms, 2010

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	\$417,740	\$9,121	\$4,736	\$9,201
Real estate		3,738		3,771
Machinery & equipment	71,252	1,556	808	

Ratios

Asset turnover	Operating Expense	Interest Expense	Depreciation Expense
.58	.76	.03	.07

My Farm

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

Ratios

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

**LABOR FORCE INVENTORY**  
90 Western New York Region Dairy Farms, 2010

Labor Force	Months	Age	Years of Education	Value of Labor & Management
Operator number 1	13.2	52	14	\$55,692
Operator number 2	8.2	43	14	35,999
Operator number 3	3.1	45	14	15,139
Operator number 4	1.6	55	15	5,855
Family paid	4.6			
Family unpaid	1.3			
Hired	<u>128.0</u>			
Total	160.0	/ 12 = 13.33 Worker Equivalent 1.91 Operator/Manager Equivalent		
<u>My Farm:</u> Total	_____	/ 12 = ____ Worker Equivalent		
Operator's	_____	/ 12 = ____ Operator/Manager Equivalent		

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

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

**LABOR EFFICIENCY**  
90 Western New York Region Dairy Farms, 2010

Labor Efficiency	Average		My Farm	
	Total	Per Worker	Total	Per Worker
Cows, average number	611	46	_____	_____
Milk sold, pounds	15,167,733	1,137,651	_____	_____
Tillable acres	1,176	88	_____	_____

**LABOR AND MACHINERY COSTS**  
90 Western New York Region Dairy Farms, 2010

Labor Costs	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Value of operator(s) labor (\$2,500/month)	\$ 64,624	\$ 106	\$ .43	\$ _____	\$ _____	\$ _____
Family unpaid (\$2,500/month)	3,115	5	.02	_____	_____	_____
Hired	<u>414,205</u>	<u>678</u>	<u>2.73</u>	_____	_____	_____
Total Labor	\$ 481,944	\$ 789	\$ 3.18	\$ _____	\$ _____	\$ _____
Machinery Cost	<u>\$ 431,720</u>	<u>\$ 707</u>	<u>\$ 2.85</u>	\$ _____	\$ _____	\$ _____
Total Labor & Mach.	\$ 913,664	\$ 1,497	\$ 6.02	\$ _____	\$ _____	\$ _____
Hired labor expense per hired worker equivalent			\$ 37,487	\$ _____		
Hired labor expense as % of milk sales			15.3%	_____%		

## 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 83 Western New York Region Dairy Farms, 2009 & 2010

Selected Factors	Average of 83 Farms*		My Farm		Goal
	2009	2010	2009	2010	
<u>Size of Business</u>					
Average number of cows	601	631	_____	_____	_____
Average number of heifers	518	545	_____	_____	_____
Milk sold, pounds	14,736,660	15,721,394	_____	_____	_____
Worker equivalent	13.22	13.73	_____	_____	_____
Total tillable acres	1,171	1,212	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, pounds	24,509	24,896	_____	_____	_____
Hay DM per acre, tons	3.7	3.9	_____	_____	_____
Corn silage per acre, tons	19.6	20.3	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	45	46	_____	_____	_____
Milk sold/worker, pounds	1,114,725	1,145,040	_____	_____	_____
<u>Cost Control</u>					
Grain & conc. purchased as % of milk sales	37%	28%	_____ %	_____ %	_____ %
Dairy feed & crop expense per cwt. milk	\$ 6.33	\$ 6.20	\$ _____	\$ _____	\$ _____
Labor & mach. costs/cow	\$ 1,453	\$ 1,495	\$ _____	\$ _____	\$ _____
Operating cost of producing cwt. of milk	\$ 13.48	\$ 13.37	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency**</u>					
Farm capital per cow	\$ 9,215	\$ 9,168	\$ _____	\$ _____	\$ _____
Mach. & equipment per cow	\$ 1,599	\$ 1,571	\$ _____	\$ _____	\$ _____
Asset turnover ratio	0.44	0.58	_____	_____	_____
<u>Profitability</u>					
Net farm income w/o apprec.	\$ -141,118	\$ 489,852	\$ _____	\$ _____	\$ _____
Net farm income w/apprec.	\$ -99,303	\$ 599,040	\$ _____	\$ _____	\$ _____
Labor & mgmt. income per operator/manager	\$ -163,787	\$ 159,821	\$ _____	\$ _____	\$ _____
Rate of return on equity capital w/appreciation	-5.8	12.7	_____ %	_____ %	_____ %
Rate of return on all capital w/appreciation	-2.5	9.7	_____ %	_____ %	_____ %
<u>Financial Summary</u>					
Farm net worth, end year	\$3,521,634	\$ 3,991,721	\$ _____	\$ _____	\$ _____
Debt to asset ratio	.36	.34	_____	_____	_____
Farm debt per cow	\$ 3,301	\$ 3,131	\$ _____	\$ _____	\$ _____

