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# NORTHERN HUDSON REGION 2008



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

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The Dairy Farm Business Summary and Analysis Project is funded in part by:



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# 2008 DAIRY FARM BUSINESS SUMMARY NORTHERN HUDSON REGION Table of Contents

	<u>Page</u>
INTRODUCTION	1
Program Objectives	1
Format Features	1
SUMMARY AND ANALYSIS OF THE FARM BUSINESS	2
Business Characteristics	2
Income Statement	2
Profitability Analysis	4
Farm and Family Financial Status	7
Statement of Owner Equity	10
Cash Flow Statement	11
Repayment Analysis	13
Cropping Analysis	15
Dairy Analysis	17
Capital and Labor Efficiency Analysis	19
COMPARATIVE ANALYSIS OF THE FARM BUSINESS	21
Progress of the Farm Business	21
Regional Farm Business Chart	23
Supplementary Information	24
New York State Farm Business Chart	27
Financial Analysis Chart	29
Comparisons by Type of Barn and Herd Size	30
Herd Size Comparisons	30
IDENTIFY AND SET GOALS	37
GLOSSARY AND LOCATION OF COMMON TERMS	39
INDEV	42

### 2008 DAIRY FARM BUSINESS SUMMARY NORTHERN HUDSON REGION\*

# INTRODUCTION

Dairy farm managers throughout New York State have been participating in Cornell Cooperative Extension's farm business summary and analysis program since the early 1950's. Managers of each participating farm business receive a comprehensive summary and analysis of their farm business. The information in this report represents averages of the data submitted from dairy farms in the Northern Hudson Region for 2008.

# **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 2008 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 <a href="http://dfbs.cornell.edu">http://dfbs.cornell.edu</a>. 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 <u>income statement</u> 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) <u>progress of the farm business</u> over the past two years.

<sup>\*</sup> The Northern Hudson Region of New York State, with the number of participating farms in parentheses, is comprised of Albany (4), Saratoga (6), Schenectady (3), Rensselaer (16), Washington (11), and Schoharie (1) counties in New York. This year three farms in Addison County, Vermont, were also included. This report was written by George J. Conneman, Professor, Farm Management. Linda Putnam was in charge of data preparation and Jessica Anderson assisted with the publication preparation. Farm business data were collected by Cooperative Extension Educators Cathy Wickswat; Sandra Buxton; and Richard Smith; and Senior Extension Associate in PRO-DAIRY, Jason Karszes.

# 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**

44 Northern Hudson Region Dairy Farms, 2008

Type of Farm	Number	Milking System	Number
Dairy	43	Bucket & carry	0
Part-time dairy	0	Dumping station	0
Dairy cash-crop	1	Pipeline	9
-		Herringbone conventional exit	25
Certified organic milk producer	0	Herringbone rapid exit	2
Rotational grazing farm	2	Parallel	5
		Parabone	0
Type of Ownership	Number	Rotary	1
Owner	41	Other	2
Renter	3		
		Production Records	Number
Type of Business	Number	Testing Service	33
Sole Proprietorship	17	On Farm System	5
Partnership	14	Other	0
Limited Liability Corporation	10	None	6
Subchapter S Corporation	3		
Subchapter C Corporation	0	Business Record System	Number
		Account Book	6
Type of Barn	Number	Accounting Service	11
Stanchion or Tie-Stall	7	On-farm computer	24
Freestall	34	Other	3
Combination	3		
Milking Frequency	Number	Breed of Herd	Percent
2 times per day	29	Holstein	93
3 times per day	10	Jersey	3
Other	5	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, part-time farms, dairy cash-crop farms, farms with confined herds, farms with grazing herds, farm renters, partnerships, and corporations included in the average. Average data for these specific types of farms are presented in the State Business Summary.

# **Income Statement**

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

<u>Cash paid</u> is the actual cash outlay during the year and does not necessarily represent the cost of goods and services actually used in 2008.

<u>Change in inventory</u>: 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

44 Northern Hudson Region Dairy Farms, 2008

	++ I torthern Huas	Change in Invento-	2000	Change in	
	Cash	ry or Prepaid Ex-		Accounts	Accrual
Expense Item	Paid -	pense	+	Payable	= Expenses
Hired Labor	\$198,427	\$ -219	<<	\$ 54	\$ 198,700
Feed	Ψ170,127	Ψ 217		Ψ	Ψ 170,700
Dairy grain & concentrate	416,663	-17,641		10,669	444,973
Dairy roughage	24,350	40		260	24,571
Nondairy	0	0		0	0
Professional nutritional services	322	0	<<	5	326
Machinery				_	
Machinery hire, rent & lease	22,908	0	<<	2,644	25,552
Machinery repairs & farm vehicle exp.	68,506	-201		1,460	70,168
Fuel, oil & grease	69,127	-794		705	70,625
Livestock	,				,
Replacement livestock	5,642	0	<<	0	5,642
Breeding	18,385	-480		790	19,654
Veterinary & medicine	47,217	-196		431	47,845
Milk marketing	82,096	615	<<	254	81,736
Bedding	25,101	-187		747	26,034
Milking supplies	28,356	262		185	28,280
Cattle lease & rent	58	0	<<	0	58
Custom boarding	26,377	0	<<	537	26,914
Livestock professional fees	3,125	-195	<<	84	3,404
Other livestock expense	31,342	447		640	31,536
Crops	,				,
Fertilizer & lime	25,691	-9,775		3,664	39,130
Seeds & plants	23,217	478		834	23,572
Spray, other crop expense	16,403	560		784	16,628
Crop professional fees	2,998	-228	<<	-155	3,071
Real Estate					
Land, building & fence repair	22,811	-620		130	23,562
Taxes	16,361	-143	<<	70	16,574
Rent & lease	14,193	27	<<	498	14,664
Other	,				,
Insurance	12,031	46	<<	25	12,010
Utilities (farm share)	32,414	-213	<<	90	32,716
Interest paid	37,687	0	<<	679	38,366
Other professional fees	3,402	-23	<<	-155	3,270
Miscellaneous	9,670	-59		64	9,793
Total Operating	\$1,284,882	\$ -28,500	_	\$ 25,989	\$ 1,339,371
Expansion livestock	10,921	0	<<	0	10,921
Extraordinary expense	946	0	<<	0	946
Machinery depreciation					47,353
Building depreciation					22,876
TOTAL ACCRUAL EXPENSES					\$ 1,421,468
					, -21, .30

<u>Change in prepaid expenses</u> (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.

<u>Change in accounts payable</u>: 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 2008 but not paid for. A decrease is subtracted because it represents payment for resources used before 2008.

<u>Accrual expenses</u> 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

44 Northern Hudson Region Dairy Farms, 2008

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	\$ 1,387,313				\$ -31,073		\$1,356,239
Dairy cattle	71,166		\$ 20,444		-312		91,299
Dairy calves	6,015		-294		-59		5,661
Other livestock	11,203		-1,423		-68		9,712
Crops	9,712		60,197		1,741		71,650
Government receipts	15,435		0 *		-77		15,358
Custom machine work	1,816				-40		1,776
Gas tax refund	78				-45		32
Other	17,778				-109		17,669
Less nonfarm noncash capital**		(-)	0 **			(-)	0
Total Receipts	\$ 1,520,515		\$ 78,924		\$ -30,043		\$ 1,569,396

<sup>\*</sup>Change in advanced government receipts.

<u>Cash receipts</u> 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.

<u>Changes in inventory</u> of assets produced by the business are calculated by subtracting beginning of year values from end of year values <u>excluding appreciation</u>. 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 2008 for the 2009 crop year in excess of funds earned for 2008. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2008 but received in 2007.

<u>Changes in accounts receivable</u> are calculated by subtracting beginning year balances from end year balances. Payments in January 2009 for milk produced in December 2008 compared to January 2008 payments for milk produced in 2007 are included as a change in accounts receivable in determining accrual milk sales.

<u>Accrual receipts</u> 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.

<sup>\*\*</sup>Gifts or inheritances of cattle or crops included in inventory.

<sup>\*</sup> 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.

<u>Net farm income</u> 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.

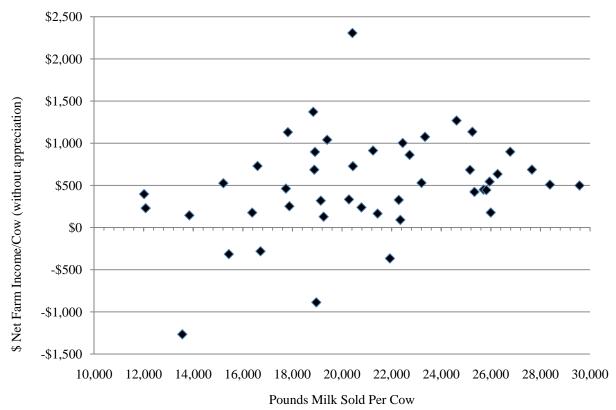
Net farm income is computed both with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than Farm Credit stock required for loan borrowings). Appreciation is a major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

**NET FARM INCOME**44 Northern Hudson Region Dairy Farms, 2008

	$\underline{\mathbf{A}}\mathbf{v}$	My Farm		
Item	Total	Per Cow	Total	Per Cow
Total agarnal receipts	\$1,569,396		¢	
Total accrual receipts			Φ	
Appreciation: Livestock	-32,876			
Machinery	8,971			
Real Estate	19,454			
Other Stock & Certificates				
Total Including Appreciation	\$1,564,522		\$	
Total accrual expenses	1,421,468			
Net Farm Income (with appreciation)	\$ 143,055	\$ 499	\$	\$
Net Farm Income (without appreciation)	\$ 147,929	\$ 516	\$	\$

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 PERCOW



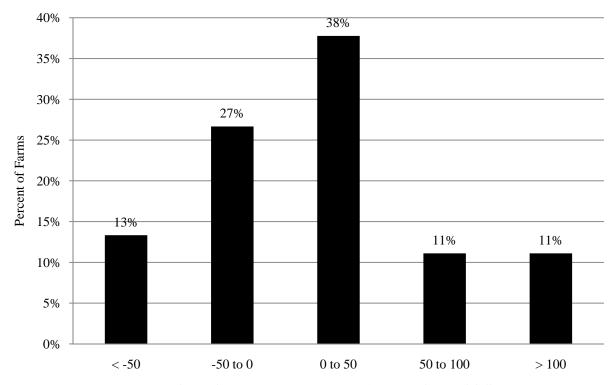
<u>Labor and management income</u> is the return which farm operators receive for their labor and management used in the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor 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**44 Northern Hudson Region Dairy Farms, 2008

Item	Average	My Farm
Net farm income without appreciation	\$ 147,929	\$
Family labor unpaid @ \$2,500 per month	- 4,223	
Interest on \$1,918,835 average equity capital @ 5% real rate	<u>- 95,942</u>	
Labor & Management Income per farm (1.67 Operators/farm)	\$ 47,764	\$
Labor & Management Income per Operator/Manager	\$ 28,601	\$

<u>Labor and management income per operator</u> averaged \$28,601 on these 44 farms in 2008. The range in labor and management income per operator was from about \$-299,000 to more than \$288,000. Returns to labor and management were less than \$0 on 40 percent of the farms. Labor and management incomes per operator were between \$0 and \$50,000 on 38 percent of the farms, while 22 percent had labor and management incomes of \$50,000 or more per operator.

