



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*


*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

AUGUST 2006

E.B. 2006-12

# **DAIRY FARM BUSINESS SUMMARY**

## ***NORTHERN NEW YORK REGION 2005***



***Celebrating  
50+ Years  
of Regional  
Farm Data  
Analyses***

**Wayne A. Knoblauch  
Linda D. Putnam  
Jason Karszes  
Peggy Murray  
Frans Vokey  
Molly Ames  
William Van Loo  
Anita Deming  
Carl Tillinghast  
Julie Viveiros**

**Department of Applied Economics and Management  
College of Agriculture and Life Sciences  
Cornell University, Ithaca, New York 14853-7801**

It is the Policy of Cornell University actively to support equality of educational and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, national or ethnic origin, sex, age or handicap. The University is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.

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



For information on how to obtain additional copies, please contact:

Linda Putnam  
Cornell University  
Department of Applied Economics and Management  
305 Warren Hall  
Ithaca, NY 14853-7801

E-mail: [ldp2@cornell.edu](mailto:ldp2@cornell.edu)  
Fax: 607-255-1589  
Voice: 607-255-8429

© Copyright 2006 by Cornell University. All rights reserved.

**2005 DAIRY FARM BUSINESS SUMMARY**  
**NORTHERN NEW YORK 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
INDEX .....	42

## 2005 DAIRY FARM BUSINESS SUMMARY NORTHERN NEW YORK REGION\*

### INTRODUCTION

Dairy farm managers throughout New York State have been participating in Cornell Cooperative Extension's farm business summary and analysis program since the early 1950's. Managers of each participating farm business receive a comprehensive summary and analysis of their farm business. The information in this report represents averages of the data submitted from dairy farms in the Northern New York Region for 2005.

#### **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 2005 DFBS individual farm report received by participating dairy farmers. The analysis tables have an open column or section labeled My Farm. It may be used by any dairy farm manager who wants to compare his or her business with the average data of this region. The individual farm data, the regional averages and other data can then be used to establish goals for the business. Non-DFBS participants can download a DFBS Data Check-In Form at <http://dfbs.cornell.edu>. After collecting the data on the form, it can be entered in the U. S. Top Dairies business summary program at the same web site to obtain a summary of their business.

This report features:

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

---

\* This report was written by Wayne A. Knoblauch, Department of Applied Economics and Management, College of Agriculture and Life Sciences, Cornell University, in cooperation with Cooperative Extension Educators Peggy Murray, Frans Vokey, Molly Ames, Anita Deming, Julie Viveiros, Carl Tillinghast, and Bill Van Loo; and Jason Karszes, Senior Extension Associate, PRO-DAIRY. Linda Putnam was in charge of data preparation. The Northern New York Region of New York State, with the number of participating farms in parentheses, is comprised of Clinton (3), Essex (2), Jefferson (6), Lewis (15), and St. Lawrence (10) Counties in New York

## 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**  
36 Northern New York Region Dairy Farms, 2005

Type of Farm	Number	Milking System	Number
Dairy	34	Bucket & carry	0
Part-time dairy	0	Dumping station	0
Dairy cash-crop	2	Pipeline	14
Certified organic milk producer	0	Herringbone conventional exit	6
Rotational grazing farm	4	Herringbone rapid exit	3
Type of Ownership	Number	Parallel	12
Owner	33	Parabone	0
Renter	3	Rotary	0
Type of Business	Number	Other	1
Sole Proprietorship	15	Production Records	Number
Partnership	9	Testing Service	26
Limited Liability Corporation	11	On Farm System	4
Subchapter S Corporation	1	Other	1
Subchapter C Corporation	0	None	5
Type of Barn	Number	bST Usage	Number
Stanchion or Tie-Stall	10	Used consistently	17
Freestall	22	Used inconsistently	1
Combination	4	Started using in 2005	1
Milking Frequency	Number	Stopped using in 2005	0
2 times per day	21	Not used in 2005	17
3 times per day	15	Average percent usage, if used	60%
Other	0	Business Record System	Number
Breed of Herd	Percent	Account Book	3
Holstein	97	Accounting Service	2
Jersey	3	On-farm computer	30
Other	0	Other	1

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

### Income Statement

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

Cash paid is the actual cash outlay during the year and does not necessarily represent the cost of goods and services actually used in 2005.

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

**CASH AND ACCRUAL FARM EXPENSES**  
36 Northern New York Region Dairy Farms, 2005

Expense Item	Cash Paid	-	Change in Inven- tory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
<u>Hired Labor</u>	\$ 179,734		\$ -433	<<	\$ 46		\$ 180,213
<u>Feed</u>							
Dairy grain & concentrate	327,696		23,444		-352		303,900
Dairy roughage	13,852		24		0		13,828
Nondairy	28		-55		0		83
Professional nutritional services	551		0		0		551
<u>Machinery</u>							
Machinery hire, rent & lease	25,471		0	<<	-658		24,813
Machinery repair & farm vehicle exp.	63,281		27		521		63,775
Fuel, oil & grease	39,935		1,335		346		38,946
<u>Livestock</u>							
Replacement livestock	13,114		0	<<	0		13,114
Breeding	19,501		193		21		19,328
Veterinary & medicine	50,529		2		311		50,838
Milk marketing	48,539		0	<<	303		48,842
Bedding	22,348		395		-26		21,927
Milking supplies	30,744		155		-194		30,395
Cattle lease & rent	0		0	<<	0		0
Custom boarding	25,849		0	<<	-1		25,848
bST	19,381		-30		-15		19,397
Livestock professional fees	3,002		17		0		2,985
Other livestock expense	6,853		-495		55		7,404
<u>Crops</u>							
Fertilizer & lime	25,101		1,941		0		23,160
Seeds & plants	17,704		1,779		-103		15,822
Spray, other crop expense	13,804		-368		81		14,253
Crop professional fees	1,557		0		0		1,557
<u>Real Estate</u>							
Land, building & fence repair	20,106		81		113		20,138
Taxes	14,252		-44	<<	0		14,296
Rent & lease	18,233		0	<<	6		18,239
<u>Other</u>							
Insurance	13,053		-109	<<	0		13,162
Utilities (farm share)	27,603		0	<<	381		27,984
Interest paid	45,626		0	<<	2		45,628
Other professional fees	5,494		-37		-39		5,492
Miscellaneous	10,756		346		-127		10,283
Total Operating	\$1,103,696		\$ 28,165		\$ 670		\$1,076,201
Expansion livestock	13,011		0	<<	0		13,011
Extraordinary expense	2,393		0	<<	0		2,393
Machinery depreciation							76,307
Building depreciation							42,806
<b>TOTAL ACCRUAL EXPENSES</b>							<b>\$1,210,718</b>

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

Change in accounts payable: An increase in accounts payable from beginning to end of year is added when calculating accrual expenses because these expenses were incurred (resources used) in 2005 but not paid for. A decrease is subtracted because it represents payment for resources used before 2005.

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

**CASH AND ACCRUAL FARM RECEIPTS**  
36 Northern New York Region Dairy Farms, 2005

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	\$1,251,813				\$ -3,691		\$ 1,248,122
Dairy cattle	55,046		\$ 35,781		246		91,072
Dairy calves	13,999		2,319		112		16,430
Other livestock	2,126		1,822		0		3,948
Crops	22,218		25,102		2,696		50,016
Government receipts	35,092		0 *		0		35,092
Custom machine work	10,143				-623		9,520
Gas tax refund	58				0		58
Other	<u>18,372</u>				<u>-94</u>		18,278
Less nonfarm noncash capital**		(-)	<u>0</u> **			(-)	<u>0</u>
Total Receipts	\$1,408,867		\$ 65,023		\$ -1,355		\$ 1,472,536

\*Change in advanced government receipts.

\*\*Gifts or inheritances of cattle or crops included in inventory.

Cash receipts include the gross value of milk checks received during the year plus all other payments received from the sale of farm products, services, and government programs. Nonfarm income is not included in calculating farm profitability.

Changes in inventory of assets produced by the business are calculated by subtracting beginning of year values from end of year values excluding appreciation. Increases in livestock inventory caused by herd growth and/or quality are added, and decreases caused by herd reduction and/or quality are subtracted. Changes in inventories of crops grown are also included. An increase in advanced government receipts is subtracted from cash income because it represents income received in 2005 for the 2006 crop year in excess of funds earned for 2005. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2005 but received in 2004.

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. Payments in January 2006 for milk produced in December 2005 compared to January 2005 payments for milk produced in 2004 are included as a change in accounts receivable in determining accrual milk sales.

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

### **Profitability Analysis**

Farm operators\* contribute labor, management, and equity capital to their businesses and the combination of these resources, and the other resources used in the business, determines profitability. Farm profitability can be measured as the return to all family resources or as the return to one or more individual resources such as labor and management.

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

---

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

Net farm income is the return to the farm operators and other unpaid family members for their labor, management, and equity capital. It is the farm family's net annual return from working, managing, and financing the farm business. This is not a measure of cash available from the year's business operation. Cash flow is evaluated later in this report.