\*Farms participating both years.

\*\*Average for the year.



**RECEIPTS AND EXPENSES PER COW AND PER CWT.**  
Same 83 Western New York Region Dairy Farms, 2009 & 2010

Item	2009		2010	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	601		631	
Cwt. of Milk Sold		147,367		157,214
<b><u>ACCRUAL OPERATING RECEIPTS</u></b>				
Milk	\$3,396	\$13.86	\$4,441	\$17.84
Dairy cattle	251	1.02	316	1.27
Dairy calves	45	0.18	26	0.11
Other livestock	8	0.03	16	0.06
Crops	59	0.24	207	0.83
Miscellaneous receipts	<u>225</u>	<u>0.92</u>	<u>120</u>	<u>0.48</u>
Total Receipts	\$3,983	\$16.25	\$5,126	\$20.59
<b><u>ACCRUAL OPERATING EXPENSES</u></b>				
Hired labor	\$ 685	\$ 2.79	\$ 680	\$ 2.73
Dairy grain & concentrate	1,245	5.08	1,228	4.93
Dairy roughage	75	0.30	94	0.38
Nondairy feed	0	0.00	3	0.01
Professional nutritional services	1	0.00	3	0.01
Machine hire, rent & lease	87	0.35	89	0.36
Machinery repair & vehicle expense	165	0.67	190	0.76
Fuel, oil & grease	128	0.52	154	0.62
Replacement livestock	8	0.03	7	0.03
Breeding	51	0.21	53	0.21
Veterinary & medicine	153	0.62	162	0.65
Milk marketing	203	0.83	213	0.86
Bedding	87	0.36	90	0.36
Milking supplies	89	0.36	85	0.34
Cattle lease	4	0.02	5	0.02
Custom boarding	63	0.26	71	0.29
bST expense	65	0.26	63	0.25
Livestock professional fees	12	0.05	15	0.06
Other livestock expense	19	0.08	19	0.08
Fertilizer & lime	88	0.36	80	0.32
Seeds & plants	89	0.36	91	0.36
Spray & other crop expense	47	0.19	42	0.17
Crop professional fees	7	0.03	9	0.04
Land, building & fence repair	67	0.27	78	0.32
Taxes	53	0.22	58	0.23
Real estate rent & lease	70	0.29	72	0.29
Insurance	41	0.17	43	0.17
Utilities	88	0.36	97	0.39
Interest paid	121	0.49	133	0.53
Other professional fees	26	0.11	27	0.11
Miscellaneous	<u>30</u>	<u>0.12</u>	<u>30</u>	<u>0.12</u>
Total Operating Expenses	\$3,867	\$15.78	\$3,984	\$16.00
Expansion Livestock	25	0.10	29	0.11
Extraordinary Expense	2	0.01	1	0.00
Machinery Depreciation	189	0.77	197	0.79
Real Estate Depreciation	<u>135</u>	<u>0.55</u>	<u>139</u>	<u>0.56</u>
Total Expenses	\$4,218	\$17.21	\$4,350	\$17.46
Net Farm Income Without Appreciation	\$ -235	\$ -0.96	\$ 776	\$ 3.12

### 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

90 Western New York Region Dairy Farms, 2010

Size of Business			Rate of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
31.28	1,462	37,602,041	27,649	6.0	26	57	1,404,281
17.66	834	20,827,673	25,556	4.4	22	48	1,183,690
10.26	496	11,731,276	24,249	3.7	20	44	1,052,736
5.10	190	4,320,020	22,136	3.0	18	38	869,310
2.37	71	1,357,658	17,347	1.9	15	25	501,691