# DISTRIBUTION OF LABOR AND MANAGEMENT INCOMES PER OPERATOR



Labor and Management Incomes Per Operator (thousand dollars)

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

44 Northern Hudson Region Dairy Farms, 2008

Item	Average	My Farm
Net farm income with appreciation	\$ 143,055	\$
Family labor unpaid @ \$2,500 per month	- 4,223	
Value of operators' labor & management	<u>- 61,201</u>	
Return on equity capital with appreciation	\$ 77,631	\$
Interest paid	<u>+ 38,366</u>	+
Return on total capital with appreciation	\$ 115,997	\$
Return on equity capital without appreciation	\$ 82,505	\$
Return on total capital without appreciation	\$ 120,871	\$
Rate of return on average equity capital:		
with appreciation	4.1%	%
without appreciation	4.3%	%
Rate of return on average total capital:		
with appreciation	4.3%	%
without appreciation Net Farm Income from Operations Ratio	4.4% 0.09	%

# 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.

<u>Financial lease</u> 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 2008, lease payments were discounted by 8.15 percent to obtain their present value.

<u>Advanced government receipts</u> are included as current liabilities. Government payments received in 2008 that are for participation in the 2009 program are the end year balance and payments received in 2007 for participation in the 2008 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.

# 2008 FARM BUSINESS & NONFARM MARKET VALUE BALANCE SHEET

			Farm Liabilities		
Farm Assets	Jan. 1	Dec. 31	& Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking			Accounts payable	\$ 57,991	\$ 83,980
	\$ 16,069	\$ 14.667		51,094	
& savings	. ,	\$ 14,667	Operating debt		47,425
Accounts receivable	108,857	78,814	Short Term	2,624	6,961
Prepaid expenses	2,653	2,321	Advanced govt. receipts	0	0
Feed & supplies	<u>253,423</u>	<u>285,452</u>	Current Portion:	67.110	72.221
			Intermediate	65,119	72,221
T . 1 C	Ф. 201.002	Φ 201.255	Long Term	<u>20,851</u>	20,461
Total Current	\$ 381,002	\$ 381,255	Total Current	\$ 197,679	\$ 231,048
<u>Intermediate</u>			Intermediate		
Dairy cows:			Structured debt		
owned	\$ 441,173	\$ 425,001	1-10 years	\$ 314,090	\$ 326,906
leased	151	106	Financial lease	,	, , , ,
Heifers	248,118	251,769	(cattle/machinery)	1,729	1,216
Bulls & other livestock	12,501	10,872	Farm Credit stock	1,959	2,085
Mach. & equip. owned	456,592	250,390	Total Intermediate	\$ 317,779	\$ 330,207
Mach. & equip. leased	1,578	1,109		, ,	,,
Farm Credit stock	1,959	2,085			
Other stock/certificate	55,181	60,318			
Total Intermediate	\$ 1,217,253	\$1,271,651			
1000111001111001	Ψ 1,217,200	ψ1, <b>2</b> /1,001	Long Term		
Long Term			Structured debt		
Land & buildings:			>10 years	\$ 267,900	\$ 282,301
owned	\$ 1,084,309	\$1,129,113	Financial lease	Ψ 207,500	Ψ 202,301
leased	337	177	(structures)	337	177
Total Long Term	\$ 1,084,646	\$1,129,290	Total Long Term	\$ 268,237	\$ 282,478
			m . 15	<b>4. 502.604</b>	ф. 0.4 <b>0.53</b> 0
<b>T</b> 1 <b>T</b> 1	<b># 2 :02 002</b>	<b>42 502</b> 00 c	Total Farm Liabilities	\$ 783,694	\$ 843,733
Total Farm Assets	\$ 2,682,902	\$2,782,096	FARM NET WORTH	\$ 1,899,207	\$1,938,463
Nonfarm Assets, Liabilitie	es & Net Worth	(Average of 26 fa	rms reporting)		
Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking			Nonfarm Liabilities	\$ 6,524	\$ 6,089
& savings	\$ 2,514	\$ 2,170		. ,-	,
Cash value life insurance	33,704	32,367			
Nonfarm real estate	253,462	256,805			
Auto (personal share)	5,104	5,931			
Stocks & bonds	31,031	28,811			
Household furnishings	9,154	9,615			
All other nonfarm assets	10,886	9,350			
Total Nonfarm Assets	\$ 345,855	\$ 345,049	NONFARM NET WORTH	\$ 339,331	\$ 338,960
Farm & Nonfarm Assets, I	Liabilities, and N	Net Worth*		Jan. 1	Dec. 31
Total Assets				\$3,028,757	\$3,127,145
Total Liabilities				790,218	849,822
TOTAL FARM & NONFA	ADM NEW MO	TII		\$2,238,539	\$2,277,323

<sup>\*</sup>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**44 Northern Hudson Region Dairy Farms, 2008

Item			Average		My Farm
Financial Ratios - Fa	<u>ırm</u> :				
Percent equity			70%		%
Debt/asset ratio: tot	al		.30		
lor	ng-term		.25		
int	ermediate/current		.34		
Leverage Ratio:			.44		
Current Ratio:			1.65		
Working capital	\$150,207	As % of total expe	enses: 11%		
Farm Debt Analysis:					
Accounts payable as	% of total debt		10%		%
Long-term liabilities	as a % of total debt		33%		%
Current & inter. liab	oilities as a % of tota	l debt	67%		%
Cost of term debt (w	eighted average)		4.59%		%
			Per Tillable		Per Tillable
Farm Debt Levels:		Per Cow	Acre Owned	Per Cow	Acre Owned
Total farm debt		\$ 2,921	\$ 3,033	\$	\$
Long-term debt		978	1,016		
Intermediate & long	term	2,121	2,203		
Intermediate & curre	ent debt	1,943	2,018		

<u>Farm inventory balance</u> 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**44 Northern Hudson Region Dairy Farms, 2008

Item	Average of Region's Farms						
	Real Estate	Machinery & Equipment					
Value beginning of year	\$ 1,084,309	\$ 456,592					
Purchases	\$ 97,978*	\$ 105,825					
Gift & inheritance	+ 0	+ 0					
Lost capital	- 36,453						
Sales	- 13,300	- 3,645					
Depreciation	- 22,876	- 47,353					
Net investment	= 25,350	= 54,827					
Appreciation	+ 19,454	<u>+ 8,971</u>					
Value end of year	\$ 1,129,113	\$ 520,390					

 $<sup>\$\$4,\!000</sup>$  land and  $\$93,\!978$  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)

Item	Av	/erage	M	y Farm
Beginning of year farm net worth		\$1,899,207		\$
Net farm income without appreciation +Nonfarm cash income -Personal withdrawals & family expenditures excluding nonfarm borrowings RETAINED EARNINGS	\$ 147,929 + 8,117 - 91,898	+\$ 64,148	\$ +	
Nonfarm noncash transfers to farm +Cash used in business from nonfarm capital -Note or mortgage from farm real estate sold (nonfarm) CONTRIBUTED/WITHDRAWN CAPITAL	\$ 0 + 16,693 - 0	+\$ 16,693	\$ +	. +\$
Appreciation -Lost capital CHANGE IN VALUATION EQUITY IMBALANCE/ERROR End of year net worth*	\$ -4,874 - 36,453	+ \$ -41,327 - 258 = \$1,938,463	\$ -	+\$ - \$ =\$
Change in Net Worth				
Without appreciation	\$	44,130	\$	
With appreciation	\$	39,256	\$	

<sup>\*</sup>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 <u>annual cash flow statement</u> 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** 44 Northern Hudson Region Dairy Farms, 2008

Item			Average	
Cash Flow from Operating Activities				
Cash farm receipts	\$ 1,520,515			
- Cash farm expenses	1,284,882			
- Extraordinary expense	946			
= Net cash farm income		\$	234,687	
Personal withdrawals & family expenses				
including nonfarm debt payments	\$ 92,034			
- Nonfarm income	8,117			
- Net cash withdrawals from the farm		\$	83,917	
<ul> <li>Net Provided by Operating Activities</li> </ul>				\$ 150,770
Cash Flow From Investing Activities				
Sale of assets: machinery	\$ 3,645			
+ real estate	13,300			
+ other stock & cert.	188			
= Total asset sales		\$	17,132	
Capital purchases: expansion livestock	\$ 10,921			
+ machinery	105,825			
+ real estate	97,978			
+ other stock & cert.	5,748			
- Total invested in farm assets		\$	220,472	
= Net Provided by Investment Activities				\$ -203,340
Cash Flow From Financing Activities				
Money borrowed (intermediate & long term)	\$ 120,153			
+ Money borrowed (short term)	7,683			
+ Increase in operating debt	0,003			
+ Cash from nonfarm capital used in business	16,693			
+ Money borrowed - nonfarm	136			
= Cash inflow from financing		\$	144,665	
		•	,	
Principal payments (intermediate & long term)	\$ 86,224			
+ Principal payments (short term)	3,346			
+ Decrease in operating debt	3,669			
- Cash outflow for financing		\$	93,239	
<ul> <li>Net Provided by Financing Activities</li> </ul>				\$ 51,426
Cash Flow From Reserves				
Beginning farm cash, checking & savings		\$	16,069	
- Ending farm cash, checking & savings		Ψ	14,667	
= Net Provided from Reserves			1.,007	\$ 1,402
Imbalance (error)				\$ 258

# ANNUAL CASH FLOW STATEMENT

Item	My Farm	
Cash Flow from Operating Activities	¢	
Cash farm receipts - Cash farm expenses	\$	
	<del></del>	
- Extraordinary expense = Net cash farm income	 \$	
- Net cash farm income	Ψ	
Personal withdrawals & family expenses		
including nonfarm debt payments	\$	
- Nonfarm income	,	
- Net cash withdrawals from the farm	\$	
<ul> <li>Net Provided by Operating Activities</li> </ul>	\$	
Cash Flow From Investing Activities		
Sale of assets: machinery	\$	
+ real estate		
+ other stock & cert.		
= Total asset sales	\$	
Capital purchases: expansion livestock	\$	
+ machinery	<del></del>	
+ real estate	·	
+ other stock & cert.		
- Total invested in farm assets	\$	
= Net Provided by Investment Activities	\$	
Cash Flow From Financing Activities		
Money borrowed (intermediate & long term)	\$	
+ Money borrowed (short term)	Ψ	
+ Increase in operating debt	<del></del>	
+ Cash from nonfarm capital used in business	<del></del>	
+ Money borrowed - nonfarm		
= Cash inflow from financing	<u></u>	
Cuon mino ii ii iii iii iii ii ii ii ii ii ii ii	Ψ	
Principal payments (intermediate & long term)	\$	
+ Principal payments (short term)		
+ Decrease in operating debt		
- Cash outflow for financing	\$	
= Net Provided by Financing Activities	\$	
Cash Flow From Reserves		
Beginning farm cash, checking & savings	\$	
- Ending farm cash, checking & savings	<del></del> .	
= Net Provided from Reserves	\$	
Imbalanca (arrar)	¢	
Imbalance (error)	<b>3</b>	

# **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 2009. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2009 debt payments shown below.