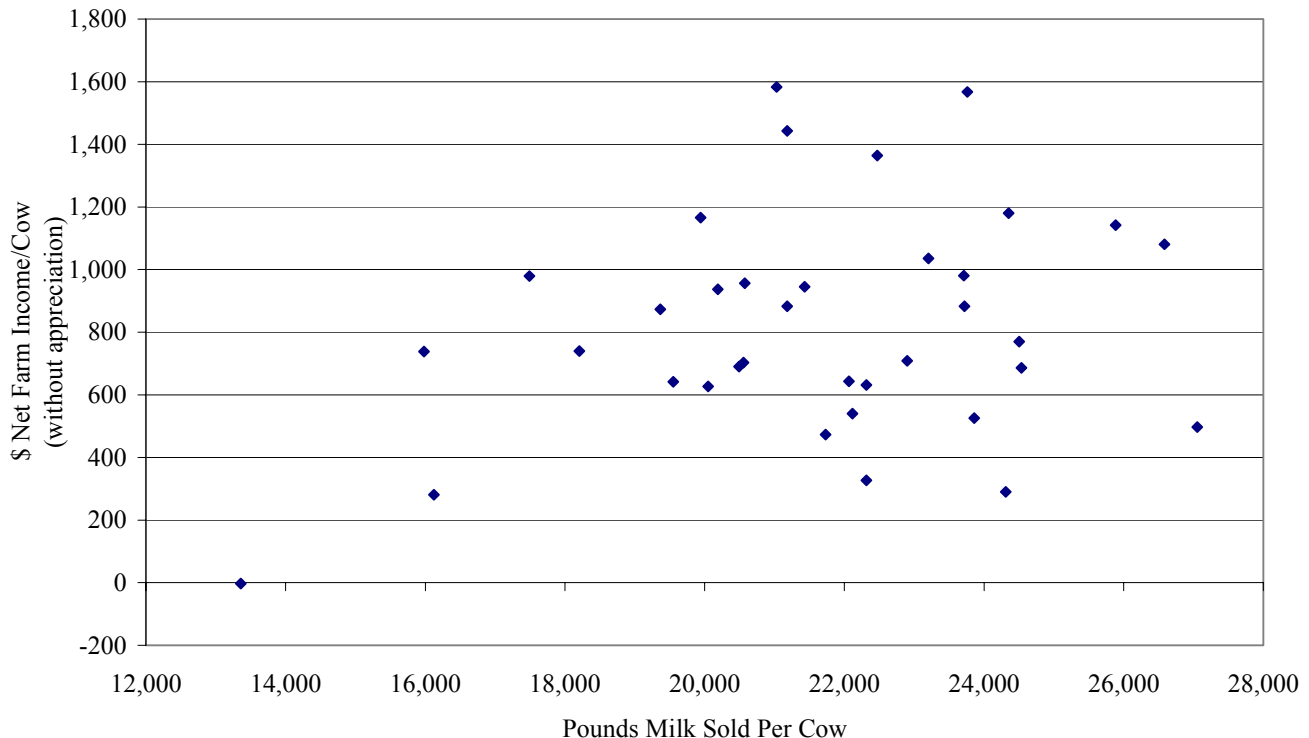
Net farm income is computed both with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than Farm Credit stock required for loan borrowings). Appreciation is a major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

**NET FARM INCOME**  
36 Northern New York Region Dairy Farms, 2005

Item	Total	Average	Total	My Farm
		Per Cow		Per Cow
Total accrual receipts	\$1,472,536		\$ _____	
Appreciation: Livestock	43,301		_____	
Machinery	51,451		_____	
Real Estate	40,297		_____	
Other Stock & Certificates	<u>-4,042</u>		_____	
Total Including Appreciation	\$1,603,542		\$ _____	
Total accrual expenses	<u>- 1,210,718</u>		- _____	
Net Farm Income (with appreciation)	\$ 392,824	\$ 1,148	\$ _____	\$ _____
Net Farm Income (without appreciation)	\$ 261,818	\$ 765	\$ _____	\$ _____

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

**NET FARM INCOME PER COW AND MILK PER COW**  
36 Northern New York Region Dairy Farms, 2005



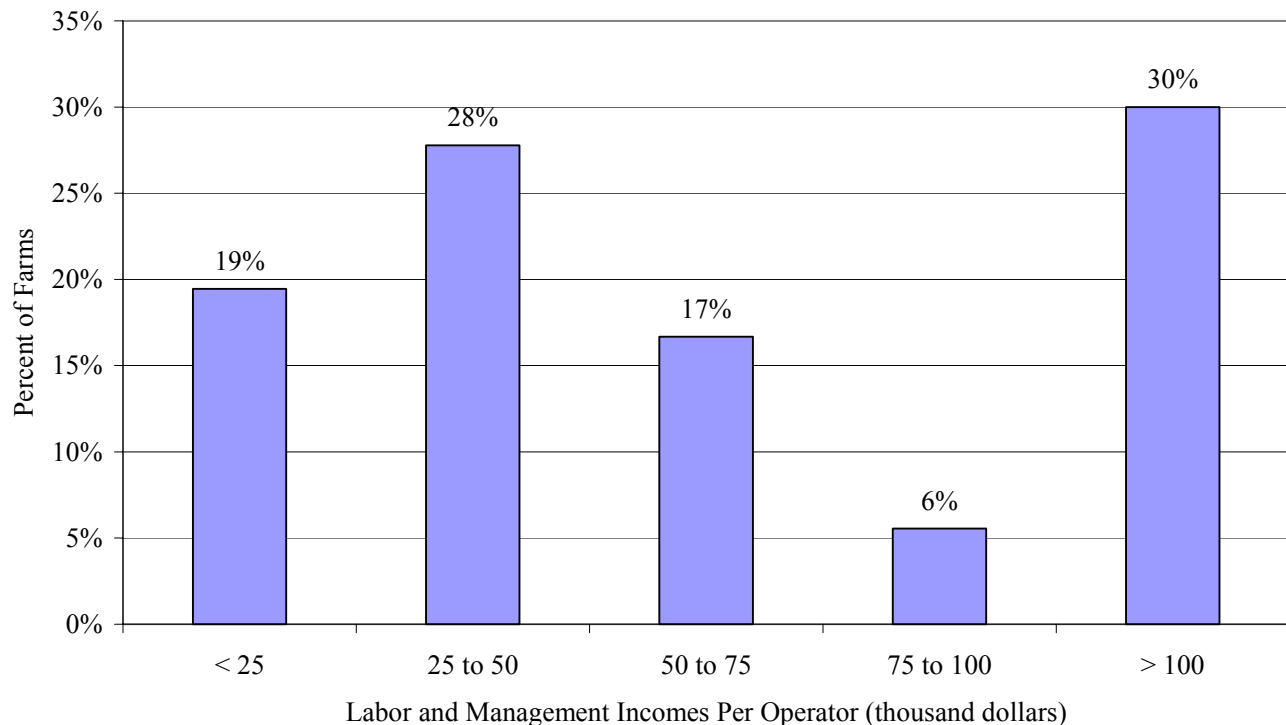
Labor and management income is the return which farm operators receive for their labor and management used in the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and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

**LABOR AND MANAGEMENT INCOME**  
36 Northern New York Region Dairy Farms, 2005

Item	Average	My Farm
Net farm income without appreciation	\$ 261,818	\$ _____
Family labor unpaid @ \$2,200 per month	- 1,937	- _____
Interest on \$1,709,003 average equity capital @ 5% real rate	- 85,450	- _____
Labor & Management Income per Farm (1.69 Operators/farm)	\$ 174,431	\$ _____
Labor & Management Income per Operator/Manager	\$ 103,213	\$ _____

Labor and management income per operator averaged \$103,213 on these 36 farms in 2005. The range in labor and management income per operator was from about \$-13,000 to more than \$574,000. Returns to labor and management were less than \$25,000 on 19 percent of the farms. Labor and management incomes per operator were between \$25,000 and \$75,000 on 45 percent of the farms while 36 percent showed labor and management incomes of \$75,000 or more per operator.

**DISTRIBUTION OF LABOR AND MANAGEMENT INCOMES PER OPERATOR**  
36 Northern New York Region Dairy Farms, 2005



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**  
36 Northern New York Region Dairy Farms, 2005

Item	Average	My Farm
Net farm income with appreciation	\$ 392,824	\$ _____
Family labor unpaid @\$2,200 per month	- 1,937	- _____
Value of operators' labor & management	<u>- 62,275</u>	- _____
Return on equity capital with appreciation	\$ 328,612	\$ _____
Interest paid	<u>+ 45,628</u>	+ _____
Return on total capital with appreciation	\$ 374,240	\$ _____
Return on equity capital without appreciation	\$ 197,606	\$ _____
Return on total capital without appreciation	\$ 243,233	\$ _____
Rate of return on average equity capital:		
with appreciation	19.2%	_____ %
without appreciation	11.6%	_____ %
Rate of return on average total capital:		
with appreciation	14.5%	_____ %
without appreciation	9.4%	_____ %
Net Farm Income from Operations Ratio	0.18	_____

**Farm and Family Financial Status**

The first step in evaluating the financial position of the farm is to construct a balance sheet which identifies and values all the assets and liabilities of the business. The second step is to evaluate the relationship between assets, liabilities, and net worth and changes that occurred during the year.

Financial lease obligations are included in the balance sheet. The present value of all future payments is listed as a liability since the farmer is committed to make the payments by signing the lease. The present value is also listed as an asset, representing the future value the item has to the business. For 2005, lease payments were discounted by 7.25 percent to obtain their present value.

Advanced government receipts are included as current liabilities. Government payments received in 2005 that are for participation in the 2006 program are the end year balance and payments received in 2004 for participation in the 2005 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.

**2005 FARM BUSINESS & NONFARM MARKET VALUE BALANCE SHEET**  
36 Northern New York Region Dairy Farms, 2005

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 20,121	\$ 20,745	Accounts payable	\$ 9,456	\$ 10,126
Accounts receivable	84,777	83,422	Operating debt	17,111	16,286
Prepaid expenses	757	150	Short Term	4,692	4,678
Feed & supplies	251,901	305,775	Advanced govt. receipts	0	0
			Current Portion:		
			Intermediate	88,502	95,816
			Long Term	23,229	25,905
Total Current	\$ 357,556	\$ 410,092	Total Current	\$ 142,989	\$ 152,812
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows:			Structured debt		
owned	\$ 436,449	\$ 475,807	1-10 years	\$ 367,004	\$ 372,627
leased	0	0	Financial lease		
Heifers	231,826	273,868	(cattle/machinery)	4,505	5,069
Bulls & other livestock	3,330	5,153	Farm Credit stock	2,699	1,286
Mach. & equip. owned	435,117	516,541	Total Intermediate	\$ 374,208	\$ 378,982
Mach. & equip. leased	4,505	5,069			
Farm Credit stock	2,699	1,286			
Other stock/certificate	26,984	24,635			
Total Intermediate	\$ 1,140,909	\$1,302,359			
<u>Long Term</u>			<u>Long Term</u>		
Land & buildings:			Structured debt		
owned	\$ 947,721	\$1,002,674	>10 years	\$ 362,875	\$ 336,749
leased	0	3,038	Financial lease		
Total Long Term	\$ 947,721	\$1,005,712	(structures)	0	3,038
			Total Long Term	\$ 362,875	\$ 339,787
Total Farm Assets	\$2,446,186	\$2,718,163	Total Farm Liabilities	\$ 880,072	\$ 871,581
			FARM NET WORTH	\$1,566,114	\$ 1,846,582

Nonfarm Assets, Liabilities & Net Worth (Average of 11 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	\$ 3,432	\$ 5,497	Nonfarm Liabilities	\$ 0	\$ 0
Cash value life insurance	19,109	28,183			
Nonfarm real estate	13,500	13,518			
Auto (personal share)	4,591	4,182			
Stocks & bonds	82,056	97,832			
Household furnishings	9,636	9,818			
All other nonfarm assets	14,773	13,545			
Total Nonfarm Assets	\$ 147,097	\$ 172,577	NONFARM NET WORTH	\$ 147,097	\$ 172,577