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)	
\$758	20%	\$486	\$1,160	\$1,078	\$5.19	
1,037	26	641	1,444	1,347	5.89	
1,203	28	739	1,549	1,524	6.28	
1,320	31	868	1,695	1,649	6.78	
1,521	36	1,058	2,218	1,952	8.39	

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)
\$4,931	\$10.63	\$14.86	\$1,671,059	\$1,451,521	\$601,656	\$1,400,367
4,540	12.51	16.12	713,779	545,100	189,139	550,488
4,292	13.61	17.40	383,110	297,674	73,821	238,005
3,933	14.39	19.01	121,631	85,125	12,108	62,752
3,098	17.23	23.95	-30,204	-57,791	-81,630	-125,804

\*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** 29 New York Dairy Farms, 2010

<u>Animals Entering Herd</u>	Average
Number calving in 2010 for first time	243
Animals purchased, % <sup>1</sup>	1%
Animals raised by farm, % <sup>2</sup>	99%
 <u>Current Heifer Inventory</u>	
Raised on dairy, %	92%
Raised by a custom grower, %	8%

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

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

On the average farm, 243 animals calved for the first time in 2010. The breakdown on these animals for source was 1 percent purchased and 99 percent raised by the farm. Of the current heifer inventory, 92 percent were raised on the dairy and 8 percent were raised by a custom grower. There is increased interest in evaluating the dairy replacement enterprise.

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

Starting January 1<sup>st</sup>, 2000, the northeast switched to multiple components pricing, which changed the format of the milk check and how farmers received payment for their milk. To examine the breakdown of the gross milk income and the marketing expenses, 76 Western 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**  
76 Western New York Region Dairy Farms, 2010

	Pounds	Percent	Price/Pound	Total	\$/Cwt of Milk
<b>BASE FARM PRICE</b>					
Butterfat	592,877	3.62%	\$1.86	\$1,101,322	\$6.73
Protein	500,064	3.06%	\$2.30	\$1,151,261	\$7.04
Solids	961,065	5.88%	\$0.17	\$165,274	\$1.01
<b>Total Component Contribution</b>					\$14.78
<b>PPD</b>	16,357,691			\$262,326	\$1.60
<b>Base Farm Price</b>					\$16.38
<b>Premiums</b>					
Quality				\$43,419	\$0.27
Volume				\$46,902	\$0.29
Market Premiums				\$94,285	\$0.58
<b>Total Premiums</b>					\$1.13
<b>BASE FARM PRICE + PREMIUM</b>					\$17.51
<hr style="border-top: 1px dashed black;"/>					
<b>Deductions</b>					
Promotion				\$24,769	\$0.15
Hauling + Stop Charges.				\$94,802	\$0.58
Market Fees & Coop Dues				\$22,916	\$0.14
<b>Total Deductions</b>					\$0.87
<b>BASE FARM PRICE + PREMIUMS - DEDUCTIONS</b>					\$16.64
<b>Marketing Programs</b>					
Futures Contracts, Forward Contracting, Etc.				\$69	\$0.00
<b>Total Marketing Income</b>					\$0.00
<b>Patronage Dividends</b>				\$53,481	\$0.33
<b>NET PRICE RECEIVED ON FARM, ALL SOURCES</b>					\$16.97
<b>PPD - Hauling, \$ per cwt.</b>					\$1.02
<b>PPD - Hauling + Market Premiums, \$ per cwt.</b>					\$1.60
<b>Net Marketing Value (PPD + Total Premiums - Total Deductions), \$ per cwt.</b>					\$1.86



## 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, 2009

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)
34.5	1,662	43,168,090	27,708	5.5	26	63	1,442,513
21.6	969	24,026,822	26,204	4.4	22	51	1,195,505
16.1	715	17,158,049	25,098	3.9	21	47	1,103,896
12.2	512	11,954,459	24,083	3.5	19	43	1,022,874
8.2	359	8,336,747	23,176	3.2	18	40	927,078
5.4	203	4,407,937	21,930	2.8	17	37	823,127
4.0	136	2,631,526	20,554	2.5	16	34	701,150
3.1	96	1,831,947	19,097	2.3	15	31	618,720
2.4	68	1,198,114	17,092	1.9	13	28	520,658
1.6	47	789,780	13,066	1.5	8	21	346,599