**FARM DEBT PAYMENTS PLANNED**Same 39 Northern Hudson Region Dairy Farms, 2007 & 2008

		Average				My Farm				
		2008 Pa	ayme	ents	F	Planned	2	008 Payn	nents	Planned
Debt Payments	Pla	anned		Made		2009	Plann	ned	Made	2009
Long term	\$ 3	31,557	\$	31,615	\$	32,964	\$	\$		\$
Intermediate term		85,213		82,867		86,680				
Short term		922		3,786		4,583				
Operating (net										
reduction)		897		13,587		256				
Accounts payable										
(net reduction)		536		580		2,564				
Total	\$ 1	19,125	\$	132,435	\$	127,048	\$	\$		\$
Per cow	\$	455	\$	506			\$	\$		
Per cwt. 2008 milk	\$	1.97	\$	2.19			\$	\$		
Percent of total										
2008 farm receipts		9%		9%						
Percent of 2008										
milk receipts		10%		11%						

The <u>cash flow coverage ratio</u> and <u>debt coverage ratio</u> measure the ability of the farm business to meet its planned debt payment schedule. The ratios show the percentage of payments planned for 2008 (as of December 31, 2007) that could have been made with the amount available for debt service in 2008. Farmers who did not participate in DFBS in 2007 have their 2008 ratios based on planned debt payments for 2009.

COVERAGE RATIOS
Same 39 Northern Hudson Region Dairy Farms, 2007 & 2008

Item	Average	Item	Average
Cash Flow Coverage Ratio		Debt Coverage Ratio	
Cash farm receipts	\$1,357,535	Net farm income (w/o appreciation)	\$120,454
- Cash farm expenses	1,151,282	+ Depreciation	61,468
+ Interest paid (cash)	35,680	+ Interest paid (accrual)	36,446
- Net personal withdrawals from farm*	<u>80,700</u>	- Net personal withdrawals from farm*	80,700
<ul><li>(A) = Amount Available for Debt Service</li><li>(B) = Debt Payments Planned for 2008</li></ul>	\$161,233	(A') = Repayment Capacity (B) = Debt Payments Planned for 2008	\$137,668
(as of December 31, 2007)	\$119,125	(as of December 31, 2007)	\$119,125
(A/B)= Cash Flow Coverage Ratio for 2008	1.35	(A'/B)= Debt Coverage Ratio for 2008	1.16

<sup>\*</sup>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

	ANNUAL CASI	Hudson Region	My Farm		
		_	Per Cow/	Expected	2009
Itam	Per Cow	Farms Per Cwt.	Per Cow/	-	
Average number of cows	287	Per Cwt.	Per Cwt.	Change	Projection
Total cwt. of milk sold	201	68,330			
Accrual Operating Receipts		00,550			
Milk	\$ 4,730	\$ 19.85	\$		\$
Dairy cattle	318	1.34			
Dairy calves	20	0.08			
Other livestock	34	0.14			
Crops	250	1.05			
Miscellaneous Receipts	121	0.51			
Total	\$ 5,473	\$ 22.97	\$		\$
Accrual Operating Expenses					
Hired labor	\$ 693	\$ 2.91	\$		\$
Dairy grain & concentrate	1,552	6.51		- <del></del> -	
Dairy roughage	86	0.36		- <del></del> -	
Nondairy feed	0	0.00			
Professional nutritional services	1	0.00			
Machinery hire, rent & lease	89	0.37		- <del></del> -	
Machinery repair & vehicle expense	245	1.03			
Fuel, oil & grease	246	1.03			
Replacement livestock	20	0.08			
Breeding	69	0.29			
Veterinary & medicine	167	0.70			
Milk marketing	285	1.20			
Bedding	91	0.38			
Milking supplies	99	0.41			
Cattle lease	0	0.00			
Custom boarding	94	0.39			
Livestock professional fees	12	0.05		<del></del>	
Other livestock expense	110	0.46			
Fertilizer & lime	136	0.57			
Seeds & plants	82	0.34			
Spray & other crop expense	58	0.24			
Crop professional fees	11	0.04			
Land, building & fence repair	82	0.34			
Taxes	58	0.24			
Real estate rent & lease	51	0.21		<del></del>	
Insurance	42	0.18		<del></del>	
Utilities Otherwood serious I force	114	0.48			
Other professional fees	11	0.05			
Miscellaneous Total Less Interest Paid	<u>34</u>	0.14	<u> </u>		ф
	\$ 4,537	\$ 19.04	<b>\$</b>		\$
Net Accrual Operating Income		otal	•		¢
<ul><li>(without interest paid)</li><li>Change in livestock /crop inventory*</li></ul>		3,391 3,924	Φ		Φ
- Change in accounts receivable		5,92 <del>4</del> ),043			
- Change in feed & supply inventory**		3,500		<del></del>	
+ Change in accounts payable***				<del></del>	
NET CASH FLOW		5,310 3,320	<u> </u>		•
- Net family withdrawals		),839	φ		Φ
Available for Farm		2,482	<u> </u>		
- Farm debt payments		2,482 9,973	Φ		
Available for Farm Investment		2,509	<u> </u>		•
- Capital purchases		2,309 <u>),472</u>	Φ		Ψ
* *	\$-167		<u> </u>		•
Additional Capital Needed	φ-10	,,,,,,,	φ		Ψ

# **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

44 Northern Hudson Region Dairy Farms, 2008

Item		Average			My Farm	
<u>Land</u> Tillable	Owned 278	Rented 411	<u>Total</u> 689	Owned	Rented	<u>Total</u>
Nontillable	51	19	70			
Other nontillable	126	10	135			
Total	455	440	895			
Crop Yields	Farms	Acres*	Production/Acre	Acre	es Prod	uction/Acre
Hay crop	44	351	2.90 tons DM	11010	<u> 1100</u>	tons DM
Corn silage	43	255	18.15 ton			tons
<u> </u>			6.00 tons DM			tons DM
Other forage	5	67	2.34 tons DM			tons DM
Total forage	44	608	4.16 tons DM			tons DM
Corn grain	18	125	137 bushels			bushels
Oats	2	25	55 bushels			bushels
Wheat	0	0	0 bushels			bushels
Other crops	12	62				
Tillable pasture	2	84				
Idle	11	59				
Total Tillable Acres	44	689				

<sup>\*</sup>This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were hay crop 351, corn silage 249, corn grain 51, oats 1, tillable pasture 4, and idle 15.

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

Item	Average	My Farm
Total tillable acres per cow	2.40	
Total forage acres per cow	2.12	
Harvested forage dry matter, tons per cow	8.82	

# **Cropping Analysis** (continued)

A number of cooperators have allocated crop expenses among the hay crop, corn, and other crops produced. Fertilizer and lime, seeds and plants, and spray and other crop expenses have been computed per acre and per production unit for hay and corn. Additional expense items such as fuels, labor, and machinery repairs are not included. Rotational grazing was used on two farms in the region.

**CROP RELATED ACCRUAL EXPENSES**Northern Hudson Region Dairy Farms Reporting, 2008

	Total	All	Corn	Corn			Pas	ture
	Per	Corn	Silage	Grain	Hay	y Crop	Per	Per
	Till.	Per	Per	Per Dry	Per	Per	Till	Total
Item	Acre	Acre	Ton DM	Sh. Bu.	Acre	Ton DM	Acre	Acre
No. of farms								
reporting	44	4				5	(	0
Ave. number	• •	•				3		
of acres	689	258			2	288	0	0
Fert. & lime	\$ 51.95	\$ 9.58	\$ 9.59	\$ 0.15	\$ 28.46	\$ 8.48	\$ 0.00	\$ 0.00
Seeds & plants	28.46	10.36	7.11	0.08	27.00	8.50	0.00	0.00
Spray & other								
crop expense	22.60	8.46	5.28	0.19	21.41	6.77	0.00	0.00
TOTAL	\$ 103.01	\$ 28.40	\$ 21.98	\$ 0.42	\$ 76.87	\$ 23.75	\$ 0.00	\$ 0.00
My Farm								
Fertilizer &								
lime	\$	\$	\$	\$	\$	\$	\$	\$
Seeds & plants								
Spray & other								
crop expense		Φ.	Φ	ф.				
TOTAL	\$	\$	\$	\$	\$	\$	\$	\$

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

# ACCRUAL MACHINERY EXPENSES 44 Northern Hudson Region Dairy Farms, 2008

	Ave	erage	My Farm		
Machinery	Total	Per Tillable	Total	Per Tillable	
Expense	Expenses	Acre	Expenses	Acre	
Fuel, oil & grease	\$ 70,625	\$ 102	\$	\$	
Mach. repair & vehicle expense	70,168	102			
Machine hire, rent & lease	25,552	37			
Interest (5%)	24,492	36			
Depreciation	47,353	69			
Total	\$ 238,189	\$ 346	\$	\$	

# **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**44 Northern Hudson Region Dairy Farms, 2008

	D	airy Cows	Heifer						
				Bred		Open	C	alves	
Item	No.	Value	No.	Value	No.	Value	No.	Value	
Beg. year (owned) + Change w/o apprec. + Appreciation	282	\$ 441,173 3,443 -19,614	84	\$ 126,126 14,772 -4,365	82	\$ 75,566 2,230 -3,427	78	\$ 46,426 -294 -5,264	
End year (owned) End including leased	287 289	\$ 425,002	94	\$ 136,533	84	\$ 74,368	77	\$ 40,868	
Average number	287		252	(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 44 Northern Hudson Region Dairy Farms, 2008

Item	Average	My Farm
T . 1 . 11 . 1 . 1	6.022.015	
Total milk sold, lbs.	6,833,015	
Milk sold per cow, lbs.	23,829	
Average milk plant test, percent butterfat	3.70%	

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

	Ave	erage	My	Farm
Item	Number	Percent*	Number	Percent*
Cows sold for beef	73	25.5		
Cows sold for dairy	15	5.2		
Cows died	19	6.6		
Culling rate**		32.0		

<sup>\*</sup>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

44 Northern Hudson Region Dairy Farms, 2008

		Average			My Farm	
Item	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Accrual Cost of						
Producing Milk						
Operating costs	\$1,137,136	\$ 3,966	\$ 16.64	\$	\$	\$
Purchased inputs						
costs	\$1,208,311	\$ 4,214	\$ 17.68	\$	\$	\$
Total Costs	\$1,369,676	\$ 4,777	\$ 20.04	\$	\$	\$
Accrual Receipts						
From Milk	\$1,356,239	\$ 4,730	\$ 19.85	\$	\$	\$
Net Milk Receipts	\$1,274,504	\$ 3,918	\$ 18.65	\$	\$	\$
Net Farm Income						
without Apprec.	\$ 147,929	\$ 516	\$ 2.16	\$	\$	\$
Net Farm Income						
with Appreciation	\$ 143,055	\$ 499	\$ 2.09	\$	\$	\$