Farm & Nonfarm Assets, Liabilities, and Net Worth\*

	Jan. 1	Dec. 31
Total Assets	\$2,593,283	\$2,890,740
Total Liabilities	880,072	871,581
TOTAL FARM & NONFARM NET WORTH	\$1,713,211	\$2,019,159

\*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**  
36 Northern New York Region Dairy Farms, 2005

Item	Average		My Farm	
<u>Financial Ratios - Farm:</u>				
Percent equity		68%	_____	%
Debt/asset ratio: total		.32	_____	
long-term		.34	_____	
intermediate/current		.31	_____	
Leverage Ratio:		.47	_____	
Current Ratio:		2.68	_____	
Working capital	\$257,280	As % of total expenses:	21%	
<u>Farm Debt Analysis:</u>				
Accounts payable as % of total debt		1%	_____	%
Long-term liabilities as a % of total debt		39%	_____	%
Current & intermediate liabilities as a % of total debt		61%	_____	%
Cost of term debt (weighted average)		5.72%	_____	%
<u>Farm Debt Levels:</u>				
	<u>Per Cow</u>	<u>Per Tillable Acre Owned</u>	<u>Per Cow</u>	<u>Per Tillable Acre Owned</u>
Total farm debt	\$ 2,478	\$ 1,743	\$ _____	\$ _____
Long-term debt	966	679	_____	_____
Intermediate & long term	2,044	1,437	_____	_____
Intermediate & current debt	1,512	1,063	_____	_____

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

**FARM INVENTORY BALANCE**  
36 Northern New York Region Dairy Farms, 2005

Item	Average of Region's Farms			
	Real Estate		Machinery & Equipment	
Value beginning of year	\$	947,721	\$	435,117
Purchases	\$	87,679*	\$	111,865
Gift & inheritance	+	0	+	0
Lost capital	-	29,625	-	5,584
Sales	-	591	-	5,584
Depreciation	-	42,806	-	76,307
Net investment		= 14,656		= 29,973
Appreciation		+ 40,297		+ 51,451
Value end of year	\$	1,002,674	\$	516,541

\*\$6,092 land and \$81,587 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)**

36 Northern New York Region Dairy Farms, 2005

Item	Average	My Farm
Beginning of year farm net worth	\$1,566,114	\$ _____
Net farm income without appreciation	\$ 261,818	\$ _____
+Nonfarm cash income	+ 2,222	+ _____
-Personal withdrawals & family expenditures excluding nonfarm borrowings	<u>- 98,494</u>	- _____
RETAINED EARNINGS	+ \$ 165,546	+\$ _____
Nonfarm noncash transfers to farm	\$ 0	\$ _____
+Cash used in business from nonfarm capital	+ 7,371	+ _____
-Note or mortgage from farm real estate sold (nonfarm)	<u>- 0</u>	- _____
CONTRIBUTED/WITHDRAWN CAPITAL	+ \$ 7,371	+\$ _____
Appreciation	\$ 131,007	\$ _____
-Lost capital	<u>- 29,625</u>	- _____
CHANGE IN VALUATION EQUITY	+ \$ 101,381	+\$ _____
IMBALANCE/ERROR	<u>- -6,170</u>	- \$ _____
End of year net worth*	=\$ 1,846,582	=\$ _____
<hr/>		
<u>Change in Net Worth</u>		
Without appreciation	\$ 144,152	\$ _____
With appreciation	\$ 280,468	\$ _____

\*May not add due to rounding.

**Cash Flow Statement**

Completing an annual cash flow statement is an important step in understanding the sources and uses of funds for the business. Understanding last year's cash flow is the first step toward planning and managing cash flow for the current and future years.

The annual cash flow statement is structured to show net cash provided by operating activities, investing activities, financing activities and from reserves. All cash inflows and outflows, including beginning and end balances, are included. Therefore, the sum of net cash provided from all four activities should be zero. Any imbalance is the error from incorrect accounting of cash inflows/outflows.

**ANNUAL CASH FLOW STATEMENT**  
36 Northern New York Region Dairy Farms, 2005

Item	Average	
<b><u>Cash Flow from Operating Activities</u></b>		
Cash farm receipts	\$ 1,408,867	
- Cash farm expenses	1,103,696	
- Extraordinary expense	<u>2,393</u>	
= Net cash farm income		\$ 302,778
Personal withdrawals & family expenses including nonfarm debt payments	\$ 98,484	
- Nonfarm income	<u>2,222</u>	
- Net cash withdrawals from the farm		\$ <u>96,262</u>
= Net Provided by Operating Activities		\$ 206,517
<b><u>Cash Flow From Investing Activities</u></b>		
Sale of assets: machinery	\$ 5,584	
+ real estate	591	
+ other stock & cert.	<u>1,231</u>	
= Total asset sales		\$ 7,407
Capital purchases: expansion livestock	\$ 13,011	
+ machinery	111,865	
+ real estate	87,679	
+ other stock & cert.	<u>2,925</u>	
- Total invested in farm assets		\$ <u>215,479</u>
= Net Provided by Investment Activities		\$ -208,072
<b><u>Cash Flow From Financing Activities</u></b>		
Money borrowed (intermediate & long term)	\$ 133,625	
+ Money borrowed (short term)	5,367	
+ Increase in operating debt	0	
+ Cash from nonfarm capital used in business	7,371	
+ Money borrowed - nonfarm	<u>0</u>	
= Cash inflow from financing		\$ 146,363
Principal payments (intermediate & long term)	\$ 144,138	
+ Principal payments (short term)	5,391	
+ Decrease in operating debt	<u>825</u>	
- Cash outflow for financing		\$ <u>150,354</u>
= Net Provided by Financing Activities		\$ -3,991
<b><u>Cash Flow From Reserves</u></b>		
Beginning farm cash, checking & savings		\$ 20,121
- Ending farm cash, checking & savings		<u>20,745</u>
= Net Provided from Reserves		\$ -624
Imbalance (error)		\$ -6,170

## ANNUAL CASH FLOW STATEMENT

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

## Repayment Analysis

A valuable use of cash flow analysis is to compare the debt payments planned for the last year with the amount actually paid. The measures listed below provide a number of different perspectives on the repayment performance of the business. However, the critical question for many farmers and lenders is whether planned payments can be made in 2006. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2006 debt payments shown below.

### FARM DEBT PAYMENTS PLANNED

Same 25 Northern New York Region Dairy Farms, 2004 & 2005

Debt Payments	Average			My Farm		
	2005 Payments		Planned 2006	2005 Payments		Planned 2006
	Planned	Made		Planned	Made	
Long term	\$ 58,761	\$ 79,991	\$ 65,210	\$ _____	\$ _____	\$ _____
Intermediate term	156,676	159,522	158,767	_____	_____	_____
Short term	3,426	5,360	3,671	_____	_____	_____
Operating (net reduction)	9,385	9,861	6,266	_____	_____	_____
Accounts payable (net reduction)	0	1,137	2,598	_____	_____	_____
Total	\$ 228,247	\$ 255,870	\$ 236,512	\$ _____	\$ _____	\$ _____
Per cow	\$ 533	\$ 598		\$ _____	\$ _____	
Per cwt. 2005 milk	\$ 2.28	\$ 2.56		\$ _____	\$ _____	
Percent of total 2005 farm receipts	13%	14%		_____	_____	
Percent of 2005 milk receipts	14%	16%		_____	_____	

The cash flow coverage ratio and debt coverage ratio measure the ability of the farm business to meet its planned debt payment schedule. The ratios show the percentage of payments planned for 2005 (as of December 31, 2004) that could have been made with the amount available for debt service in 2005. Farmers who did not participate in DFBS in 2004 have their 2005 ratios based on planned debt payments for 2006.

### COVERAGE RATIOS

Same 25 Northern New York Region Dairy Farms, 2004 & 2005

Item	Average	Item	Average
<u>Cash Flow Coverage Ratio</u>		<u>Debt Coverage Ratio</u>	
Cash farm receipts	\$1,790,116	Net farm income (w/o appreciation)	\$320,693
- Cash farm expenses	1,403,830	+ Depreciation	157,026
+ Interest paid (cash)	58,582	+ Interest paid (accrual)	58,585
- Net personal withdrawals from farm*	111,744	- Net personal withdrawals from farm*	111,744
(A) = Amount Available for Debt Service	\$333,124	(A') = Repayment Capacity	\$424,560
(B) = Debt Payments Planned for 2005 (as of December 31, 2004)	\$228,247	(B) = Debt Payments Planned for 2005 (as of December 31, 2004)	\$228,247
(A/B) = Cash Flow Coverage Ratio for 2005	1.46	(A'/B) = Debt Coverage Ratio for 2005	1.86