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)	
\$556	24%	\$392	\$1,050	\$761	\$4.61	
827	31	507	1,241	1,073	5.39	
938	33	568	1,348	1,233	5.83	
1,039	36	611	1,425	1,311	6.15	
1,124	37	653	1,478	1,407	6.41	
1,189	39	688	1,537	1,494	6.67	
1,259	41	726	1,614	1,557	6.94	
1,340	43	779	1,709	1,638	7.25	
1,441	46	834	1,852	1,752	7.64	
1,656	52	1,044	2,273	2,045	9.01	

\*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, 2009

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)
\$3,904	\$15.04	\$1,539	\$9.36	\$2,786	\$14.64
3,615	14.46	2,107	11.18	3,286	15.73
3,472	14.20	2,412	12.03	3,529	16.34
3,343	13.99	2,604	12.45	3,724	17.04
3,212	13.82	2,863	13.07	3,892	17.59
-----					
3,001	13.68	3,031	13.54	4,070	18.31
2,815	13.50	3,193	14.15	4,235	18.90
2,586	13.33	3,437	14.69	4,399	19.92
2,310	13.11	3,726	15.62	4,595	21.92
1,786	12.65	4,115	17.20	5,037	25.94

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)
\$189,108	\$621	0.17	\$316,867	\$689	\$44,796	\$29,113
50,933	261	0.08	73,223	359	-22,905	-15,857
21,392	129	0.03	32,127	166	-41,298	-27,377
4,190	25	0.01	6,546	49	-61,781	-39,543
-18,397	-107	-0.03	-19,455	-115	-89,481	-57,798
-----						
-41,720	-215	-0.06	-38,756	-234	-131,913	-80,521
-70,753	-353	-0.11	-65,741	-320	-219,725	-116,887
-156,846	-502	-0.14	-138,222	-476	-322,905	-187,439
-338,128	-636	-0.19	-294,082	-645	-553,193	-302,719
-861,956	-1,025	-0.35	-945,904	-1,058	-1,234,813	-758,790

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, 2009

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)
\$129	\$869	4.73	2.73	4%	\$207	48%	24.00
265	536	1.30	1.07	7	1,172	29	3.80
320	425	0.90	0.68	10	1,925	22	2.67
388	334	0.64	0.39	12	2,513	19	2.09
448	225	0.37	0.13	14	2,914	15	1.75
-----							
512	81	0.14	-0.03	17	3,517	11	1.48
592	-6	-0.06	-0.29	19	4,048	6	1.17
684	-132	-0.42	-0.57	22	4,632	0	0.94
841	-278	-0.73	-1.04	25	5,166	-6	0.72
1,321	-587	-1.87	-2.34	38	6,688	-25	0.30
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)	
0.08	98%	0.02	0.00	0.73	0.00	0.02	
0.19	88	0.11	0.00	0.83	0.01	0.04	
0.28	81	0.22	0.03	0.86	0.02	0.05	
0.39	75	0.27	0.11	0.89	0.02	0.06	
0.53	69	0.35	0.22	0.91	0.03	0.07	
-----							
0.73	60	0.42	0.33	0.95	0.04	0.08	
0.87	55	0.47	0.44	0.98	0.04	0.09	
1.06	49	0.56	0.53	1.03	0.05	0.11	
1.39	43	0.67	0.64	1.07	0.06	0.13	
3.03	26	0.89	0.98	1.19	0.11	0.18	
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)	
0.63	\$1,882	\$607	\$6,103	\$130,552	4%	4%	
0.52	2,558	968	7,394	20,677	-1	1	
0.48	2,940	1,229	7,972	-8,052	-3	-1	
0.44	3,319	1,456	8,730	-30,384	-5	-2	
0.40	3,639	1,618	9,230	-54,874	-7	-4	
-----							
0.37	4,097	1,803	9,754	-91,665	-10	-5	
0.34	4,625	2,036	10,312	-168,225	-12	-7	
0.30	5,339	2,255	11,366	-272,257	-15	-8	
0.26	6,375	2,560	12,448	-460,184	-21	-10	
0.19	8,932	3,659	15,218	-1,243,274	-46	-16	