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

### DAIRY RELATED ACCRUAL EXPENSES

_			Averag	e		N	Iy Farm
Item	P	er Cow		Pe	er Cwt.	Per Cow	Per Cwt.
Purchased dairy grain							
& concentrate	\$	1,552		\$	6.51	\$	\$
Purchased dairy roughage		86			.36		
Total Purchased							
Dairy Feed	\$	1,638		\$	6.87	\$	\$
Purchased grain & concentrate							
as % of milk receipts			35%				%
Purchased feed & crop expense	\$	1,925		\$	8.08	\$	\$
Purchased feed & crop expense							
as % of milk receipts			44%				%
Breeding	\$	69		\$	.29	\$	\$
Veterinary & medicine		167			.70		
Milk marketing		285			1.20		
Bedding		91			.38		
Milking supplies		99			.41		
Cattle lease		0			.00		
Custom boarding		94			.39		
Livestock professional fees		12			.05		
Other livestock expense		110			.46		

# **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
44 Northern Hudson Region Dairy Farms, 2008

Item	Per Worker	Per Cow	Per Tillab Acre	le Per Tillable Acre Owned
Farm capital	\$339,447	\$9,529	\$3,96	
Real estate Machinery & equipment	60,849	3,860 1,708	71	3,980
Ratios Asset turnover	Operating Expense	Int	erest Expense	Depreciation Expense
.57	.84		.02	.04
My Farm				
Farm capital Real estate Machinery & equipment	\$	\$	\$ 	\$
Ratios				
Asset turnover	Operating Expense	Int	erest Expense	Depreciation Expense

# **LABOR FORCE INVENTORY**44 Northern Hudson Region Dairy Farms, 2008

Labor Force	Months	Age	Years of Education	Value of Labor & Management
Operator number 1	13.9	54	14	\$ 35,257
Operator number 1 Operator number 2	7.7	48	14	20,058
Operator number 3	2.0	33	15	5,886
Family paid	5.7	33	13	3,000
Family unpaid	1.7			
Hired	<u>65.5</u>			
Total	96.6	/12 = 8.05 Worke	r Equivalent	
		1.67 Operat	or/Manager Equivalent	
My Farm: Total		/ 12 = Wor	ker Equivalent	
Operator's			ator/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**44 Northern Hudson Region Dairy Farms, 2008

Labor	Av	erage	My Farm		
Efficiency	Total	Per Worker	Total	Per Worker	
Cows, average number	287	36			
Milk sold, pounds	6,833,015	849,173			
Tillable acres	689	86			

# **LABOR AND MACHINERY COSTS**44 Northern Hudson Region Dairy Farms, 2008

		Average			My Farm	
		Per	Per		Per	Per
Labor Costs	Total	Cow	Cwt.	Total	Cow	Cwt.
Value of operator(s)						
labor (\$2,500/month)	\$ 58,910	\$ 205	\$ .86	\$	\$	\$
Family unpaid						
(\$2,500/month)	4,210	15	.06			
Hired	198,700	693	2.91			
Total Labor	\$ 261,820	\$ 913	\$ 3.83	\$	\$	\$
Machinery Cost	\$ 238,189	<u>\$ 831</u>	\$ 3.49	\$	\$	\$
Total Labor & Mach.	\$ 500,009	\$ 1,744	\$ 7.32	\$	\$	\$
Hired labor expense per l Hired labor expense as %	-	uivalent	\$ 33,479 14.7%	\$	%	

# 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 39 Northern Hudson Region Dairy Farms, 2007 & 2008

		Average of	of 39	Farms*	My Farm			
Selected Factors		2007		2008	2007		2008	Goal
Size of Business								
Average number of cows		258		262				- <u></u> -
Average number of heifers		214		224				
Milk sold, pounds	5	,809,722		5,038,023				
Worker equivalent		7.22		7.47	<del></del>			
Total tillable acres		628		652	<del></del>			
Rates of Production								
Milk sold per cow, pounds		22,503		23,080	<del></del>			
Hay DM per acre, tons		2.6		2.9	<del></del>			
Corn silage per acre, tons		17.9		18.6				
Labor Efficiency								
Cows per worker		36		35				
Milk sold/worker, pounds		804,671		808,303				
Cost Control								
Grain & conc. purchased								
as % of milk sales		26%		33%		%	%	%
Dairy feed & crop expense								
per cwt. milk	\$	6.81	\$	8.23	\$	\$	\$ \$	<b>.</b>
Labor & mach. costs/cow	\$	1,570	\$	1,744	\$	\$	\$ \$	<b>.</b>
Operating cost of producing								
cwt. of milk	\$	14.80	\$	16.98	\$	\$	\$	<b>.</b>
Capital Efficiency**								
Farm capital per cow	\$	9,008	\$	9,667	\$	\$	\$	S
Mach. & equipment per cow	\$	1,489	\$	1,672	\$	\$	\$ \$	`
Asset turnover ratio		0.65		0.55				
<u>Profitability</u>								
Net farm income w/o apprec.	\$	302,431	\$	120,454	\$	\$	\$	•
Net farm income w/apprec.		403,338	\$	121,682	\$	\$	\$ \$	3
Labor & mgmt. income								
per operator/manager	\$	134,470	\$	16,890	\$	\$	\$	
Rate of return on equity								
capital w/appreciation		21.2		3.2		%	%	%
Rate of return on all								
capital w/appreciation		16.5		3.7		%	%	%
Financial Summary								
Farm net worth, end year	\$1	,758,916	\$	1,778,887	\$	\$	\$	3
Debt to asset ratio		0.29		0.31	•	·		
Farm debt per cow	\$	2,742	\$	3,025	\$		 \$	
<u>r</u>		y		- ,				

<sup>\*</sup>Farms participating both years.

<sup>\*\*</sup>Average for the year.

# RECEIPTS AND EXPENSES PER COW AND PER CWT.

Same 39 Northern Hudson Region Dairy Farms, 2007 & 2008

	20	07	2008			
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.		
Average Number of Cows	258		262			
Cwt. of Milk Sold		58,097		60,380		
ACCRUAL OPERATING RECEIPTS						
Milk	\$ 4,730	\$ 21.02	\$ 4,617	\$ 20.01		
Dairy cattle	279	1.24	288	1.25		
Dairy calves	29	0.13	27	0.11		
Other livestock	21	0.09	42	0.18		
Crops	201	0.89	248	1.07		
Miscellaneous receipts	<u>172</u>	0.76	<u>129</u>	0.56		
Total Receipts	\$ 5,431	\$ 24.14	\$ 5,351	\$ 23.18		
ACCRUAL OPERATING EXPENSES						
Hired labor	\$ 620	\$ 2.76	\$ 667	\$ 2.89		
Dairy grain & concentrate	1,215	5.40	1,541	6.68		
Dairy roughage	76	0.34	73	0.32		
Nondairy feed	0	0.00	0	0.00		
Professional nutritional services	1	0.00	1	0.01		
Machine hire, rent & lease	98	0.43	103	0.45		
Machinery repair & vehicle expense	234	1.04	248	1.07		
Fuel, oil & grease	174	0.77	248	1.08		
Replacement livestock	6	0.03	22	0.10		
Breeding	62	0.27	69	0.30		
Veterinary & medicine	163	0.73	163	0.71		
Milk marketing	230	1.02	265	1.15		
Bedding	78	0.35	92	0.40		
Milking supplies	110	0.49	106	0.46		
Cattle lease	3	0.01	0	0.00		
Custom boarding	52	0.23	80	0.35		
Livestock professional fees	15	0.06	13	0.06		
Other livestock expense	92	0.41	96	0.42		
Fertilizer & lime	112	0.50	130	0.56		
Seeds & plants	66	0.29	86	0.37		
Spray & other crop expense	62	0.28	57	0.25		
Crop professional fees	2	0.01	12	0.05		
Land, building & fence repair	57	0.25	80	0.35		
Taxes	57	0.25	55	0.24		
Real estate rent & lease	57	0.25	55	0.24		
Insurance	38	0.17	44	0.19		
Utilities	119	0.53	110	0.48		
Interest paid	170	0.76	139	0.60		
Other professional fees	15	0.07	14	0.06		
Miscellaneous	23	0.10	34	0.15		
Total Operating Expenses	\$ 4,006	\$ 17.80	\$ 4,606	\$ 19.96		
Expansion Livestock	26	0.11	45	0.19		
Extraordinary Expense	0	0.00	4	0.02		
Machinery Depreciation	133	0.59	152	0.66		
Real Estate Depreciation	95	0.42	83	0.36		
Total Expenses	\$ 4,260	\$ 18.92	\$ 4,890	\$ 21.19		
Net Farm Income Without Appreciation	\$ 1,171	\$ 5.21	\$ 460	\$ 1.99		

# **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

Si	ize of Busi	iness	R	ate of Production	on	Labor Efficiency		
Worker Equiv-	No. of	Pounds Milk	Pounds Milk Sold	Tons Hay Crop	Tons Corn Silage	Cows Per	Pounds Milk Sold	
alent	Cows	Sold	Per Cow	DM/Acre	Per Acre	Worker	Per Worker	
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)	
21.04	820	20,991,079	27,056	4.3	24	48	1,066,888	
10.22	361	8,844,016	24,202	3.5	19	37	876,461	
4.65	157	3,188,185	21,145	2.9	18	32	721,653	
3.55	100	1,837,460	18,604	2.3	17	29	532,183	
2.23	55	877,452	14,649	1.5	13	20	336,367	

			Cost Control		
Grain	% Grain is	Machinery	Labor &	Feed & Crop	Feed & Crop
Bought	of Milk	Costs	Machinery	Expenses	Expenses Per
Per Cow	Receipts	Per Cow	Costs per Cow	Per Cow	Cwt. Milk
(12)	(12)	(14)	(14)	(12)	(12)
\$1,008	28%	\$568	\$1,387	\$1,289	\$6.91
1,318	33	732	1,633	1,673	7.88
1,446	34	838	1,761	1,864	8.67
1,629	37	917	1,939	2,003	9.39
1,824	43	1,083	2,437	2,191	10.90

V	alue and Cost of Pr	oduction				
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Producing Milk Per Cwt.	Net Farm Income with Appreciation	Net Farm Income w/o Appreciation	Labor & Mgt. Income Per Operator	Change in Net Worth with Appreciation
(12)	(12)	(12)	(4)	(4)	(4)	(8)
\$5,379 4,809	\$12.81 15.58	\$17.87 19.80	\$518,323 163,885	\$526,958 187,537	\$149,242 45,947	\$302,247 78,896
4,280	16.91	20.75	77,291	87,967	18,143	19,106
3,652	17.72	22.60	32,745	31,945	-13,760	-3,945
2,912	21.15	29.65	-35,274	-52,649	-87,478	-170,805

<sup>\*</sup>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

36 New York Dairy Farms, 2008

Animals Entering Herd	Average
Number calving in 2008 for first time Animals purchased, % <sup>1</sup> Animals raised by farm, % <sup>2</sup>	221.0 4.5% 95.5%
Current Heifer Inventory	
Raised on dairy, % Raised by a custom grower, %	78.6% 21.4%

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

On the average farm, 221 animals calved for the first time in 2008. The breakdown on these animals for source was 4.5 percent purchased and 95.5 percent raised by the farm. Of the current heifer inventory, 78.6 percent were raised on the dairy and 21.4 percent were being raised by a custom grower. There is increased interest in evaluating the dairy replacement enterprise.