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

## ANNUAL CASH FLOW WORKSHEET

Item	36 Northern New York Re- gion Dairy Farms		My Farm	Expected Change	2006 Projection
	Per Cow	Per Cwt.	Per Cow/ Per Cwt.		
Average number of cows	342				
Total cwt. of milk sold		79,223			
<u>Accrual Operating Receipts</u>					
Milk	\$3,649	\$15.75	\$ _____	_____	\$ _____
Dairy cattle	266	1.15	_____	_____	_____
Dairy calves	48	0.21	_____	_____	_____
Other livestock	12	0.05	_____	_____	_____
Crops	146	0.63	_____	_____	_____
Miscellaneous Receipts	<u>184</u>	<u>0.79</u>	_____	_____	_____
Total	\$4,305	\$18.59	\$ _____	_____	\$ _____
<u>Accrual Operating Expenses</u>					
Hired labor	\$ 527	\$ 2.27	\$ _____	_____	\$ _____
Dairy grain & concentrate	888	3.84	_____	_____	_____
Dairy roughage	40	0.17	_____	_____	_____
Nondairy feed	0	0.00	_____	_____	_____
Professional nutritional services	2	0.01	_____	_____	_____
Machinery hire, rent & lease	73	0.31	_____	_____	_____
Machinery repair & vehicle expense	186	0.81	_____	_____	_____
Fuel, oil & grease	114	0.49	_____	_____	_____
Replacement livestock	38	0.17	_____	_____	_____
Breeding	57	0.24	_____	_____	_____
Veterinary & medicine	149	0.64	_____	_____	_____
Milk marketing	143	0.62	_____	_____	_____
Bedding	64	0.28	_____	_____	_____
Milking supplies	89	0.38	_____	_____	_____
Cattle lease	0	0.00	_____	_____	_____
Custom boarding	76	0.33	_____	_____	_____
bST	57	0.24	_____	_____	_____
Livestock professional fees	9	0.04	_____	_____	_____
Other livestock expense	22	0.09	_____	_____	_____
Fertilizer & lime	68	0.29	_____	_____	_____
Seeds & plants	46	0.20	_____	_____	_____
Spray & other crop expense	42	0.18	_____	_____	_____
Crop professional fees	5	0.02	_____	_____	_____
Land, building & fence repair	59	0.25	_____	_____	_____
Taxes	42	0.18	_____	_____	_____
Real estate rent & lease	53	0.23	_____	_____	_____
Insurance	38	0.17	_____	_____	_____
Utilities	82	0.35	_____	_____	_____
Miscellaneous	<u>46</u>	<u>0.20</u>	_____	_____	_____
Total Less Interest Paid	\$3,013	\$13.01	\$ _____	_____	\$ _____
<u>Net Accrual Operating Income</u>					
		<u>Total</u>			
(without interest paid)	\$ 441,963		\$ _____	_____	\$ _____
- Change in livestock /crop inventory*	65,023		_____	_____	_____
- Change in accounts receivable	-1,355		_____	_____	_____
- Change in feed & supply inventory**	28,165		_____	_____	_____
+ Change in accounts payable***	<u>668</u>		_____	_____	_____
NET CASH FLOW	\$ 350,797		\$ _____	_____	\$ _____
- Net family withdrawals	<u>\$ 96,272</u>		_____	_____	_____
Available for Farm	\$ 254,525		\$ _____	_____	_____
- Farm debt payments	<u>203,307</u>		_____	_____	_____
Available for Farm Investment	\$ 51,219		\$ _____	_____	\$ _____
- Capital purchases	<u>215,479</u>		_____	_____	_____
Additional Capital Needed	\$ 164,260		\$ _____	_____	\$ _____

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

### Cropping Analysis

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

#### LAND RESOURCES AND CROP PRODUCTION 36 Northern New York Region Dairy Farms, 2005

Item	Average			My Farm		
<u>Land</u>	<u>Owned</u>	<u>Rented</u>	<u>Total</u>	<u>Owned</u>	<u>Rented</u>	<u>Total</u>
Tillable	500	340	840	_____	_____	_____
Nontillable	53	10	63	_____	_____	_____
Other nontillable	221	6	227	_____	_____	_____
Total	774	356	1,130	_____	_____	_____
<u>Crop Yields</u>	<u>Farms</u>	<u>Acres*</u>	<u>Production/Acre</u>	<u>Acres</u>	<u>Production/Acre</u>	
Hay crop	35	475	3.16 tons DM	_____	_____	tons DM
Corn silage	32	274	20.99 ton	_____	_____	tons
			7.04 tons DM	_____	_____	tons DM
Other forage	3	33	4.37 tons DM	_____	_____	tons DM
Total forage	35	728	4.49 tons DM	_____	_____	tons DM
Corn grain	15	191	144 bushels	_____	_____	bushels
Oats	2	57	48 bushels	_____	_____	bushels
Wheat	0	0	0 bushels	_____	_____	bushels
Other crops	5	209		_____	_____	
Tillable pasture	9	63		_____	_____	
Idle	4	22		_____	_____	
Total Tillable Acres	36	840		_____	_____	

\*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were hay crop 462, corn silage 243, corn grain 80, oats 3, tillable pasture 16, and idle 2.

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 35 Northern New York Region Dairy Farms, 2005

Item	Average*	My Farm
Total tillable acres per cow	2.46	_____
Total forage acres per cow	2.08	_____
Harvested forage dry matter, tons per cow	9.33	_____

\*Excludes farms that do not harvest forages.

**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 four farms in the region.

**CROP RELATED ACCRUAL EXPENSES**  
Northern New York Region Dairy Farms Reporting, 2005

Item	Total Per Tillable Acre	All Corn Per Acre	Corn Silage Per Ton DM	Corn Grain Per Dry Sh. Bu.	Hay Crop		Pasture	
					Per Acre	Per Ton DM	Per Till- able Pas- ture Acre	Per Total Pasture Acre
No. of farms reporting	34	8				7		2
Ave. number of acres	864	153				358		15
Fert. & lime	\$ 25.35	\$ 58.28	\$ 10.64	\$ 0.09	\$ 18.90	\$ 9.46	\$ 44.35	\$ 15.94
Seeds & plants	15.13	32.14	5.81	0.11	7.86	4.22	0.00	0.71
Spray & other crop expense	<u>15.85</u>	<u>39.44</u>	<u>7.26</u>	<u>0.09</u>	<u>2.97</u>	<u>1.18</u>	<u>0.00</u>	<u>0.00</u>
TOTAL	\$ 56.33	\$ 129.86	\$ 23.71	\$ 0.29	\$ 29.73	\$ 14.86	\$ 44.35	\$ 16.65

**My Farm**

Fertilizer & lime	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
Seeds & plants	_____	_____	_____	_____	_____	_____	_____	_____
Spray & other crop expense	_____	_____	_____	_____	_____	_____	_____	_____
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**  
35 Northern New York Region Dairy Farms, 2005\*

Machinery Expense	Average		My Farm	
	Total Expenses	Per Tillable Acre	Total Expenses	Per Tillable Acre
Fuel, oil & grease	\$ 40,044	\$ 46.35	\$ _____	\$ _____
Mach. repair & vehicle expense	65,535	75.85	_____	_____
Machine hire, rent & lease	25,514	29.53	_____	_____
Interest (5%)	24,716	28.61	_____	_____
Depreciation	<u>78,476</u>	<u>90.83</u>	_____	_____
Total	\$ 234,285	\$ 271.17	\$ _____	\$ _____

\*Excludes farms that do not harvest forages.

**Dairy Analysis**

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

**DAIRY HERD INVENTORY**  
36 Northern New York Region Dairy Farms, 2005

Item	Dairy Cows		Bred		Heifer Open		Calves	
	No.	Value	No.	Value	No.	Value	No.	Value
Beg. year (owned)	338	\$436,449	96	\$ 124,260	92	\$ 72,894	76	\$ 34,672
+ Change w/o apprec.		19,046		13,008		3,726		2,319
+ Appreciation		<u>20,313</u>		<u>13,789</u>		<u>6,472</u>		<u>2,728</u>
End year (owned)	352	\$ 475,807	106	\$ 151,057	98	\$ 83,093	80	\$ 39,718
End including leased	352							
Average number	342		277	(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**  
36 Northern New York Region Dairy Farms, 2005

Item	Average	My Farm
Total milk sold, lbs.	7,922,305	_____
Milk sold per cow, lbs.	23,161	_____
Average milk plant test, percent butterfat	3.62%*	_____

\*Average of farms reporting pounds of butterfat.

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

**ANIMALS LEAVING THE HERD**  
36 Northern New York Region Dairy Farms, 2005

Item	Average		My Farm	
	Number	Percent*	Number	Percent*
Cows sold for beef	91	26.6	_____	_____
Cows sold for dairy	3	0.8	_____	_____
Cows died	16	4.7	_____	_____
Culling rate**		31.3		_____

\*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**

36 Northern New York Region Dairy Farms, 2005

Item	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
<u>Accrual Cost of Producing Milk</u>						
Operating costs	\$ 864,798	\$ 2,528	\$ 10.92	\$ _____	\$ _____	\$ _____
Purchased inputs costs	\$ 986,304	\$ 2,883	\$ 12.45	\$ _____	\$ _____	\$ _____
Total Costs	\$ 1,135,966	\$ 3,321	\$ 14.34	\$ _____	\$ _____	\$ _____
<u>Accrual Receipts</u>						
<u>From Milk</u>	\$ 1,248,122	\$ 3,649	\$ 15.75	\$ _____	\$ _____	\$ _____
Net Milk Receipts	\$ 1,199,280	\$ 3,236	\$ 15.14	\$ _____	\$ _____	\$ _____
Net Farm Income without Apprec.	\$ 261,818	\$ 765	\$ 3.30	\$ _____	\$ _____	\$ _____
Net Farm Income with Appreciation	\$ 392,824	\$ 1,148	\$ 4.96	\$ _____	\$ _____	\$ _____

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**

36 Northern New York Region Dairy Farms, 2005

Item	Average		My Farm	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrate	\$ 888	\$ 3.84	\$ _____	\$ _____
Purchased dairy roughage	40	.17	_____	_____
Total Purchased Dairy Feed	\$ 928	\$ 4.01	\$ _____	\$ _____
Purchased grain & concentrate as % of milk receipts		24%	_____	_____ %
Purchased feed & crop expense	\$ 1,089	\$ 4.70	\$ _____	\$ _____
Purchased feed & crop expense as % of milk receipts		30%	_____	_____ %
Breeding	\$ 57	\$ .24	\$ _____	\$ _____
Veterinary & medicine	149	.64	_____	_____
Milk marketing	143	.62	_____	_____
Bedding	64	.28	_____	_____
Milking supplies	89	.38	_____	_____
Cattle lease	0	.00	_____	_____
Custom boarding	76	.33	_____	_____
bST	57	.24	_____	_____
Livestock professional fees	9	.04	_____	_____
Other livestock expense	22	.09	_____	_____

**Capital and Labor Efficiency Analysis**

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

**CAPITAL EFFICIENCY**  
36 Northern New York Region Dairy Farms, 2005

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	\$326,444	\$7,549	\$3,074	\$5,163
Real estate		2,855		1,953
Machinery & equipment	60,761	1,405	572	

Ratios

Asset turnover	Operating Expense	Interest Expense	Depreciation Expense
.62	.71	.03	.08

My Farm

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

Ratios

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

**LABOR FORCE INVENTORY**

36 Northern New York Region Dairy Farms, 2005

Labor Force	Months	Age	Years of Education	Value of Labor & Management
Operator number 1	13.2	46	14	\$36,358
Operator number 2	7.0	49	13	20,417
Operator number 3	2.5	42	14	5,500
Family paid	1.6			
Family unpaid	0.9			
Hired	<u>69.8</u>			
Total	94.9	/ 12 = 7.91 Worker Equivalent 1.69 Operator/Manager Equivalent		

<u>My Farm:</u> Total	_____	/ 12 = _____	Worker Equivalent
Operator's	_____	/ 12 = _____	Operator/Manager Equivalent

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

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

### LABOR EFFICIENCY

36 Northern New York Region Dairy Farms, 2005

Labor Efficiency	Average		My Farm	
	Total	Per Worker	Total	Per Worker
Cows, average number	342	43	_____	_____
Milk sold, pounds	7,922,305	1,001,556	_____	_____
Tillable acres	840	106	_____	_____

### LABOR AND MACHINERY COSTS

36 Northern New York Region Dairy Farms, 2005

Labor Costs	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Value of operator(s)						
labor (\$2,200/month)	\$ 49,830	\$ 146	\$ .63	\$ _____	\$ _____	\$ _____
Family unpaid						
(\$2,200/month)	1,936	5	.02	_____	_____	_____
Hired	<u>180,213</u>	<u>527</u>	<u>2.27</u>	_____	_____	_____
Total Labor	\$ 231,979	\$ 678	\$ 2.92	\$ _____	\$ _____	\$ _____
Machinery Cost	\$ <u>227,872</u>	\$ <u>666</u>	\$ <u>2.88</u>	\$ _____	\$ _____	\$ _____
Total Labor & Mach.	\$ 459,851	\$ 1,344	\$ 5.80	\$ _____	\$ _____	\$ _____
Hired labor expense per hired worker equivalent			\$30,292	\$ _____		
Hired labor expense as % of milk sales			14.4%	_____%		

## COMPARATIVE ANALYSIS OF THE FARM BUSINESS

### Progress of the Farm Business

Comparing your business with average data from regional DFBS cooperators that participated in both of the last two years can be helpful to establishing your goals for these parameters. It is equally important for you to determine the progress your business has made over the past two or three years, to compare this progress to your goals, and to set goals for the future.