\*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 48 cows on the small conventional farms to 881 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; however, in 2009 they had the lowest 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 2009 State Summary\*. In most years, as herd size increases, the net farm income increases (page 48)\*; however, that was not the case for 2009. All herd size categories averaged a negative net farm income without appreciation. Net farm income without appreciation averaged \$-1,939 per farm for the less than 60 cow farms and \$-490,500 per farm for those with more than 900 cows. Return to all capital without appreciation generally increased as herd size increased.

Assets, liabilities and financial measures are presented on pages 55-58\*. All herd size categories saw a decrease in net worth during 2009. The largest herd size category experienced a decrease in net worth of \$293,733. However, percent equity went down as assets increased. The 200 to 399 herd size category had the lowest percent equity; while the smaller herds averaged 77 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 25,229 pounds of milk sold per cow, farms in the largest herd size group averaged 8.8 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 453,250 pounds at the lowest herd size category up to 1,217,421 pounds at the largest size category.

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\*Wayne A. Knoblauch, Linda D. Putnam, and Jason Karszes, Dairy Farm Management Business Summary, New York, 2009, Department of Applied Economics and Management, Cornell University, R.B. 2010-02, November 2010.

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

191 New York Dairy Farms, 2009

Item	Farms with:	Conventional		Freestall		
		<= 60 Cows	>60 Cows	<=150 Cows	151-300 Cows	≥300 Cows
Number of farms		23	25	27	24	92
<u>Cropping Program Analysis</u>						
Total Tillable acres		153	327	239	556	1,711
Tillable acres rented*		82	132	113	250	878
Hay crop acres*		123	228	150	319	768
Corn silage acres*		18	53	57	139	681
Hay crop, tons DM/acre		2.3	2.2	2.6	2.7	3.6
Corn silage, tons/acre		16	13.3	16.1	18.6	19.0
Oats, bushels/acre		45	73	79	55	67
Forage DM per cow, tons		8.4	8.1	7.9	8.3	8.3
Tillable acres/cow		3.3	3.5	2.7	2.7	2.0
Fertilizer & lime expense/tillable acre		\$27.94	\$26.51	\$33.97	\$54.76	\$48.73
Total machinery costs		\$34,204	\$61,040	\$70,419	\$158,061	\$585,211
Machinery cost/tillable acre		\$214	\$187	\$243	\$284	\$336
<u>Dairy Analysis</u>						
Number of cows		48	93	103	210	881
Number of heifers		40	79	84	179	734
Milk sold, lbs.		854,175	1,713,249	1,981,491	4,605,848	22,034,738
Milk sold/cow, lbs.		17,844	18,446	19,328	21,928	25,024
Operating cost of producing milk/cwt.		\$12.16	\$13.13	\$12.42	\$13.03	\$13.81
Total cost of producing milk/cwt.		\$21.52	\$20.43	\$18.51	\$17.65	\$16.82
Price/cwt. milk sold		\$13.44	\$13.45	\$13.81	\$13.71	\$13.90
Purchased dairy feed/cow		\$891	\$1,044	\$1,207	\$1,155	\$1,358
Purchased dairy feed/cwt. milk		\$5.00	\$5.66	\$6.24	\$5.27	\$5.43
Purchased grain & concentrate as % of milk receipts		35%	41%	39%	38%	38%
Purchased feed & crop expense/cwt milk		\$5.99	\$6.58	\$7.21	\$6.36	\$6.38
<u>Capital Efficiency</u>						
Farm capital/worker		\$296,563	\$325,893	\$313,395	\$368,757	\$405,869
Farm capital/cow		\$11,523	\$11,298	\$9,538	\$9,481	\$8,905
Farm capital/tillable acre owned		\$7,765	\$5,385	\$7,760	\$6,504	\$9,408
Real estate/cow		\$5,772	\$5,506	\$4,368	\$3,994	\$3,563
Machinery investment/cow		\$2,383	\$2,200	\$1,763	\$1,741	\$1,505
Asset turnover ratio		0.26	0.26	0.34	0.38	0.46
<u>Labor Efficiency</u>						
Worker equivalent		1.86	3.22	3.11	5.41	19.32
Operator/manager equivalent		1.09	1.47	1.52	2.01	2.14
Milk sold/worker, lbs.		458,823	531,652	636,283	852,014	1,140,662
Cows/worker		26	29	33	39	46
Labor cost/cow		\$1,124	978	\$862	\$800	\$787
Labor cost/tillable acre		\$352	\$278	\$370	\$302	\$405
<u>Profitability &amp; Balance Sheet Analysis</u>						
Net farm income (without appreciation)		\$-2,315	\$-16,922	\$-1,745	\$-28,801	\$-260,522
Labor & management income/operator		\$-31,550	\$-47,833	\$-29,326	\$-49,465	\$-239,395
Rate return on all capital with appreciation		-7.0%	-6.9%	-5.0%	-4.9%	-3.2%
Farm debt/cow		\$2,661	\$3,160	\$2,921	\$3,177	\$3,388
Percent equity		77%	72%	68%	66%	61%