# Milk Income and Marketing Expense Breakdown

Starting January 1<sup>st</sup>, 2000, the northeast switched to multiple components pricing, which changed the format of the milk check and how farmers received payment for their milk. To examine the breakdown of the gross milk income and the marketing expenses, 41 Northern Hudson 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 the compact program or 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. Your net farm price can be found on page 12 of your farm's 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.

<sup>&</sup>lt;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.

# **AVERAGE MILK INCOME AND MARKETING REPORT** 41 Northern Hudson Region Dairy Farms, 2008

	Pounds	Percent	Price/Pound	Total	\$/Cwt of Milk
DACE EADM DDICE					
BASE FARM PRICE Butterfat	263,373	3.70%	\$1.57	\$ 412,249	\$ 5.80
Protein	219,242	3.08%	\$3.89	\$ 852,425	\$11.98
Solids	406,615	5.72%	\$0.06	\$ 23,218	\$ 0.33
<b>Total Component Contribution</b>					\$18.11
PPD	7,112,673			\$ 49,042	\$0.69
Base Farm Price					\$18.80
Premiums Quality				\$17,488	\$0.25
Volume				\$30,712	\$0.43
Market Premiums				\$25,168	\$0.35
<b>Total Premiums</b>					\$1.03
BASE FARM PRICE + PREMIUM					\$19.83
Deductions Promotion				\$10,681	\$0.15
Hauling + Stop Charges.				\$64,928	\$0.91
Market Fees & Coop Dues				9,601	\$0.13
<b>Total Deductions</b>					\$1.20
BASE FARM PRICE + PREMIUMS - 3	DEDUCTIONS				\$18.63
Marketing Programs					
Futures Contracts, Forward Contract	ting, Etc.			\$0.00	\$0.00
<b>Total Marketing Income</b>					\$0.00
Patronage Dividends				\$2,983	\$ 0.04
NET PRICE RECEIVED ON FARM, A	ALL SOURCES				\$18.67
PPD - Hauling, \$ per cwt.					\$-0.22
PPD - Hauling + Market Premiums, \$ p	er cwt.				\$ 0.13
Net Marketing Value (PPD + Total Pres	miums - Total De	eductions), \$ p	er cwt.		\$ 0.52

# MILK PRICE INFORMATION BY QUINTILE\*

(Each Category Sorted Independently)
41 Northern Hudson Region Dairy Farms, 2008

Lowest									
	Quintile	•		-	Quintile				
Butterfat, %	3.55	3.68	3.82	3.94	4.16				
Protein, %	3.01	3.04	3.12	3.19	3.34				
Other Solids, %	5.62	5.67	5.70	5.74	5.79				
Butterfat, \$ per Cwt.	5.57	5.79	5.93	6.13	6.52				
Protein, \$ per Cwt.	11.62	11.85	12.12	12.40	13.10				
Other solids, \$ per Cwt.	0.27	0.32	0.33	0.34	0.38				
Total Component Value per Cwt.	\$17.56	\$17.93	\$18.43	\$18.80	\$19.92				
PPD, \$ per Cwt.	0.44	0.61	0.67	0.86	1.15				
Base Farm Price per Cwt.	\$18.17	\$18.73	\$19.13	\$19.57	\$20.72				
Dase Latin Title per Cit.	Ψ10.17	ψ10.73	ψ17.13	ψ17.57	Ψ20.72				
Quality, \$ per Cwt.	-0.01	0.06	0.15	0.25	0.41				
Volume, \$ per Cwt.	0.01	0.06	0.11	0.29	0.64				
Market premium, \$ per Cwt.	0.06	0.25	0.36	0.44	0.71				
Total Premium, \$ per Cwt.	0.29	0.50	0.70	0.89	1.36				
	<b>040.0</b> ■	<b>\$40.45</b>	<b>\$40.04</b>	400.00	<b>\$24.20</b>				
Base Farm Price + Premiums per Cwt.	\$19.05	\$19.45	\$19.84	\$20.23	\$21.39				
Promotion, \$ per Cwt.	0.15	0.15	0.15	0.15	0.22				
Hauling, \$ per Cwt.	0.13	0.76	0.98	1.15	1.42				
Market fees & coop dues per Cwt.	0.03	0.10	0.16	0.18	0.21				
Warket rees & coop dues per Cwt.	0.03	0.10	0.10	0.16	0.21				
Total Marketing Expenses per Cwt.	\$0.78	\$1.07	\$1.29	\$1.48	\$1.71				
Total Marketing Expenses per Cwt.	\$0.78	\$1.07	\$1.29	\$1.48	\$1.71				
Total Marketing Expenses per Cwt.  Base + Premiums – Deductions per Cwt.	\$0.78 \$17.70	\$1.07 \$18.31	\$1.29 \$18.75	\$1.48 \$19.08	\$1.71 \$19.87				
Base + Premiums – Deductions per Cwt.	\$17.70	\$18.31	\$18.75	\$19.08	\$19.87				
Base + Premiums – Deductions per Cwt.	\$17.70	\$18.31	\$18.75	\$19.08	\$19.87				
Base + Premiums – Deductions per Cwt.  Futures contract, forward contracting, \$ per Cwt.	<b>\$17.70</b>	\$ <b>18.31</b>	\$18.75	<b>\$19.08</b>	<b>\$19.87</b>				
Base + Premiums – Deductions per Cwt.  Futures contract, forward contracting, \$ per Cwt.  Total Marketing Income, \$ per Cwt.  Patronage Dividends, \$ per Cwt.	\$17.70 0.00 \$0.00 \$0.00	\$18.31 0.00 \$0.00 \$0.00	\$18.75 0.00 \$0.00 \$0.00	\$19.08 0.00 \$0.00 \$0.02	\$19.87 0.01 \$0.01 \$0.23				
Base + Premiums – Deductions per Cwt.  Futures contract, forward contracting, \$ per Cwt.  Total Marketing Income, \$ per Cwt.	\$17.70 0.00 \$0.00	\$18.31 0.00 \$0.00	\$18.75 0.00 \$0.00	\$19.08 0.00 \$0.00	\$19.87 0.01 \$0.01				
Base + Premiums – Deductions per Cwt.  Futures contract, forward contracting, \$ per Cwt.  Total Marketing Income, \$ per Cwt.  Patronage Dividends, \$ per Cwt.  Net Price Received From All Sources, \$ per Cwt.	\$17.70 0.00 \$0.00 \$0.00 \$17.71	\$18.31 0.00 \$0.00 \$0.00 \$18.33	\$18.75 0.00 \$0.00 \$0.00 \$18.84	\$19.08 0.00 \$0.00 \$0.02 \$19.18	\$19.87 0.01 \$0.01 \$0.23 \$19.92				
Base + Premiums – Deductions per Cwt.  Futures contract, forward contracting, \$ per Cwt.  Total Marketing Income, \$ per Cwt.  Patronage Dividends, \$ per Cwt.  Net Price Received From All Sources, \$ per Cwt.  PPD - Hauling, \$ per cwt.	\$17.70 0.00 \$0.00 \$0.00	\$18.31 0.00 \$0.00 \$0.00	\$18.75 0.00 \$0.00 \$0.00	\$19.08 0.00 \$0.00 \$0.02	\$19.87 0.01 \$0.01 \$0.23 \$19.92				
Base + Premiums – Deductions per Cwt.  Futures contract, forward contracting, \$ per Cwt.  Total Marketing Income, \$ per Cwt.  Patronage Dividends, \$ per Cwt.  Net Price Received From All Sources, \$ per Cwt.	\$17.70 0.00 \$0.00 \$0.00 \$17.71	\$18.31 0.00 \$0.00 \$0.00 \$18.33	\$18.75 0.00 \$0.00 \$0.00 \$18.84	\$19.08 0.00 \$0.00 \$0.02 \$19.18	\$19.87 0.01 \$0.01 \$0.23 \$19.92				

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

# **New York State Farm Business Charts**

The Farm Business Chart is a tool which can be used in analyzing a business by drawing a line through the figure in each column which represents the current level of management performance. The figure at the top of each column is the average of the top 10 percent of the 250 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 <u>not</u> 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 <u>lowest cost is not necessarily the most profitable</u>. 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

250 New York Dairy Farms, 2007

	Size of Business			Rates of Product	ion	Labor I	Efficiency
Worker	No.	Pounds	Pounds	Tons	Tons Corn	Cows	Pounds
Equiv-	of	Milk	Milk Sold	Hay Crop	Silage	Per	Milk Sold
alent	Cows	Sold	Per Cow	DM/Acre	Per Acre	Worker	Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
28.1	1,314	32,322,710	26,645	5.2	26	61	1,309,445
17.1	773	18,291,548	24,891	4.0	23	50	1,121,656
11.9	494	11,182,833	23,916	3.5	21	46	1,026,711
8.1	346	7,739,127	23,029	3.1	20	43	943,700
5.2	217	4,765,001	21,916	2.8	19	40	849,317
4.0	149	2,798,701	20,742	2.6	18	36	764,401
3.2	108	2,051,550	19,708	2.4	17	34	662,962
2.7	80	1,444,394	18,062	2.1	16	30	569,954
2.2	60	1,035,063	15,732	1.8	15	25	454,811
1.6	41	684,234	12,412	1.2	12	20	314,396

		Cosi	Connor		
Grain	% Grain is	Machinery	Labor &	Feed & Crop	Feed & Crop
Bought	of Milk	Costs	Machinery	Expenses	Expenses Per
Per Cow	Receipts	Per Cow	Costs Per Cow	Per Cow	Cwt. Milk
(12)	(12)	(14)	(14)	(12)	(12)
\$515	15%	\$430	\$1,088	\$705	\$4.28
726	19	551	1,294	948	4.96
814	20	605	1,373	1,067	5.45
894	22	648	1,436	1,160	5.77
991	23	700	1,513	1,262	5.95
1,066	25	757	1,595	1,341	6.22
1,134	26	821	1,693	1,426	6.60
1,205	27	899	1,817	1,511	7.00
1,305	29	995	2,020	1,609	7.44

2,388

1,831

9.03

Cost Control

1,251

35

1,492

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

# FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS

250 New York Dairy Farms, 2007

Milk	Milk	Operating Cost	Operating Cost	Total Cost Milk	Total Cost Milk
Receipts	Receipts	Milk Production	Milk Production	Production	Production
Per Cow	Per Cwt.	Per Cow	Per Cwt.	Per Cow	Per Cwt.
(12)	(12)	(12)	(12)	(12)	(12)
\$5,473	\$22.53	\$1,631	\$9.70	\$2,801	\$14.86
5,036	21.38	2,096	11.55	3,306	16.34
4,850	20.97	2,385	12.46	3,536	16.99
4,689	20.70	2,632	12.97	3,708	17.60
4,473	20.48	2,812	13.56	3,885	18.16
4,247	20.32	2,990	14.03	4,024	18.91
4,002	20.12	3,139	14.57	4,173	19.99
3,719	19.87	3,353	15.44	4,351	21.53
3,252	19.62	3,627	16.41	4,566	23.15
2,599	19.04	4,077	19.13	5,111	28.29