### PROGRESS OF THE FARM BUSINESS

Same 25 Northern New York Region Dairy Farms, 2004 & 2005

Selected Factors	Average of 25 Farms*		My Farm		Goal
	2004	2005	2004	2005	
<u>Size of Business</u>					
Average number of cows	407	428	_____	_____	_____
Average number of heifers	312	346	_____	_____	_____
Milk sold, pounds	9,113,972	10,001,901	_____	_____	_____
Worker equivalent	9.15	9.91	_____	_____	_____
Total tillable acres	960	1,021	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, pounds	22,386	23,378	_____	_____	_____
Hay DM per acre, tons	3.2	3.3	_____	_____	_____
Corn silage per acre, tons	19.8	21.1	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	44	43	_____	_____	_____
Milk sold/worker, pounds	996,063	1,009,274	_____	_____	_____
<u>Cost Control</u>					
Grain & conc. purchased as % of milk sales	26%	24%	_____ %	_____ %	_____ %
Dairy feed & crop expense per cwt. milk	\$ 5.33	\$ 4.68	\$ _____	\$ _____	\$ _____
Labor & mach. costs/cow	\$ 1,254	\$ 1,346	\$ _____	\$ _____	\$ _____
Operating cost of producing cwt. of milk	\$ 11.25	\$ 10.97	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency**</u>					
Farm capital per cow	\$ 7,097	\$ 7,571	\$ _____	\$ _____	\$ _____
Mach. & equipment per cow	\$ 1,297	\$ 1,438	\$ _____	\$ _____	\$ _____
Asset turnover ratio	.66	.63	_____	_____	_____
<u>Profitability</u>					
Net farm income w/o apprec.	\$ 352,194	\$ 320,693	\$ _____	\$ _____	\$ _____
Net farm income with apprec.	\$ 466,733	\$ 499,938	\$ _____	\$ _____	\$ _____
Labor & management income per operator/manager	\$ 148,656	\$ 120,748	\$ _____	\$ _____	\$ _____
Rate of return on equity capital with appreciation	22.4%	20.2%	_____ %	_____ %	_____ %
Rate of return on all capital with appreciation	15.4%	15.0%	_____ %	_____ %	_____ %
<u>Financial Summary</u>					
Farm net worth, end year	\$1,951,949	\$ 2,291,452	\$ _____	\$ _____	\$ _____
Debt to asset ratio	.36	.33	_____	_____	_____
Farm debt per cow	\$ 2,642	\$ 2,564	\$ _____	\$ _____	\$ _____

\*Farms participating both years.

\*\*Average for the year.

**RECEIPTS AND EXPENSES PER COW AND PER CWT.**  
Same 25 Northern New York Region Dairy Farms, 2004 & 2005

Item	2004		2005	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	407		428	
Cwt. of Milk Sold		91,140		100,019
<b><u>ACCRUAL OPERATING RECEIPTS</u></b>				
Milk	\$3,733	\$16.67	\$3,689	\$15.78
Dairy cattle	330	1.48	271	1.16
Dairy calves	68	0.30	48	0.21
Other livestock	6	0.03	13	0.06
Crops	127	0.57	161	0.69
Miscellaneous receipts	<u>129</u>	<u>0.58</u>	<u>188</u>	<u>0.80</u>
Total Receipts	\$4,392	\$19.62	\$4,369	\$18.69
<b><u>ACCRUAL OPERATING EXPENSES</u></b>				
Hired labor	\$ 523	\$ 2.34	\$ 558	\$ 2.39
Dairy grain & concentrate	965	4.31	894	3.83
Dairy roughage	43	0.19	36	0.15
Nondairy feed	0	0.00	0	0.00
Professional nutritional services	2	0.01	2	0.01
Machine hire, rent & lease	66	0.30	55	0.24
Machinery repair & vehicle expense	173	0.77	185	0.79
Fuel, oil & grease	82	0.37	113	0.48
Replacement livestock	17	0.07	44	0.19
Breeding	51	0.23	58	0.25
Veterinary & medicine	127	0.57	150	0.64
Milk marketing	138	0.61	147	0.63
Bedding	54	0.24	69	0.30
Milking supplies	89	0.40	92	0.39
Cattle lease	0	0.00	0	0.00
Custom boarding	66	0.30	86	0.37
bST expense	41	0.18	63	0.27
Livestock professional fees	6	0.03	9	0.04
Other livestock expense	19	0.08	22	0.09
Fertilizer & lime	96	0.43	68	0.29
Seeds & plants	47	0.21	49	0.21
Spray & other crop expense	35	0.16	42	0.18
Crop professional fees	7	0.03	5	0.02
Land, building & fence repair	59	0.26	57	0.25
Taxes	41	0.18	42	0.18
Real estate rent & lease	43	0.19	52	0.22
Insurance	38	0.17	38	0.16
Utilities	75	0.33	79	0.34
Interest paid	115	0.51	137	0.59
Other professional fees	18	0.08	17	0.07
Miscellaneous	<u>17</u>	<u>0.07</u>	<u>32</u>	<u>0.14</u>
Total Operating Expenses	\$3,052	\$13.63	\$3,202	\$13.70
Expansion Livestock	125	0.56	43	0.18
Extraordinary Expense	2	0.01	8	0.03
Machinery Depreciation	206	0.92	234	1.00
Real Estate Depreciation	<u>141</u>	<u>0.63</u>	<u>133</u>	<u>0.57</u>
Total Expenses	\$3,526	\$15.75	\$3,620	\$15.48
Net Farm Income Without Appreciation	\$ 865	\$ 3.86	\$ 750	\$ 3.21

### 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

36 Northern New York Region Dairy Farms, 2005

Size of Business			Rate of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
21.56	1,015	24,576,324	25,319	5.2	25	56	1,220,520
9.60	384	8,511,956	23,376	3.7	21	47	1,060,775
4.81	192	4,246,613	21,881	3.0	20	42	913,853
2.96	109	2,255,603	20,582	2.4	18	34	736,246
1.53	52	1,008,688	17,502	1.8	17	24	480,767

Cost Control						
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk	
(12)	(12)	(14)	(14)	(12)	(12)	
\$511	16%	\$401	\$1,106	\$754	\$3.72	
729	22	613	1,306	872	4.15	
848	25	685	1,424	1,017	4.60	
893	27	772	1,507	1,130	4.93	
1,054	31	1,007	1,847	1,248	5.93	

Value and Cost of Production			Profitability			Change in
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	Net Worth with Appreciation
(12)	(12)	(12)	(4)	(4)	(4)	(8)
\$3,943	\$8.00	\$12.77	\$1,258,656	\$765,154	\$319,696	\$954,111
3,619	9.78	13.86	381,031	284,093	112,476	273,001
3,423	10.53	14.76	223,594	169,734	54,693	122,730
3,183	11.31	15.43	109,716	86,418	30,634	55,480
2,711	12.65	16.83	41,337	35,957	6,260	8,557

\*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** 53 New York Dairy Farms, 2005

<u>Animals Entering Herd</u>	Average
Number calving in 2005 for first time	139
Animals purchased, % <sup>1</sup>	11%
Animals raised by farm, % <sup>2</sup>	89%
 <u>Current Heifer Inventory</u>	
Raised on dairy, %	86%
Raised by a custom grower, %	14%

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

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

On the average farm, 139 animals calved for the first time in 2005. The breakdown on these animals for source was 11 percent purchased and 89 percent raised by the farm. Of the current heifer inventory, 86 percent were raised on the dairy and 14 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, 20 Northern New York farms provided data for all the different sources of income for milk sales and the milk marketing expenses on an accrual basis. This information is reported in the following two tables. The tables are divided into six different areas, each representing a different area of income or expenses.

The first section looks at the value of the milk components on a per cwt. basis. The second area looks at the Producer Price Differential. The third area looks at the premiums a farm receives. Any premiums not specifically noted as quality or volume related are included in market premiums. The fourth area looks at the expenses associated with marketing milk. A new line item in this section is the expenses associated with utilizing forward contracting or hedging programs to market milk, such as commission or broker fees. The fifth area is income from 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.