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

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

23 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 2009

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)
2.75	57	1,166,624	23,699	4.5	22	41	814,988
2.48	55	1,054,704	22,630	3.5	20	35	700,081
2.22	52	1,027,653	21,999	2.8	20	31	627,340
2.04	51	1,019,893	20,747	2.4	19	31	569,357
2.00	51	1,002,706	19,706	2.3	18	29	531,012
1.79	50	965,943	18,647	2.2	16	26	469,700
1.63	47	900,255	18,247	2.0	15	25	432,381
1.58	46	736,147	15,835	1.8	15	24	391,392
1.50	43	630,256	13,205	1.7	12	21	312,985
1.25	37	423,753	10,155	1.5	7	18	232,739

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)	
\$366	21%	\$444	\$1,265	\$466	\$4.26	
622	28	528	1,482	827	4.74	
715	33	607	1,659	925	5.45	
798	36	645	1,746	1,016	6.07	
881	37	666	1,868	1,077	6.31	
938	39	754	1,991	1,173	6.46	
955	40	794	2,120	1,263	6.56	
1,054	40	879	2,160	1,319	6.86	
1,107	43	938	2,263	1,456	7.02	
1,269	44	1,126	2,473	1,633	7.49	

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)
\$3,220	\$7.64	\$16.31	\$44,417	\$931	\$10,108	\$60,332
3,074	10.10	18.97	30,319	617	-6,583	34,450
2,878	11.11	20.13	16,506	327	-12,640	26,646
2,804	11.35	20.62	10,951	212	-21,467	10,692
2,660	12.26	21.20	4,899	92	-23,274	1,252
2,528	12.90	22.42	1,350	30	-26,611	-3,844
2,404	13.41	23.00	-2,281	-53	-35,102	-9,513
2,174	13.59	25.02	-10,140	-225	-37,137	-17,266
1,774	14.46	27.53	-20,302	-415	-50,867	-24,671
1,322	19.81	34.87	-58,077	-1,274	-75,119	-38,682

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

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

25 Conventional Stall Dairy Farms with More Than 60 Cows, New York, 2009

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)
6.20	151	3,110,205	24,463	4.4	27	64	961,921
4.65	133	2,347,372	22,085	3.6	25	43	801,367
4.04	120	2,244,457	21,533	3.2	19	41	698,749
3.64	105	2,129,390	20,958	2.7	17	35	660,705
3.53	99	1,968,372	20,320	2.6	15	32	646,832
3.16	85	1,671,792	19,100	2.4	15	30	579,244
2.91	79	1,463,721	17,581	2.2	12	28	530,941
2.62	75	1,320,625	15,975	2.0	9	26	483,325
2.06	67	1,036,449	14,505	1.7	8	22	357,151
1.41	64	917,955	12,439	1.1	6	18	292,357