			Profit	ability		
N	let Farm Ind	come	Net Farn	n Income	Lal	oor &
Witho	ut Apprecia	ation	With App	reciation	Manager	nent Income
	Per Operations Per		Per	Per		
Total	Cow	Ratio	Total	Cow	Farm	Operator
(4)	(12)	(4)	(4)	(12)	(4)	(4)
\$1,658,164	\$1,985	0.37	\$2,258,907	\$2,580	\$1,350,735	\$828,820
881,033	1,602	0.31	1,159,819	2,039	690,457	422,319
593,261	1,424	0.28	786,149	1,861	459,165	250,521
385,119	1,262	0.26	537,897	1,674	267,642	163,957
227,152	1,131	0.23	323,558	1,540	154,444	94,290
142,549	1,021	0.21	182,217	1,407	91,721	57,044
102,171	909	0.19	131,539	1,231	56,345	42,053
68,086	722	0.16	97,870	987	30,338	23,345
43,034	467	0.11	63,898	733	2,284	1,427
3,007	67	0.01	21,902	280	-41,030	-36,506

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

250 New York Dairy Farms, 2007

			Liquidity (	repayment)			
				Debt Pay-			
Planned	Available			ments		Working	
Debt	for	Cash Flow	Debt	as Percent		Capital as	
Payments	Debt Service	Coverage	Coverage	of Milk	Debt Per	% of Total	Current
Per Cow	Per Cow	Ratio	Ratio	Sales	Cow	Expenses	Ratio
(10)*	(16)	(10)	(10)	(10)	(7)	(7)	(7)
\$92	\$1,522	6.22	9.80	2%	\$203	55%	36.91
233	1,106	2.82	4.47	6	992	38	5.77
315	977	2.24	3.60	8	1,678	30	4.12
387	881	1.91	3.09	10	2,100	26	3.23
454	813	1.65	2.74	11	2,515	23	2.59
517	737	1.44	2.29	12	2,881	19	2.21
566	655	1.26	1.88	13	3,265	14	1.83
626	534	1.08	1.60	15	3,711	10	1.52
735	377	0.84	1.11	19	4,170	4	1.07
1,007	-5	-0.08	0.02	28	5,777	-12	0.49

	Solve	O	perational Ra	atios		
		Debt/Asset I	Operating	Interest	Depreciation	
Leverage	Percent	Current &	Long	Expense	Expense	Expense
Ratio***	Equity	Intermediate	Term	Ratio	Ratio	Ratio
(7)	(7)	(7)	(7)	(14)	(14)	(14)
0.02	98%	0.01	0.00	0.54	0.00	0.02
0.11	90	0.09	0.00	0.59	0.01	0.03
0.19	84	0.15	0.01	0.62	0.02	0.04
0.29	78	0.20	0.10	0.65	0.03	0.05
0.36	74	0.25	0.21	0.67	0.03	0.05
0.45	69	0.29	0.29	0.69	0.04	0.06
0.54	65	0.34	0.39	0.71	0.05	0.07
0.67	60	0.42	0.50	0.73	0.05	0.08
0.94	52	0.53	0.63	0.78	0.06	0.10
1.68	39	0.70	0.89	0.87	0.09	0.14

	Efficience	cy (Capital)		_	Prof	itability
Asset	Real Estate	Machinery	Total Farm	Change in	Percent Rate	of Return with
Turnover	Investment	Investment	Assets	Net Worth	Apprec	ciation on:
(ratio)	Per Cow	Per Cow	Per Cow	With Appreciation	Equity	Investment***
(14)	(14)	(14)	(14)	(8)	(4)	(4)
0.95	\$1,504	\$634	\$5,726	\$1,980,666	55%	29%
0.78	2,240	876	6,959	969,490	36	24
0.72	2,696	1,111	7,431	612,376	29	21
0.68	3,012	1,358	7,894	396,561	23	18
0.62	3,388	1,559	8,452	238,455	19	15
0.57	3,752	1,792	9,113	137,890	14	12
0.50	4,339	2,003	10,060	98,507	11	10
0.44	5,105	2,256	11,046	69,452	7	7
0.37	6,374	2,599	12,687	37,054	3	4
0.26	10,220	3,766	16,830	-5,198	-7	-2

<sup>\*</sup>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.

<sup>\*\*\*</sup>Return on all farm capital (no deduction for interest paid) divided by total farm assets

# Comparison by Type of Barn and Herd Size

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

The table on page 31 includes the average values for the resulting five groups of dairy farms. The average size of farms in the five groups ranges from 45 cows on the small conventional farms to 765 cows on the largest freestall farms.

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

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

# **Herd Size Comparisons**

A detailed comparison of profitability, financial situation and business analysis factors across herd size is contained on pages 48-60 of the 2007 State Summary\*. As herd size increases, the net farm income profitability generally increases (page 48)\*. Net farm income without appreciation averaged \$36,257 per farm for the less than 50 cow farms and \$1,156,991 per farm for those with more than 600 cows. Return to all capital without appreciation also generally increased as herd size increased.

Assets, liabilities and financial measures are presented on pages 55-58\*. All herd size categories saw an increase in net worth during 2007. The largest herd size category experienced an increase in net worth of \$1,301,770. However, percent equity went down as assets increased. The largest herds had the lowest percent equity; while the smaller herds averaged 79 percent.

Crop yields showed little relationship to herd size, but fertilizer and lime expenses, and machinery cost per tillable acre generally increased as herd size increased (pages 59-60)\*. The farms with 600 and more cows per farm averaged 34 percent more milk sold per cow than the smallest farms. All of the groups with 200 or more cows averaged above 20,000 pounds of milk sold per cow while the farms smaller than 200 cows averaged 18,431 pounds of milk sold per cow. Farm capital per cow generally decreased as herd size increased. Milk sold per worker increased dramatically as herd size increased, ranging from 411,770 pounds at the lowest herd size category up to 1,130,956 pounds at the largest size category.

<sup>\*</sup>Wayne A. Knoblauch, Linda D. Putnam, and Jason Karszes, Dairy Farm Management Business Summary, New York, 2007, Department of Applied Economics and Management, Cornell University, R.B. 2008-03, October 2008.

# SELECTED BUSINESS FACTORS BY TYPE OF BARN AND HERD SIZE

235 New York Dairy Farms, 2007

-			ntional	2007	Freestall			
		Conve	illioliai	-	151-300			
Item	Farms with:	<= 60 Cows	>60 Cows	<=150 Cows	Cows	>300 Cows		
Number of farms	i dillis with.	32	35	41	36	91		
Number of farms		32	33	71	30	91		
Cropping Program An	alvsis							
Total Tillable acres	<u>ur y 515</u>	173	264	256	546	1,502		
Tillable acres rented*		81	107	131	260	782		
Hay crop acres*		134	177	165	259	663		
Corn silage acres*		18	54	63	163	572		
Hay crop, tons DM/ac	<b>r</b> e	1.9	2.5	2.5	2.7	3.3		
Corn silage, tons/acre		17	17.5	17.0	18.8	19.0		
Oats, bushels/acre		25	60.5	0	48	71		
Forage DM per cow, to	one	8.3	8.8	8.3	8.3	7.9		
Tillable acres/cow	Olis	4.0	3.1	2.7	2.6	2.0		
Fertilizer & lime expense	nca/tillable acre	\$29.91	\$27.65	\$36.31	\$52.78	\$45.47		
Total machinery costs		\$37,126	\$69,721	\$85,153	\$178,009	\$524,509		
Machinery cost/tillable		\$208	\$265	\$301	\$178,009	\$324,309 \$349		
•	e acre	\$208	\$203	\$301	φ321	φ3 <del>4</del> 3		
Dairy Analysis								
Number of cows		45	86	102	215	765		
Number of heifers		36	72	84	170	617		
Milk sold, lbs.		803,437	1,540,743	1,907,152	4,669,673	18,323,557		
Milk sold/cow, lbs.		18,055	17,999	18,676	21,759	23,957		
Operating cost of prod	lucing milk/cwt.	\$13.22	\$14.03	\$13.90	\$13.98	\$14.03		
Total cost of producing	g milk/cwt.	\$22.57	\$21.09	\$20.39	\$18.35	\$16.98		
Price/cwt. milk sold		\$20.32	\$20.46	\$20.85	\$20.31	\$20.30		
Purchased dairy feed/c	cow	\$938	\$942	\$1,076	\$1,087	\$1,244		
Purchased dairy feed/c		\$5.19	\$5.23	\$5.76	\$5.00	\$5.19		
Purchased grain & cor								
milk receipts		24%	25%	25%	23%	24%		
Purchased feed & crop	expense/cwt milk	\$6.12	\$6.11	\$6.81	\$6.18	\$6.08		
Capital Efficiency	. 1							
Farm capital/worker		\$303,979	\$310,146	\$341,029	\$384,576	\$364,434		
Farm capital/cow		\$12,842	\$10,507	\$9,818	\$9,282	\$8,086		
Farm capital/tillable ac	ana arrinad			\$8,013	\$6,970	\$8,588		
Real estate/cow	cie owiieu	\$6,210	\$5,749 \$4,728					
	1	\$6,988	\$4,728	\$4,296	\$3,825	\$3,118		
Machinery investment	/COW	\$2,426	\$2,310	\$2,058	\$1,707	\$1,328		
Asset turnover ratio		0.35	0.43	0.48	0.58	0.73		
<u>Labor Efficiency</u>								
Worker equivalent		1.88	2.90	2.94	5.18	16.97		
Operator/manager equ	ivalent	1.09	1.34	1.45	1.65	1.96		
Milk sold/worker, lbs.		427,929	530,986	649,796	901,336	1,079,497		
Cows/worker		24	30	35	41	45		
Labor cost/cow		\$1,136	915	\$829	\$747	\$776		
Labor cost/tillable acre	e	\$292	\$297	\$331	\$294	\$395		
Profitability & Balance								
Net farm income (with		\$43,748	\$76,448	\$100,892	\$233,622	\$909,264		
Labor & management		\$11,942	\$25,590	\$37,718	\$94,556	\$363,992		
Rate return on all capi		4.2%	7.0%	9.1%	14.0%	20.7%		
Farm debt/cow	tai witti appietiation		\$2,473	\$2,505	\$2,393	\$2,985		
		\$2,310						
Percent equity		82%	77%	75%	75%	65%		

<sup>\*</sup>Average of all farms, not only those reporting data.