**AVERAGE MILK INCOME AND MARKETING REPORT**  
20 Northern New York Region Dairy Farms, 2005

	Pounds	Percent	Price/Pound	Total	\$/Cwt of Milk
<b>BASE FARM PRICE</b>					
Butterfat	382,965.80	3.62%	\$1.71	\$656,765.95	\$6.21
Protein	317,245.05	3.00%	\$2.46	\$781,226.45	\$7.38
Solids	602,849.40	5.70%	\$0.13	\$81,098.85	\$0.77
<b>Total Component Contribution</b>					\$14.36
<b>PPD</b>	10,584,070.00			\$66,025.60	\$0.62
<b>Base Farm Price</b>					\$14.98
<b>Premiums</b>					
Quality				\$42,411.25	\$0.40
Volume				\$40,279.70	\$0.38
Market Premiums				\$9,605.90	\$0.09
<b>Total Premiums</b>					\$0.87
<b>BASE FARM PRICE + PREMIUM</b>					\$15.85
<b>Deductions</b>					
Promotion				\$15,546.90	\$0.15
Hauling + Stop Charges.				\$41,176.75	\$0.39
Market Fees & Coop Dues				\$12,229.00	\$0.12
<b>Total Deductions</b>					\$0.66
<b>BASE FARM PRICE + PREMIUMS - DEDUCTIONS</b>					\$15.19
<b>Marketing Programs</b>					
Futures Contracts, Forward Contracting, Etc.				\$-2,614.05	\$-0.02
<b>Total Marketing Income</b>					\$-0.02
<b>Patronage Dividends</b>				\$1,964.15	\$0.02
<b>NET PRICE RECEIVED ON FARM, ALL SOURCES</b>					\$15.19
<b>PPD - Hauling, \$ per cwt.</b>					\$0.23
<b>PPD - Hauling + Market Premiums, \$ per cwt.</b>					\$0.32
<b>Net Marketing Value (PPD + Total Premiums - Total Deductions), \$ per cwt.</b>					\$0.84



### 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 200 farms for that factor. The other figures in each column are the average for the second 10 percent, third 10 percent, etc. Each column of the chart is independent of the others. The farms which are in the top 10 percent for one factor would not necessarily be the same farms which make up the top 10 percent for any other factor.

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

#### FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS

200 New York Dairy Farms, 2004

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
27.4	1,320	30,813,655	25,912	5.6	24	61	1,276,169
15.2	627	14,673,004	23,717	4.3	21	51	1,100,689
10.7	430	9,341,701	22,791	3.9	20	46	981,861
7.2	309	6,569,316	21,971	3.5	19	42	868,108
5.4	225	4,326,245	21,304	3.3	18	38	787,445
-----							
4.2	144	2,848,633	20,482	3.0	17	35	700,990
3.4	110	2,072,815	19,295	2.8	16	32	631,342
2.7	78	1,398,571	17,658	2.3	15	29	547,027
2.0	59	1,035,229	15,829	2.0	13	26	445,686
1.5	42	687,413	12,854	1.4	9	19	321,988

Cost Control						
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk	
(12)	(12)	(14)	(14)	(12)	(12)	
\$507	17%	\$323	\$903	\$660	\$3.87	
669	22	444	1,124	863	4.71	
780	24	499	1,221	994	5.10	
839	26	552	1,293	1,082	5.34	
900	27	592	1,370	1,133	5.54	
-----						
979	28	637	1,463	1,183	5.75	
1,031	29	683	1,541	1,242	6.05	
1,094	31	750	1,664	1,308	6.36	
1,166	33	835	1,796	1,394	6.82	
1,295	39	1,044	2,173	1,591	7.69	

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

**FARM BUSINESS CHART FOR  
FARM MANAGEMENT COOPERATORS**  
200 New York Dairy Farms, 2004

Milk Receipts Per Cow	Milk Receipts Per Cwt.	Oper. Cost Milk Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cow	Total Cost Production Per Cwt.
(12)	(12)	(12)	(12)	(12)	(12)
\$4,409	\$18.64	\$1,505	\$9.19	\$2,552	\$13.68
3,964	17.86	1,892	10.50	2,955	14.56
3,777	17.47	2,164	11.20	3,132	15.16
3,662	17.13	2,319	11.80	3,275	15.81
3,573	16.92	2,449	12.19	3,381	16.56
-----					
3,421	16.71	2,587	12.60	3,490	17.26
3,279	16.55	2,733	13.13	3,621	18.37
3,027	16.28	2,884	13.71	3,774	19.14
2,662	16.06	3,090	14.37	3,992	20.42
2,246	15.46	3,400	15.99	4,485	24.72

Profitability						
Net Farm Income Without Appreciation			Net Farm Income With Appreciation		Labor & Management Income	
Total	Per Cow	Operations Ratio	Total	Per Cow	Per Farm	Per Operator
(4)	(12)	(4)	(4)	(12)	(4)	(4)
\$838,746	\$1,306	0.30	\$1,189,067	\$1,919	\$657,429	\$357,551
413,151	1,025	0.25	570,269	1,344	293,399	181,620
286,223	860	0.22	384,433	1,155	200,179	107,460
171,989	773	0.20	263,743	1,033	105,888	66,066
120,112	667	0.17	187,418	908	57,054	35,606
-----						
78,969	561	0.14	116,687	805	31,211	21,959
53,830	449	0.12	79,113	688	17,970	12,836
36,206	347	0.09	57,505	579	5,373	4,198
21,262	216	0.06	35,671	419	-12,627	-9,507
-11,854	-70	-0.03	10,807	103	-75,681	-63,025

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**  
200 New York Dairy Farms, 2004

Liquidity (repayment)							
Planned Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio	Debt Coverage Ratio	Debt Payments as Percent of Milk Sales	Debt Per Cow	Working Capital as % of Total Expenses	Current Ratio
(10)*	(16)	(10)	(10)	(10)	(7)	(7)	(7)
\$52	\$1,138	5.77	7.80	2%	\$231	42%	22.29
199	844	2.42	3.24	6	1,035	29	4.31
294	748	1.82	2.53	9	1,683	24	3.02
353	671	1.49	2.06	11	2,125	18	2.43
421	596	1.32	1.71	12	2,464	15	2.01
470	513	1.17	1.44	14	2,758	11	1.67
518	449	1.01	1.22	15	3,021	8	1.39
562	357	0.83	0.95	17	3,360	4	1.16
658	244	0.61	0.62	20	3,931	-2	0.89
815	-373	-1.30	-1.52	28	5,108	-17	0.52
Solvency				Operational Ratios			
Leverage Ratio**	Percent Equity	Debt/Asset Ratio		Operating Expense Ratio	Interest Expense Ratio	Depreciation Expense Ratio	
		Current & Intermediate	Long Term				
(7)	(7)	(7)	(7)	(14)	(14)	(14)	
0.02	98%	0.03	0.00	0.58	0.00	0.02	
0.14	88	0.11	0.00	0.64	0.01	0.04	
0.23	81	0.20	0.02	0.68	0.02	0.05	
0.35	74	0.25	0.14	0.71	0.02	0.06	
0.45	69	0.31	0.24	0.74	0.03	0.06	
0.56	64	0.37	0.34	0.76	0.03	0.07	
0.75	57	0.44	0.43	0.78	0.04	0.08	
0.95	51	0.50	0.56	0.80	0.04	0.09	
1.22	45	0.58	0.68	0.83	0.05	0.11	
2.76	30	0.79	0.89	0.91	0.08	0.15	
Efficiency (Capital)				Profitability			
Asset Turnover (ratio)	Real Estate Investment Per Cow	Machinery Investment Per Cow	Total Farm Assets Per Cow	Change in Net Worth With Appreciation	Percent Rate of Return with Appreciation on:		
					Equity	Investment***	
(14)	(14)	(14)	(14)	(8)	(4)	(4)	
.93	\$1,360	\$533	\$4,895	\$965,036	46%	23%	
.72	2,072	885	5,982	456,002	26	16	
.66	2,333	1,089	6,498	311,468	20	13	
.61	2,631	1,221	6,895	196,995	16	11	
.57	2,932	1,356	7,355	140,216	12	9	
.53	3,306	1,558	8,008	82,241	9	7	
.48	3,807	1,796	8,583	45,148	6	5	
.42	4,253	1,982	9,301	30,133	3	3	
.36	4,981	2,320	10,637	14,529	-1	1	
.27	7,946	3,464	13,990	-57,407	-11	-5	

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

\*\*Dollars of debt per dollar of equity, computed by dividing total liabilities by total equity.

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

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

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

The table on page 31 includes the average values for the resulting five groups of dairy farms. The average size of farms in the five groups ranges from 46 cows on the small conventional farms to 721 cows on the largest freestall farms.

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

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

### **Herd Size Comparisons**

A detailed comparison of profitability, financial situation and business analysis factors across herd sizes is contained on pages 48-60 of the 2004 State Summary\*. As herd size increases, the net farm income profitability generally increases (page 48)\*. Net farm income without appreciation averaged \$23,339 per farm for the less than 50 cow farms and \$624,346 per farm for those with more than 600 cows. Return to all capital without appreciation and labor and management income per operator 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 2004. The largest herd size category experienced an increase in net worth of over \$729,000. However, percent equity went down as assets increased. The largest herds had the lowest percent equity; while the smaller herds averaged 78 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 29 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 18,483 pounds of milk sold per cow. Farm capital per worker increased, and farm capital per cow decreased as herd size increased. Milk sold per worker increased dramatically as herd size increased, ranging from 365,964 pounds at the lowest herd size category up to 1,112,493 pounds at the largest size category.

---

\*Wayne A. Knoblauch, Linda D. Putnam, and Jason Karszes, Dairy Farm Management Business Summary, New York, 2004, Department of Applied Economics and Management, Cornell University, R.B. 2005-03, November 2005.