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)
\$586	24%	\$307	\$1,056	\$711	\$4.58	\$4.58
812	33	448	1,146	985	5.66	5.66
885	37	514	1,344	1,108	6.08	6.08
935	39	574	1,474	1,186	6.32	6.32
992	42	643	1,661	1,279	6.72	6.72
1,093	44	697	1,745	1,333	7.06	7.06
1,141	45	761	1,911	1,382	7.48	7.48
1,181	48	814	2,012	1,454	7.83	7.83
1,199	52	847	2,232	1,533	7.98	7.98
1,442	61	1,124	2,506	1,557	9.35	9.35

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)
\$3,406	\$8.50	\$15.78	\$71,365	\$653	\$-3,608	\$154,271
3,074	11.50	18.04	24,951	362	-20,187	35,152
2,918	12.37	19.17	16,883	204	-24,084	16,525
2,739	13.03	20.71	9,331	107	-25,483	-3,254
2,720	13.82	21.78	-6,950	-84	-29,384	-14,599
2,605	14.27	22.40	-20,299	-201	-37,412	-23,170
2,300	15.29	22.87	-27,719	-327	-52,118	-28,093
2,175	15.98	23.43	-42,035	-459	-64,432	-50,046
1,912	16.12	23.86	-53,888	-602	-90,066	-87,164
1,695	16.80	27.23	-74,128	-768	-138,716	-130,673

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

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

27 Freestall Barn Dairy Farms with 150 or Less Cows, New York, 2009

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
4.46	148	3,266,103	25,870	4.7	21	46	1,035,790
4.22	138	2,853,280	23,508	4.5	19	39	872,668
3.96	132	2,555,275	22,143	3.8	18	36	746,248
3.55	122	2,428,802	20,385	3.1	18	35	677,152
3.35	107	2,104,906	20,109	2.8	17	34	647,301
3.12	100	1,911,494	19,133	2.7	17	33	617,446
2.87	95	1,719,822	18,025	2.5	15	32	589,966
2.61	86	1,484,959	17,310	2.3	15	31	546,787
2.29	74	1,300,764	16,502	1.8	14	29	501,267
1.85	61	1,099,570	13,877	1.5	9	26	426,547

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)	
\$467	21%	\$314	\$1,023	\$787	\$4.48	
769	30	479	1,273	1,128	5.87	
896	34	514	1,380	1,210	6.43	
987	38	545	1,449	1,250	6.80	
1,069	40	607	1,507	1,293	7.18	
1,119	43	698	1,569	1,449	7.51	
1,172	45	749	1,658	1,564	7.91	
1,319	47	833	1,769	1,649	8.79	
1,415	51	910	1,864	1,774	9.06	
1,614	53	935	1,985	2,386	11.07	

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)
\$3,523	\$8.77	\$15.39	\$66,096	\$703	\$7,874	\$68,524
3,279	10.02	15.68	45,760	439	7,181	43,616
3,072	10.81	17.07	41,317	385	1,281	20,745
2,880	11.65	17.91	32,225	302	-13,034	679
2,764	12.26	18.43	22,419	203	-14,720	-19,767
2,569	13.18	18.92	11,144	121	-33,906	-40,170
2,423	13.81	19.94	-14,163	-183	-45,973	-49,207
2,337	14.52	22.96	-36,946	-350	-55,457	-57,158
2,287	14.84	23.70	-54,221	-482	-63,526	-85,191
1,983	16.03	25.89	-78,278	-876	-83,719	-136,978

\*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 151-300 Cows, New York, 2009

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
7.58	280	6,849,434	26,596	5.8	29	56	1,243,719
6.91	265	6,097,648	26,305	4.3	25	54	1,163,088
6.42	240	5,577,970	24,339	3.7	24	51	1,068,305
5.78	227	5,372,848	24,043	3.1	21	48	976,836
5.52	215	5,142,677	23,447	2.9	19	44	939,448
5.34	206	4,482,464	22,408	2.5	18	39	814,575
5.13	200	4,248,858	20,963	2.3	17	36	788,885
4.96	185	3,975,199	20,224	2.2	15	35	742,622
4.37	175	3,436,860	18,181	2.1	12	31	650,544
3.75	166	2,837,173	16,409	1.6	8	27	596,333