# FARM BUSINESS CHART FOR SMALL CONVENTIONAL STALL DAIRY FARMS

32 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 2007

,	Size of Bu	siness	Rates of Production			Labor	Efficiency
Worker	No.	Pounds	Pounds	Tons	Tons Corn	Cows	Pounds
Equiv-	of	Milk	Milk Sold	Hay Crop	Silage	Per	Milk Sold
alent	Cows	Sold	Per Cow	DM/Acre	Per Acre	Worker	Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
2.86	58	1,099,232	24,446	2.9	25	39	810,088
2.40	53	1,036,401	22,911	3.6	22	33	707,891
2.16	51	996,659	21,564	2.4	20	29	588,257
2.03	48	941,296	20,915	2.3	18	26	488,972
1.95	47	874,710	20,045	2.1	18	25	438,230
1.88	45	833,652	17,757	1.9	 16	23	397,870
1.70	43	816,327	16,563	1.8	15	20	365,041
1.55	40	727,982	15,284	1.6	14	20	337,736
1.44	36	574,365	13,818	1.3	14	19	300,938
1.20	31	358,434	10,386	0.8	12	17	217,459

Cost Control								
Grain Bought	% Grain is of Milk	Machinery Costs	Labor & Machinery	Feed & Crop Expenses	Feed & Crop Expenses Per			
Per Cow	Receipts	Per Cow	Costs Per Cow	Per Cow	Cwt. Milk			
(12)	(12)	(14)	(14)	(12)	(12)			
\$487	16%	\$471	\$1,355	\$662	\$4.41			
669	20	621	1,669	863	5.12			
706	21	680	1,762	906	5.46			
777	23	721	1,830	962	5.64			
829	24	772	1,881	996	5.81			
895	25	832	2,103	1,171	6.08			
963	25	937	2,245	1,280	6.51			
1,028	27	1.019	2,364	1,335	7.09			
1,119	28	1.125	2,425	1,418	7.79			
1,239	31	1,371	2,646	1,548	9.10			

Va	Value and Cost of Production			Profitability Profitability			
Milk Receipts	Operating Cost Producing Milk	Total Cost Production		n Income ppreciation	Labor & Mgmt. Income	Change in Net Worth	
Per Cow	Per Cwt.	Per Cwt.	Total	Per Cow	Per Operator	w/Appreciation	
(12)	(12)	(12)	(4)	(12)	(4)	(8)	
\$4,908	\$9.25	\$16.77	\$103,687	\$2,080	\$71,795	\$104,731	
4,584	10.36	19.62	77,384	1,791	39,495	71,980	
4,528	12.16	20.88	66,142	1,398	33,110	54,915	
4,199	12.44	21.86	55,982	1,195	27,372	49,040	
3,957	12.83	22.67	49,561	1,103	21,721	41,663	
3,596	13.51	23.35	40,986	1,024	11,107	30,723	
3,396	14.23	24.80	36,123	874	3,731	27,089	
3,166	14.85	25.92	28,950	695	-3,995	23,231	
2,875	16.16	29.89	15,510	388	-21,220	17,838	
2,181	21.36	34.70	-9,637	-162	-30,844	-18,866	

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

## FARM BUSINESS CHART FOR LARGE CONVENTIONAL STALL DAIRY FARMS

35 Conventional Stall Dairy Farms with More Than 60 Cows, New York, 2007

Size of Business		R	Rates of Production			Labor Efficiency	
Worker	No.	Pounds	Pounds	Tons	Tons Corn	Cows	Pounds
Equiv-	of	Milk	Milk Sold	Hay Crop	Silage	Per	Milk Sold
alent	Cows	Sold	Per Cow	DM/Acre	Per Acre	Worker	Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
4.27	136	2,417,111	26,067	4.6	24	48	831,609
3.76	118	2,153,052	22,077	3.6	22	43	741,411
3.28	104	1,991,129	21,085	3.2	21	40	675,874
3.21	92	1,737,093	19,592	2.9	19	35	659,682
3.11	86	1,572,605	18,910	2.7	17	33	627,227
2.99	78	1,463,017	18,038	2.5	 17	29	576,019
2.75	72	1,331,867	17,037	2.2	17	27	512,065
2.46	69	1,251,344	16,032	2.1	16	24	443,686
2.30	66	1,102,026	14,590	1.8	15	22	354,283
1.67	63	930,008	12,554	1.3	11	20	295,072

	Cost Control								
Grain	% Grain is	Machinery	Labor &	Feed & Crop	Feed & Crop				
Bought	of Milk	Costs	Machinery	Expenses	Expenses Per				
Per Cow	Receipts	Per Cow	Costs Per Cow	Per Cow	Cwt. Milk				
(12)	(12)	(14)	(14)	(12)	(12)				
\$380	13%	\$425	\$1,230	\$567	\$3.84				
580	17	569	1,335	780	4.53				
753	19	608	1,443	955	4.91				
822	21	723	1,530	1,046	5.43				
911	24	808	1,684	1,100	5.87				
983	26	859	1,840	1,189	6.48				
1,102	28	937	1,954	1,252	7.01				
1,145	32	992	2,072	1,364	7.68				
1,272	35	1,049	2,258	1,516	8.71				
1,605	42	1,278	2,555	1,765	9.77				

Va	lue and Cost of Prod	uction				
Milk Receipts	Operating Cost Producing Milk	Total Cost Production	Net Farm Income Without Appreciation		Labor & Mgmt. Income	Change in Net Worth
Per Cow	Per Cwt.	Per Cwt.	Total	Per Cow	Per Operator	w/Appreciation
(12)	(12)	(12)	(4)	(12)	(4)	(8)
\$5,152	\$9.81	\$16.75	\$150,946	\$1,927	\$96,499	\$210,929
4,540	11.49	18.01	129,912	1,443	65,644	133,891
4,215	12.26	19.10	118,299	1,353	55,584	119,683
4,048	12.85	20.21	114,228	1,259	50,698	101,908
3,896	13.78	21.15	99,121	1,055	44,709	91,344
3,749	14.89	22.07	80,009	962	25,060	82,915
3,476	15.59	22.79	60,271	803	14,508	66,619
3,308	16.81	24.10	51,427	499	2,785	39,546
3,086	17.81	26.26	24,184	332	-18,266	21,345
2,526	20.92	28.74	-6,350	-77	-39,115	4,583

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

## FARM BUSINESS CHART FOR SMALL FREESTALL DAIRY FARMS

41 Freestall Barn Dairy Farms with 150 or Less Cows, New York, 2007

,	Size of Bus	siness	R	Rates of Production			Labor Efficiency	
Worker Equiv-	No. of	Pounds Milk	Pounds Milk Sold	Tons Hay Crop	Tons Corn Silage	Cows Per	Pounds Milk Sold	
alent	Cows	Sold	Per Cow	DM/Acre	Per Acre	Worker	Per Worker	
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)	
4.33	145	3,038,782	24,012	5.0	26	54	1,049,507	
4.00	136	2,651,052	22,366	3.9	21	45	833,822	
3.63	127	2,331,685	21,003	3.6	20	41	774,651	
3.26	113	2,253,098	19,918	2.9	19	37	687,389	
3.00	106	2,097,298	19,204	2.5	18	35	659,654	
2.81	99	1,908,138	18,480	2.3	 17	34	615,421	
2.50	94	1,654,700	17,724	2.2	16	32	581,302	
2.31	86	1,420,979	16,048	2.0	15	31	537,002	
2.18	71	1,184,373	14,658	1.6	14	29	483,454	
1.66	57	806,565	12,031	1.1	12	24	387,904	

Cost Control								
Grain	% Grain is	Machinery	Labor &	Feed & Crop	Feed & Crop			
Bought	of Milk	Costs	Machinery	Expenses	Expenses Per			
Per Cow	Receipts	Per Cow	Costs Per Cow	Per Cow	Cwt. Milk			
(12)	(12)	(14)	(14)	(12)	(12)			
\$566	17%	\$412	\$1,101	\$724	\$4.63			
705	19	552	1,307	956	5.48			
796	22	585	1,364	1,078	6.01			
848	24	637	1,441	1,116	6.15			
923	25	686	1,527	1,187	6.77			
999	26	758	1,582	1,314	6.98			
1,085	27	830	1,708	1,387	7.11			
1,158	29	935	1,856	1,533	7.29			
1,264	30	1,143	2,084	1,625	8.03			
1,449	39	1,397	2,414	1,744	11.20			

Va	lue and Cost of Prod	uction		Profitability				
Milk	Operating Cost	Total Cost	Net Farm Income		Labor &	Change in		
Receipts	Producing Milk	Production	Without A	ppreciation	Mgmt. Income	Net Worth		
Per Cow	Per Cwt.	Per Cwt.	Total	Per Cow	Per Operator	w/Appreciation		
(12)	(12)	(12)	(4)	(12)	(4)	(8)		
\$4,904	\$9.62	\$16.89	\$204,925	\$1,633	\$101,149	\$240,026		
4,606	11.45	18.02	160,620	1,466	78,127	152,756		
4,427	12.27	18.70	148,490	1,387	58,021	141,631		
4,228	12.86	19.04	130,702	1,214	52,201	127,558		
4,034	13.32	19.48	112,330	1,144	46,071	112,525		
3,832	13.84	20.74	94,681	1,049	38,670	97,598		
3,622	14.70	21.83	82,277	921	28,098	81,001		
3,323	16.46	23.25	62,049	665	10,720	73,081		
3,058	18.00	25.06	35,857	377	-2,391	49,312		
2,610	19.88	29.84	1,774	-60	-29,731	23,250		

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

## FARM BUSINESS CHART FOR MEDIUM FREESTALL DAIRY FARMS

36 Freestall Barn Dairy Farms with 151-300 Cows, New York, 2007

Size of Business		R	Rates of Production			Labor Efficiency	
Worker	No.	Pounds	Pounds	Tons	Tons Corn	Cows	Pounds
Equiv-	of	Milk	Milk Sold	Hay Crop	Silage	Per	Milk Sold
alent	Cows	Sold	Per Cow	DM/Acre	Per Acre	Worker	Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
7.83	294	6,792,548	26,424	4.8	28	65	1,236,400
6.89	284	6,372,431	24,496	3.9	23	57	1,068,408
6.52	252	6,016,780	24,111	3.6	22	54	1,029,794
5.91	247	5,602,690	23,628	3.3	19	48	1,016,717
5.47	233	5,215,650	23,159	3.2	18	43	972,076
4.95	210	4,627,626	22,198	2.8	 18	39	919,212
4.67	189	4,093,227	20,680	2.3	17	38	885,395
4.41	173	3,762,683	19,839	2.1	17	37	800,010
3.87	165	3,351,085	19,235	1.8	15	35	751,921
2.90	155	2,388,376	14,614	1.5	12	30	606,594

Grain	% Grain is	Machinery	Labor &	Feed & Crop	Feed & Crop
Bought	of Milk	Costs	Machinery	Expenses	Expenses Per
Per Cow	Receipts	Per Cow	Costs Per Cow	Per Cow	Cwt. Milk
(12)	(12)	(14)	(14)	(12)	(12)
\$540	14%	\$511	\$1,067	\$723	\$3.91
743	18	586	1,281	1,042	5.00
823	20	685	1,366	1,132	5.75
924	22	745	1,457	1,271	5.89
1,069	24	818	1,567	1,352	6.02
1,127	26	884	1,676	1,459	6.37
1,199	26	911	1,744	1,537	6.82
1,278	27	977	1,808	1,598	7.11
1,353	29	1,137	2,018	1,660	7.56
1,384	31	1,347	2,150	1,806	8.28