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

191 New York Dairy Farms, 2004

Item	Farms with:	Conventional		Freestall		
		<= 60 Cows	>60 Cows	<=150 Cows	151-300 Cows	≥300 Cows
Number of farms		30	27	32	32	70
<u>Cropping Program Analysis</u>						
Total Tillable acres		156	315	283	568	1,349
Tillable acres rented*		68	115	126	288	684
Hay crop acres *		109	179	166	284	605
Corn silage acres *		18	57	73	167	540
Hay crop, tons DM/acre		2.4	2.5	2.9	2.9	3.9
Corn silage, tons/acre		14.7	17.4	16.0	16.4	18.0
Oats, bushels/acre		0	50	60	53	55
Forage DM per cow, tons		8.0	8.8	9.0	8.0	7.9
Tillable acres/cow		3.5	3.5	2.9	2.6	1.9
Fertilizer & lime expense/tillable acre		\$18.02	\$25.60	\$28.81	\$31.75	\$33.72
Total machinery costs		\$29,905	\$70,440	\$68,491	\$146,434	\$392,561
Machinery cost/tillable acre		\$187	\$223	\$221	\$253	\$279
<u>Dairy Analysis</u>						
Number of cows		46	89	103	227	721
Number of heifers		34	74	85	172	561
Milk sold, lbs.		811,167	1,666,824	1,901,213	4,775,050	16,492,528
Milk sold/cow, lbs.		17,634	18,688	18,437	21,038	22,887
Operating cost of producing milk/cwt.		\$11.70	\$12.25	\$12.77	\$12.76	\$12.58
Total cost of producing milk/cwt.		\$19.90	\$19.12	\$18.32	\$16.53	\$15.24
Price/cwt. milk sold		\$16.75	\$17.07	\$17.08	\$16.92	\$16.52
Purchased dairy feed/cow		\$879	\$904	\$953	\$1,031	\$1,110
Purchased dairy feed/cwt. milk		\$4.99	\$4.84	\$5.17	\$4.90	\$4.85
Purchased grain & concentrate as % of milk receipts		29%	28%	28%	27%	27%
Purchased feed & crop expense/cwt milk		\$5.67	\$5.76	\$6.04	\$5.72	\$5.56
<u>Capital Efficiency</u>						
Farm capital/worker		\$226,694	\$278,771	\$300,917	\$307,527	\$294,409
Farm capital/cow		\$9,659	\$10,221	\$8,696	\$7,547	\$6,586
Farm capital/tillable acre owned		\$5,026	\$4,563	\$5,724	\$6,121	\$7,138
Real estate/cow		\$4,797	\$4,523	\$3,768	\$3,095	\$2,551
Machinery investment/cow		\$1,949	\$2,341	\$1,855	\$1,444	\$1,073
Asset turnover ratio		0.38	0.40	0.43	0.59	0.69
<u>Labor Efficiency</u>						
Worker equivalent		1.95	3.27	2.98	5.57	16.12
Operator/manager equivalent		1.21	1.45	1.40	1.73	1.94
Milk sold/worker, lbs.		415,273	509,862	637,991	856,767	1,023,057
Cows/worker		24	27	35	41	45
Labor cost/cow		\$1,067	\$884	\$785	\$708	\$746
Labor cost/tillable acre		\$314	\$250	\$286	\$283	\$399
<u>Profitability &amp; Balance Sheet Analysis</u>						
Net farm income (without appreciation)		\$29,499	\$52,175	\$55,987	\$137,058	\$433,769
Labor & management income/operator		\$4,396	\$3,034	\$12,637	\$46,154	\$157,455
Rate return on all capital with appreciation		2.1%	4.4%	4.7%	11.3%	13.6%
Farm debt/cow		\$2,366	\$1,548	\$2,279	\$2,764	\$3,011
Percent equity		75%	85%	74%	64%	55%

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

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

30 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 2004

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
3.22	57	1,133,707	24,089	4.2	23	42	703,501
2.67	54	1,045,992	21,880	3.3	19	35	597,059
2.20	53	955,714	20,457	2.9	18	30	539,444
1.99	51	898,535	18,678	2.7	16	28	463,053
1.95	50	831,754	17,910	2.4	15	25	438,231
-----							
1.83	45	794,187	17,233	2.3	13	23	407,325
1.63	43	757,164	15,949	2.1	11	20	375,185
1.54	41	717,533	14,769	1.8	11	19	327,774
1.36	37	651,795	13,648	1.7	10	17	268,092
1.17	30	325,286	10,933	1.3	9	15	240,908

Cost Control						
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk	
(12)	(12)	(14)	(14)	(12)	(12)	
\$439	16%	\$249	\$1,045	\$586	\$3.64	
552	22	401	1,248	681	4.44	
660	25	489	1,405	729	5.01	
743	27	543	1,482	803	5.16	
799	27	617	1,672	928	5.39	
-----						
857	28	650	1,765	1,092	5.75	
959	30	700	1,908	1,167	6.36	
1,027	33	805	2,056	1,217	6.50	
1,073	37	858	2,224	1,281	7.17	
1,241	45	1,070	2,508	1,534	7.96	

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
			Total	Per Cow		
(12)	(12)	(12)	(4)	(12)	(4)	(8)
\$4,139	\$8.95	\$15.64	\$65,615	\$1,417	\$34,907	\$56,545
3,609	9.96	16.73	53,094	1,057	25,157	39,942
3,371	10.34	18.19	43,380	855	15,921	32,522
3,152	10.74	18.95	37,978	782	13,101	25,724
2,994	11.28	19.21	33,091	730	9,366	21,782
-----						
2,798	11.64	19.42	24,986	508	2,667	19,045
2,648	12.28	20.57	15,518	412	-772	13,697
2,562	13.40	22.06	13,372	306	-6,272	10,020
2,311	14.27	24.21	10,509	272	-11,253	5,776
1,802	15.81	29.77	-2,547	-92	-32,189	-17,925

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

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

27 Conventional Stall Dairy Farms with More Than 60 Cows, New York, 2004

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
7.23	163	3,202,431	25,150	4.7	25	42	814,565
4.44	122	2,352,081	22,786	4.0	24	36	764,671
4.13	112	2,129,506	21,627	3.7	22	36	705,555
3.69	97	1,903,718	20,728	3.2	19	34	672,474
3.18	91	1,684,049	20,172	3.1	17	32	579,958
2.84	83	1,488,916	19,014	2.5	17	30	512,690
2.67	72	1,369,555	17,369	2.2	16	27	479,264
2.50	70	1,256,258	16,255	2.0	14	23	422,381
2.18	65	1,184,462	14,824	1.6	12	21	375,024
1.83	62	991,768	13,589	1.2	7	19	315,051

Cost Control						
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk	Feed & Crop Expenses Per Cwt. Milk
(12)	(12)	(14)	(14)	(12)	(12)	(12)
\$437	14%	\$463	\$1,205	\$676	\$3.69	\$3.69
690	21	547	1,331	896	4.80	4.80
732	24	602	1,419	959	5.19	5.19
814	25	653	1,512	1,057	5.43	5.43
869	26	705	1,593	1,098	5.60	5.60
915	29	785	1,710	1,125	6.00	6.00
986	32	812	1,839	1,142	6.57	6.57
1,085	37	874	1,950	1,186	7.11	7.11
1,188	40	1,001	2,166	1,331	7.59	7.59
1,332	44	1,710	2,544	1,544	8.26	8.26

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
			Total	Per Cow		
(12)	(12)	(12)	(4)	(12)	(4)	(8)
\$4,223	\$8.82	\$14.13	\$134,367	\$1,343	\$70,126	\$172,691
3,733	10.13	15.75	124,089	1,272	50,269	111,611
3,624	10.76	16.97	106,546	1,139	32,318	78,720
3,561	11.80	18.66	73,883	941	24,579	63,284
3,406	12.34	19.62	56,295	714	14,088	49,668
3,202	13.25	20.19	44,700	545	5,513	41,071
3,095	13.69	20.77	32,908	401	-2,950	23,803
2,685	14.07	21.79	23,788	372	-13,888	5,082
2,571	15.16	24.47	14,470	141	-28,902	-10,405
2,359	16.68	28.65	-19,802	-204	-115,200	-272,653

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

### FARM BUSINESS CHART FOR SMALL FREESTALL DAIRY FARMS

32 Freestall Barn Dairy Farms with 150 or Less Cows, New York, 2004

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
4.83	141	2,841,997	22,522	5.5	22	60	1,050,540
4.11	130	2,613,323	21,432	4.6	20	48	858,837
3.68	125	2,359,415	20,771	4.2	19	42	754,070
3.39	121	2,244,505	19,815	3.6	18	39	678,744
3.25	111	2,101,750	18,982	2.9	17	35	651,909
3.03	108	2,030,754	18,383	2.5	15	33	635,943
2.68	103	1,770,415	17,577	2.1	14	32	614,418
2.22	80	1,446,587	16,945	1.9	13	30	559,852
1.90	74	1,231,628	15,798	1.6	11	28	510,864
1.56	62	921,519	12,691	1.1	7	26	415,621

Cost Control						
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk	Feed & Crop Expenses Per Cwt. Milk
(12)	(12)	(14)	(14)	(12)	(12)	(12)
\$523	19%	\$338	\$944	\$650	\$4.18	\$4.18
645	23	454	1,126	889	5.02	5.02
756	26	500	1,226	977	5.65	5.65
828	27	533	1,303	1,040	5.85	5.85
863	28	594	1,366	1,103	6.06	6.06
915	29	678	1,441	1,171	6.36	6.36
997	30	714	1,541	1,235	6.80	6.80
1,088	33	742	1,659	1,327	7.02	7.02
1,136	33	844	1,785	1,384	7.26	7.26
1,249	37	962	1,976	1,509	7.44	7.44

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
			Total	Per Cow		
(12)	(12)	(12)	(4)	(12)	(4)	(8)
\$3,782	\$8.83	\$14.88	\$147,360	\$1,290	\$82,291	\$277,345
3,661	10.67	16.84	99,576	858	30,316	132,961
3,512	11.97	17.42	80,680	710	24,754	99,601
3,383	12.26	17.82	72,142	664	20,332	71,653
3,278	12.62	18.40	64,239	632	17,565	49,907
3,175	13.05	18.58	46,650	574	13,351	43,007
2,974	13.67	19.26	41,725	524	7,985	36,388
2,819	14.03	20.00	35,016	428	2,028	28,159
2,611	15.28	21.03	22,125	241	-13,716	20,684
2,342	16.51	24.26	-14,771	-136	-54,626	-1,213

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

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

32 Freestall Barn Dairy Farms with 151-300 Cows, New York, 2004

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
8.68	293	7,147,274	25,374	5.0	24	57	1,174,860
6.53	282	6,262,072	22,839	3.9	21	53	1,039,002
6.18	274	5,824,237	22,349	3.7	19	49	979,973
6.00	265	5,399,379	21,960	3.5	18	43	917,607
5.65	243	5,032,567	21,723	3.2	18	42	868,644
5.47	234	4,603,802	21,480	3.0	17	41	838,897
5.19	213	4,105,275	21,200	2.7	15	38	819,778
4.74	184	3,802,061	20,215	2.4	13	36	793,825
4.34	169	3,500,387	19,205	2.0	11	34	755,846
3.92	156	3,067,513	15,633	1.5	9	30	582,545

Cost Control						
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk	
(12)	(12)	(14)	(14)	(12)	(12)	
\$603	17%	\$426	\$1,023	\$869	\$4.18	
775	24	539	1,126	1,033	5.12	
851	25	576	1,209	1,112	5.38	
900	26	596	1,283	1,130	5.55	
965	26	625	1,328	1,162	5.63	
1,001	28	659	1,434	1,197	5.79	
1,018	28	689	1,504	1,252	6.05	
1,067	30	817	1,605	1,312	6.23	
1,169	33	877	1,700	1,366	6.45	
1,281	36	958	1,760	1,669	7.61	