## 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)
\$768	26%	\$519	\$1,102	\$935	\$5.04
849	29	584	1,212	1,159	5.32
920	32	634	1,450	1,262	5.53
1,051	36	692	1,531	1,321	6.29
1,184	39	755	1,581	1,375	6.64
1,226	42	769	1,607	1,511	6.77
1,282	43	789	1,670	1,556	7.12
1,310	45	816	1,723	1,573	7.30
1,378	50	983	1,942	1,613	7.40
1,628	52	1,344	2,392	1,955	8.20

## 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)
\$3,700	\$10.05	\$14.18	\$223,400	\$893	\$66,995	\$66,133
3,516	10.87	15.96	115,179	458	6,815	6,362
3,405	11.66	16.54	70,222	363	-4,802	-35,701
3,382	12.10	17.38	37,526	187	-20,875	-59,710
3,308	12.83	17.76	-2,170	-9	-36,805	-84,042
3,047	14.46	18.40	-36,917	-173	-57,667	-90,400
2,880	14.78	19.08	-53,573	-294	-74,549	-108,938
2,699	14.91	20.32	-92,589	-472	-98,045	-139,590
2,454	16.40	21.78	-128,081	-555	-128,394	-204,765
2,245	19.53	24.68	-227,656	-1,208	-222,738	-242,405

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

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

92 Freestall Barn Dairy Farms with 300 or More Cows, New York, 2009

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)
41.78	2,143	56,150,342	28,614	5.9	26	63	1,607,559
29.50	1,301	33,356,512	26,931	4.6	23	53	1,315,236
23.66	1,084	27,294,228	26,276	4.2	21	50	1,233,968
21.32	936	23,124,149	25,815	3.9	20	48	1,168,917
18.51	816	20,257,627	25,133	3.6	19	47	1,121,327
16.17	696	17,283,563	24,540	3.4	18	44	1,076,082
14.05	616	14,313,270	23,967	3.1	17	42	1,031,329
12.57	513	12,324,387	23,353	2.9	16	40	980,946
10.33	445	10,402,631	22,582	2.6	15	37	920,130
7.60	362	8,623,291	20,199	1.9	13	33	791,677

Cost Control						
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk	
(12)	(12)	(14)	(14)	(12)	(12)	
\$1,735	28%	\$441	\$1,115	\$1,203	\$4.99	
1,522	32	555	1,252	1,380	5.63	
1,446	33	593	1,339	1,446	5.88	
1,372	36	631	1,381	1,507	6.11	
1,294	37	661	1,432	1,558	6.30	
1,258	38	685	1,470	1,620	6.56	
1,212	40	709	1,512	1,688	6.83	
1,157	42	751	1,583	1,755	7.12	
1,074	44	797	1,675	1,834	7.49	
907	50	890	1,872	2,115	8.65	

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)
\$4,050	\$11.23	\$14.31	\$267,895	\$335	\$30,240	\$195,183
3,782	12.23	15.39	81,042	118	-49,213	-11,763
3,648	12.62	15.91	13,375	22	-87,226	-83,254
3,561	13.08	16.29	-40,315	-65	-117,198	-190,702
3,494	13.49	16.70	-97,798	-146	-166,437	-262,591
3,395	13.90	17.14	-206,354	-246	-212,462	-313,100
3,319	14.37	17.50	-310,032	-432	-266,975	-399,069
3,234	14.82	18.15	-411,532	-545	-374,959	-609,554
3,087	15.71	18.66	-584,504	-640	-503,718	-855,267
2,865	16.60	19.36	-1,178,954	-920	-1,046,215	-1,681,781

\*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)
2011-01	Dairy Farm Business Summary, New York Large Herd Farms, 300 Cows or Larger, 2010" by Jason Karszes, Wayne A. Knoblauch, Linda D. Putnam and Allie B. Angell	(\$16.00)	Karszes, J., Knoblauch, W., Putnam, L. and A. Angell
2010-19	Legislative Actions on Overtime Pay and Collective Bargaining and Their Implications for Farm Employers In New York State, 2009-2010		Telega, L. and T. Maloney
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