Va	lue and Cost of Prod	uction				
Milk	1 &		Net Farn	n Income	Labor &	Change in
Receipts	Producing Milk	Production	Without A	ppreciation	Mgmt. Income	Net Worth
Per Cow	Per Cwt.	Per Cwt.	Total	Per Cow	Per Operator	w/Appreciation
(12)	(12)	(12)	(4)	(12)	(4)	(8)
\$5,199	\$10.03	\$14.97	\$522,171	\$2,072	\$221,725	\$468,328
4,985	11.52	16.51	424,140	1,874	196,716	388,206
4,923	12.70	17.26	344,509	1,578	176,569	358,154
4,861	13.67	17.85	288,759	1,246	157,837	329,288
4,690	14.06	18.30	254,690	1,142	137,360	260,976
4,501	15.29	19.15	215,859	1,031	84,888	222,178
4,291	15.81	20.29	189,827	859	60,076	195,828
4,068	16.05	21.31	136,788	634	40,883	138,575
3,938	16.69	22.05	74,094	433	8,882	94,801
2,876	19.07	23.32	46,657	278	-32,490	49,839

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

## FARM BUSINESS CHART FOR LARGE FREESTALL DAIRY FARMS

91 Freestall Barn Dairy Farms with 300 or More Cows, New York, 2007

Size of Business		R	Rates of Production			Labor Efficiency	
Worker	No.	Pounds	Pounds	Tons	Tons Corn	Cows	Pounds
Equiv-	of	Milk	Milk Sold	Hay Crop	Silage	Per	Milk Sold
Alent	Cows	Sold	Per Cow	DM/Acre	Per Acre	Worker	Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
35.08	1,745	43,004,232	27,708	5.7	26	60	1,442,799
25.81	1,128	27,970,111	25,873	4.6	23	53	1,228,772
21.66	995	23,835,953	25,285	3.9	22	50	1,175,249
18.59	865	20,478,846	24,607	3.6	20	47	1,134,274
15.92	695	17,089,191	24,064	3.3	20	46	1,090,405
14.17	599	13,917,572	23,604	3.1	19	44	1,040,403
12.37	500	11,748,180	22,960	2.9	18	42	991,802
10.60	436	9,928,631	22,459	2.6	17	41	940,420
9.32	396	8,949,216	21,325	2.4	16	37	868,410
7.29	337	7,514,627	19,524	2.0	14	31	722,816

Cost Control								
Grain	% Grain is	Machinery	Labor &	Feed & Crop	Feed & Crop			
Bought	of Milk	Costs	Machinery	Expenses	Expenses Per			
Per Cow	Receipts	Per Cow	Costs Per Cow	Per Cow	Cwt. Milk			
(12)	(12)	(14)	(14)	(12)	(12)			
\$790	18%	\$479	\$1,110	\$1,053	\$4.69			
914	20	558	1,285	1,192	5.23			
1,012	21	612	1,356	1,267	5.57			
1,053	22	643	1,403	1,339	5.73			
1,125	23	673	1,442	1,412	5.89			
1,173	24	720	1,496	1,459	6.11			
1,222	25	764	1,560	1,500	6.39			
1,281	26	817	1,620	1,582	6.68			
1,373	27	900	1,710	1,698	7.10			
1,578	31	989	1,899	1,958	7.58			

Va	lue and Cost of Prod	uction		Profitability				
Milk	Operating Cost	Total Cost	Net Farm Income		Labor &	Change in		
Receipts	Producing Milk	Production	Without A	ppreciation	Mgmt. Income	Net Worth		
Per Cow	Per Cwt.	Per Cwt.	Total	Per Cow	Per Operator	w/Appreciation		
(12)	(12)	(12)	(4)	(12)	(4)	(8)		
\$5,766	\$10.81	\$14.51	\$2,337,300	\$2,043	\$1,103,132	\$2,686,277		
5,344	12.31	15.59	1,362,553	1,708	746,602	1,778,284		
5,125	12.83	16.14	1,144,933	1,530	566,178	1,286,712		
5,010	13.31	16.57	969,379	1,430	461,248	1,058,420		
4,860	13.78	16.88	829,297	1,308	395,098	935,098		
4,788	14.11	17.13	719,767	1,167	313,715	774,985		
4,700	14.39	17.55	618,874	1,042	257,134	645,479		
4,538	14.89	17.83	519,316	937	197,335	543,433		
4,314	15.79	18.29	416,726	788	152,336	421,480		
3,985	16.81	20.23	247,977	442	46,295	205,528		

<sup>\*</sup>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:

- Goals should be **Specific**.
- Goals should be Measurable.
- Goals should be Achievable but challenging. 3.
- Goals should be **R**ewarding. 4.
- 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.
- Identify SMART goals. c.

Mission and Objectives

#### Worksheet for Setting Goals

I.	Mission and Objectives	
		_

## Worksheet for Setting Goals (Continued)

II. Goals What	How	When	Who is Responsible
		_	<del></del>
		_	
		_	
		_	
		-	<del></del>
		_	
Summarize Your Business Pe	erformance		
The Farm Business weaknesses of your farm bus ment.	and Financial Analysis Ch siness. Identify three maj	harts on pages 23 and 27-29 ca for strengths and three areas of	n be used to help identify strengths and your farm business that need improve-
Strengths:		Needs improvement:	

<u>Accounts Payable</u> - Open accounts or bills owed to feed and supply firms, cattle dealers, veterinarians and other providers of farm services and supplies.

<u>Accounts Receivable</u> - Outstanding receipts from items sold or sales proceeds not yet received, such as the payment for December milk sales received in January.

**<u>Accrual Expenses</u>** - (defined on page 3)

Accrual Receipts - (defined on page 4)

Annual Cash Flow Statement - (defined on page 11)

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

<u>Asset Turnover Ratio</u> - 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.

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

<u>Capital Efficiency</u> - 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.

<u>Cash From Nonfarm Capital Used in the Business</u> - 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)

<u>Cash Paid</u> - (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)

<u>Change in Inventory</u> - (defined on page 2)

<u>Cost of Term Debt</u> - 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)

**<u>Current Portion</u>** - (defined on page 7)

<u>Current Ratio</u> – 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.

<u>Dairy</u> (<u>farm</u>) - 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.

<u>Dairy Cash-Crop (farm)</u> - 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.

**<u>Debt Coverage Ratio</u>** – (defined on page 13)

**<u>Debt Per Cow</u>** - Total end-of-year debt divided by end-of-year number of cows.

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

**<u>Depreciation Expense Ratio</u>** – Machinery and building depreciation divided by total accrual receipts.

<u>Dry Matter</u> - 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.

<u>Farm Debt Payments as Percent of Milk Sales</u> - 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.

<u>Farm Debt Payments Per Cow</u> - 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.

<u>Financial Lease</u> - 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.

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

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

<u>Income Statement</u> - 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.

<u>Labor and Management Income</u> - (defined on page 6)

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

<u>**Labor Efficiency**</u> - Production capacity and output per worker.

**<u>Leverage Ratio</u>** - (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)

<u>Net Milk Receipts</u> – Accrual milk receipts less milk marketing expense.

**<u>Net Worth</u>** - 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)

<u>Operating Expense Ratio</u> – Total accrual expenses less interest and machinery and building depreciation, divided by total accrual receipts.

<u>Opportunity Costs</u> - 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.

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

<u>Part-Time Dairy (farm)</u> - 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.

<u>Personal Withdrawals and Family Expenditures Including Nonfarm Debt Payments</u> - 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.

<u>Profitability</u> - 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.

**<u>Replacement Livestock</u>** - 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)

<u>Solvency</u> - 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)

<u>Whole Farm Method</u> - 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.

<u>Working Capital</u> – 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.

# INDEX

	Page(s)		Page(s)
Accounts Payable	3,8	Expenses	3
Accounts Receivable	4,8	Farm Business Chart23, 27-	-29, 32-36
Accrual Expenses	3,5	Farm Debt Payments as Percent	
Accrual Receipts	4,5	of Milk Sales	12
Acreage	15	Farm Debt Payments Per Cow	12
Advanced Government Receipts	7,8	Financial Analysis Chart	29
Age	19	Financial Lease	8
Amount Available for Debt Service	13	Hired Labor Expenses per Hired Worker	
Annual Cash Flow Statement	11	Equivalent	20
Appreciation	10,17	Hired Labor Expense as % of Milk Sales	20
Asset Turnover Ratio	19	Income Statement	2
Balance Sheet	8	Inflows	11
Barn Type	2	Interest Expense Ratio	19
bST Usage	2	Labor & Management Income	6
Business Type	2	Labor & Management Income Per Operator.	6
Capital Efficiency	19	Labor Efficiency	19
Cash From Nonfarm Capital Used in		Land Resources	15
the Business	11	Leverage Ratio	9
Cash Flow Coverage Ratio	13	Liquidity	9
Cash Paid	2	Lost Capital	9
Cash Receipts	4,11	Machinery Expenses	3,16
Certified Organic Milk Producer	2	Marketing Report	25
Change in Accounts Payable	3	Milk Price	25, 26
Change in Accounts Receivable	4	Milk Production	17
Change in Inventory	2,3	Milking Frequency	2
Change in Net Worth	10	Milking System	2
Cost of Term Debt	9	Money Borrowed	11
Crop Expenses	3,16	Net Farm Income	5
Crop/Dairy Ratios	15	Net Farm Income from Operations Ratio	7
Culling Rate	17	Net Investment	9
Current Portion	7,8	Net Milk Receipts	18
Current Ratio	9	Net Worth	8
Dairy (farm)	2	Number of Cows	17
Dairy Cash-Crop (farm)	2	Operating Costs of Prod. Milk	18
Dairy Replacements	24	Operating Expense Ratio	19
Debt Coverage Ratio	13	Opportunity Cost	6
Debt per Cow	9	Other Livestock Expenses	3
Debt to Asset Ratios	9	Outflows	11
Deferred Taxes	9	Part-Time Cash-Crop Dairy (farm)	2
Depreciation	3, 9	Part-Time Dairy (farm)	2
Depreciation Expense Ratio		Percent Equity	
Dry Matter		Personal Withdrawals and Family Expenditus	
Education		Including Nonfarm Debt Payments	
Equity Capital	7	Principal Payments	
Expansion Livestock		Profitability	

Purchased Inputs Cost	18
Receipts	4
Record System	2
Repayment Analysis	13
Replacement Livestock	3
Retained Earnings	10
Return on Equity Capital	7
Return on Total Capital	7

Rotational Grazing	2,16
Solvency	9
Total Costs of Producing Milk	
Whole Farm Method	18
Worker Equivalent	19
Working Capital	9
Yields Per Acre	

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EB No	Title	Fee (if applicable	Author(s)
2009-12	Dairy Farm Business Summary, Southeastern New York Region, 2008	(\$12.00)	Knoblauch, W., Putnam, L., Kiraly, M., Walsh, J., Hulle, L. and C. Wickswat
2009-11	Dairy Farm Business Summary, Intensive Grazing Farms, New York, 2008	(\$16.00)	Conneman, G., Karszes, J., Grace, J., Beck, R., Staehr, A., Benson, A., Murray, P., Glazier, P., Carlberg, V., Anderson, J. and L. Putnam
2009-10	Dairy Farm Business Summary, Western and Central Plain Region, 2008	(\$12.00)	Knoblauch, W., Putnam, L., Karszes, J., Hanchar, J. and K. Getty
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