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
			Total	Per Cow		
(12)	(12)	(12)	(4)	(12)	(4)	(8)
\$4,359	\$10.58	\$13.81	\$324,384	\$1,184	\$158,209	\$384,827
3,901	11.23	14.92	244,650	1,046	105,475	272,525
3,812	11.66	15.79	195,548	904	84,728	224,633
3,700	12.09	16.42	154,177	805	66,855	160,063
3,638	12.60	16.76	140,894	689	46,755	152,308
3,606	12.97	16.97	132,538	583	36,333	143,827
3,542	13.54	17.50	106,024	492	26,726	126,677
3,458	14.05	18.29	92,124	417	16,453	89,041
3,260	14.44	18.78	51,266	226	3,267	55,236
2,648	16.68	20.53	2,445	-12	-46,021	-33,893

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

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

70 Freestall Barn Dairy Farms with 300 or More Cows, New York, 2004

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv- Alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
36.83	1,884	43,636,486	26,368	6.3	23	65	1,412,402
23.81	1,111	26,056,052	25,314	4.6	21	53	1,201,551
20.22	894	21,070,884	24,334	4.2	20	51	1,155,441
16.81	712	16,132,617	23,557	3.9	19	50	1,112,192
14.50	572	13,747,324	23,004	3.5	18	46	1,059,322
12.88	515	12,177,341	22,639	3.4	18	43	998,166
11.46	463	9,681,631	21,969	3.3	17	41	910,099
9.74	393	8,542,048	21,405	3.1	17	36	816,758
8.36	347	7,553,662	20,624	2.9	16	32	714,290
6.60	316	6,327,232	17,011	2.5	12	28	611,921

Cost Control						
Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk	
(12)	(12)	(14)	(14)	(12)	(12)	
\$677	20%	\$310	\$827	\$897	\$4.36	
817	23	417	1,089	1,050	4.79	
866	24	464	1,160	1,115	5.07	
971	26	507	1,231	1,189	5.27	
1,026	27	560	1,278	1,237	5.40	
1,056	28	590	1,338	1,270	5.57	
1,117	29	618	1,422	1,319	5.78	
1,154	30	670	1,502	1,395	6.10	
1,206	31	720	1,571	1,514	6.35	
1,330	34	847	1,733	1,598	7.12	

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
(12)	(12)	(12)	Total	Per Cow	(4)	(8)
\$4,557	\$10.04	\$13.48	\$1,240,002	\$1,189	\$508,847	\$1,512,947
4,239	11.08	14.03	696,919	952	311,387	735,240
4,028	11.71	14.42	529,859	854	233,557	563,802
3,895	12.01	14.85	440,284	803	204,122	479,557
3,794	12.26	15.11	400,814	712	166,981	428,181
3,707	12.54	15.33	330,951	608	135,493	354,786
3,645	12.94	15.66	289,642	500	92,550	314,047
3,531	13.44	16.14	245,892	370	69,981	245,606
3,339	14.03	16.81	134,416	261	28,119	185,396
2,977	15.30	18.62	28,907	65	-39,314	53,781

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

### IDENTIFY AND SET GOALS

If businesses are to be successful, they must have direction. Written goals help provide businesses with an identifiable direction over both the long and short term. Goal setting is as important on a dairy farm as it is in other businesses. Written goals are a tool which farm operators can use to ensure that the business continues to move in the desired direction. Goals should be SMART:

1. Goals should be Specific.
2. Goals should be Measurable.
3. Goals should be Achievable but challenging.
4. Goals should be Rewarding.
5. Goals should be Timed with a designated date by which the goal will be achieved.

Goal setting on a dairy farm should be a process for writing down and agreeing on goals that you have already given some thought to. It is also important to remember that once you write out your goals they are not cast in concrete. If a change takes place which has a major impact on the farm business, the goals should be reworked to accommodate that change. Refer to your goals as often as necessary to keep the farm business progressing.

It is important to identify both objectives (long-range) and goals (short-range) when looking at the future of your farm business.

A suggested format for writing out your goals is as follows:

- a. Begin with a mission statement which describes why the business exists based on the preferences and values of the owners.
- b. Identify 4-6 objectives.
- c. Identify SMART goals.

#### Worksheet for Setting Goals

##### I. Mission and Objectives

---



---



---



---



---



---



---



---

Worksheet for Setting Goals (Continued)

II. Goals

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

Summarize Your Business Performance

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

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

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

**GLOSSARY AND LOCATION OF COMMON TERMS**

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

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

**Accrual Expenses** - (defined on page 3)

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

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

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

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

**Balance Sheet** - A "snapshot" of the business financial position at a given point in time, usually December 31. The balance sheet equates the value of assets to liabilities plus net worth.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## INDEX

	<u>Page(s)</u>		<u>Page(s)</u>
Accounts Payable .....	3,8	Expansion Livestock .....	3,11
Accounts Receivable .....	4,8	Expenses .....	3
Accrual Expenses .....	3,5	Farm Business Chart.....	23, 27-29, 32-36
Accrual Receipts.....	4,5	Farm Debt Payments as Percent	
Acreage.....	15	of Milk Sales.....	12
Advanced Government Receipts .....	7,8	Farm Debt Payments Per Cow.....	12
Age .....	19	Financial Analysis Chart .....	29
Amount Available for Debt Service .....	13	Financial Lease.....	8
Annual Cash Flow Statement .....	11	Hired Labor Expenses per Hired Worker	
Appreciation .....	10,17	Equivalent.....	20
Asset Turnover Ratio.....	19	Hired Labor Expense as % of Milk Sales.....	20
Balance Sheet .....	8	Income Statement .....	2
Barn Type .....	2	Inflows.....	11
bST Usage .....	2	Interest Expense Ratio .....	19
Business Type.....	2	Labor & Management Income.....	6
Capital Efficiency .....	19	Labor & Management Income Per Operator .....	6
Cash From Nonfarm Capital Used in		Labor Efficiency.....	19
the Business .....	11	Land Resources .....	15
Cash Flow Coverage Ratio .....	13	Leverage Ratio.....	9
Cash Paid.....	2	Liquidity .....	9
Cash Receipts .....	4,11	Lost Capital .....	9
Certified Organic Milk Producer .....	2	Machinery Expenses.....	3,16
Change in Accounts Payable .....	3	Marketing Report.....	25
Change in Accounts Receivable .....	4	Milk Price .....	25, 26
Change in Inventory .....	2,3	Milk Production.....	17
Change in Net Worth.....	10	Milking Frequency .....	2
Cost of Term Debt .....	9	Milking System .....	2
Crop Expenses .....	3,16	Money Borrowed.....	11
Crop/Dairy Ratios.....	15	Net Farm Income.....	5
Culling Rate.....	17	Net Farm Income from Operations Ratio .....	7
Current Portion .....	7,8	Net Investment.....	9
Current Ratio .....	9	Net Milk Receipts.....	18
Dairy (farm).....	2	Net Worth .....	8
Dairy Cash-Crop (farm).....	2	Number of Cows.....	17
Dairy Replacements.....	24	Operating Costs of Prod. Milk.....	18
Debt Coverage Ratio .....	13	Operating Expense Ratio .....	19
Debt per Cow.....	9	Opportunity Cost .....	6
Debt to Asset Ratios .....	9	Other Livestock Expenses .....	3
Deferred Taxes .....	9	Outflows .....	11
Depreciation.....	3, 9	Part-Time Cash-Crop Dairy (farm) .....	2
Depreciation Expense Ratio .....	19	Part-Time Dairy (farm).....	2
Dry Matter .....	15	Percent Equity .....	9
Education.....	19	Personal Withdrawals and Family Expenditures	
Equity Capital .....	7	Including Nonfarm Debt Payments .....	11

Principal Payments .....	11
Profitability .....	4
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 .....	18
Whole Farm Method.....	18
Worker Equivalent .....	19
Working Capital .....	9
Yields Per Acre.....	15

**OTHER A.E.M. EXTENSION BULLETINS**

<b>EB No</b>	<b>Title</b>	<b>Fee (if applicable)</b>	<b>Author(s)</b>
2006-11	Fruit Farm Business Summary, Lake Ontario Region, 2005		White, G., DeMarree, A. and J. Byma
2006-10	The Organic Decision: Transitioning Toward Organic Dairy Production	(\$15.00)	Richard S. and S. Bulkley
2006-09	Dairy Farm Business Summary, New York Small Herd Farms, 80 Cows or Fewer, 2005	(\$16.00)	Knoblauch, W., Putnam, L., Kiraly, M. and J. Karszes
2006-08	Dairy Farm Business Summary, Southeastern New York Region, 2005	(\$12.00)	Knoblauch, W., Putnam, L., Kiraly, M., Walsh, J., Hadcock, S. and L. Hulle
2006-07	Dairy Farm Business Summary, Intensive Grazing Farms, New York, 2005	(\$16.00)	Conneman, G., Grace, J., Karszes, J., Schuelke, J., Munsee, D., Putnam, L., Staehr, E. and J. Degni
2006-06	Dairy Farm Business Summary, Western and Central Plateau Region, 2005	(\$12.00)	Knoblauch, W., Putnam, L., Karszes, J., Grace, J., Munsee, D., Schuelke, J. and J. Petzen
2006-05	Dairy Farm Business Summary, Western and Central Plain Region, 2005	(\$12.00)	Knoblauch, W., Putnam, L., Karszes, J., Hanchar, J., Moag, G. and J. Sauter
2006-04	Dairy Farm Business Summary, Northern Hudson Region, 2005	(\$12.00)	Conneman, G., Putnam, L., Wickswat, C., Buxton, S., Smith, R. and J. Karszes
2006-03	Dairy Farm Business Summary, New York Large Herd Farms, 300 Cows or Larger, 2005	(\$16.00)	Karszes, J., Knoblauch, W. and L. Putnam
2006-02	Moving Families Forward by New York FarmNet (video) 26:44	(\$9.99)	Staehr, A.
2006-01	A Value-Added Opportunity: Market Potential for Specialty Cheeses in Select New York Markets		Gloy, A. and M. Stephenson
2005-16	Dairy Farm Business Summary, New York Dairy Farm Renters, 2004	(\$16.00)	Knoblauch, W. and L. Putnam

Paper copies are being replaced by electronic Portable Document Files (PDFs). To request PDFs of AEM publications, write to (be sure to include your e-mail address): Publications, Department of Applied Economics and Management, Warren Hall, Cornell University, Ithaca, NY 14853-7801. If a fee is indicated, please include a check or money order made payable to Cornell University for the amount of your purchase. Visit our Web site (<http://aem.cornell.edu/outreach/materials.htm>) for a more complete list of recent bulletins.