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# NORTHERN NEW YORK REGION 2010

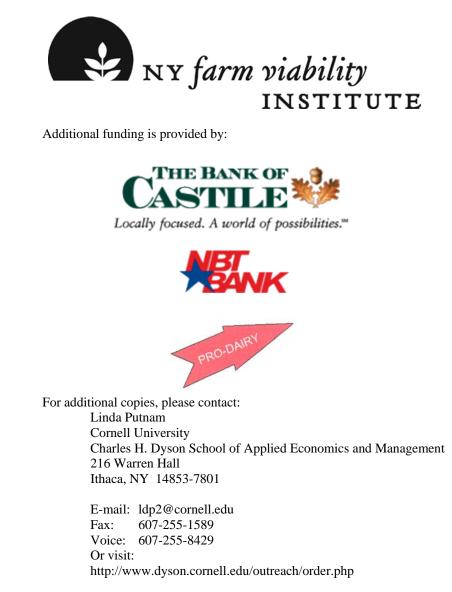


You can't manage what you can't measure. But if you measure it, you can improve it!

> Wayne A. Knoblauch Linda D. Putnam Jason Karszes Peggy Murray Frans Vokey Corey Hayes Anita Deming David Balbian Sandy Buxton Jim Manning Bonnie Collins Richard Overton Cathryn Dymond

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### 2010 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 2010.

### **Program Objective**

The primary objective of the dairy farm business summary, DFBS, is to help farm managers improve the business and financial management of their business through appropriate use of historical data and the application of modern farm business analysis techniques. This information can also be used to establish goals that enable the business to better fulfill its mission. In short, DFBS provides business and financial information needed in identifying and evaluating strengths and weaknesses of the farm business.

### **Format Features**

This regional report follows the same general format as the 2010 DFBS individual farm report received by participating dairy farmers. The analysis tables have an open column or section labeled <u>My Farm</u>. 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 <u>http://dfbs.cornell.edu</u>. After collecting the data on the form, it can be entered in the U. S. Top Dairies business summary program at the same web site to obtain a summary of their business.

### This report features:

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

<sup>\*</sup> The Northern New York Region of New York State, with the number of participating farms in parentheses, is comprised of Clinton (3), Herkimer (1), Jefferson (8), Lewis (8), Montgomery (6), Oneida (6), and St. Lawrence (7) counties in New York. This report was written by Wayne A. Knoblauch, Professor, Farm Business Management. Linda Putnam was in charge of data preparation. Cathryn Dymond assisted with data and publication preparation. Farm business data were collected by Senior Extension Associate in PRO-DAIRY, Jason Karszes; Cooperative Extension Educators Peggy Murray, Frans Vokey, Corey Hayes, Anita Deming, David Balbian, Sandy Buxton, Jim Manning, Bonnie Collins; and Richard Overton, Extension Support Specialist. We also acknowledge the cooperation of Charles Z. Radick, Consultant; Cathy Wickswat, Cargill Animal Nutrition; and Farm Credit East Association for their assistance in data collection.

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### 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.

Type of Farm	Number	Milking System	Number
Dairy	36	Bucket & carry	0
Part-time dairy	0	Dumping station	0
Dairy cash-crop	3	Pipeline	5
		Herringbone conventional exit	11
Certified organic milk producer	0	Herringbone rapid exit	3
Rotational grazing farm	0	Parallel	15
		Parabone	0
Type of Ownership	Number	Rotary	3
Owner	38	Other	2
Renter	1		
		Production Records	Number
Type of Business	Number	Testing Service	29
Sole Proprietorship	6	On Farm System	7
Partnership	10	Other	0
Limited Liability Corporation	22	None	3
Subchapter S Corporation	0		
Subchapter C Corporation	1	Business Record System	Number
		Account Book	0
Type of Barn	Number	Accounting Service	6
Stanchion or Tie-Stall	3	On-farm computer	33
Freestall	32	Other	0
Combination	4		
Milking Frequency	Number	Breed of Herd	Percent
2 times per day	15	Holstein	93
3 times per day	22	Jersey	6
Other	2	Other	1

BUSINESS CHARACTERISTICS

39 Northern New York Region Dairy Farms, 2010

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

### **Income Statement**

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

<u>Cash paid</u> is the actual cash outlay during the year and does not necessarily represent the cost of goods and services actually used in 2010.

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

### CASH AND ACCRUAL FARM EXPENSES

39 Northern I	New York	Region	Dairy	Farms,	2010

		Change in	, 2010	Change in		
	Cash	Inventory or		Accounts		Accrual
Expense Item	Paid -	Prepaid Expense	+	Payable	=	Expenses
Hired Labor	\$ 390,312	\$ -2,367	<<	\$ -257		\$392,421
Feed						
Dairy grain & concentrate	880,170	20,634		-19,037		840,499
Dairy roughage	38,787	-188		-118		38,856
Nondairy	0	0		0		0
Professional nutritional services	127	0	<<	0		127
Machinery						
Machinery hire, rent & lease	65,016	0	<<	-727		64,289
Machinery repairs & farm vehicle exp.	124,718	290		-1,052		123,377
Fuel, oil & grease	103,779	47		-75		103,656
Livestock						
Replacement livestock	11,005	0	<<	115		11,119
Breeding	30,861	118		9		30,752
Veterinary & medicine	100,032	-1		-1,435		98,597
Milk marketing	126,333	0	<<	351		126,683
Bedding	57,842	-911		-629		58,124
Milking supplies	64,135	10		-285		63,840
Cattle lease & rent	781	0	<<	0		781
Custom boarding	90,010	-6,923	<<	421		97,354
bST	43,728	-533		-183		44,078
Livestock professional fees	4,918	104	<<	0		4,814
Other livestock expense	9,186	77		-33		9,076
Crops	- ,					
Fertilizer & lime	73,880	3,616		-1,412		68,852
Seeds & plants	67,274	5,516		-729		61,028
Spray, other crop expense	32,103	-791		412		33,307
Crop professional fees	3,765	0	<<	-19		3,747
Real Estate	- ,			-		- ,
Land, building & fence repair	38,016	15		-46		37,955
Taxes	31,471	720	<<	74		30,824
Rent & lease	36,151	295	<<	-99		35,757
<u>Other</u>	50,151	275				55,757
Insurance	26,399	0	<<	-10		26,389
Utilities (farm share)	72,457	0	<<	79		72,536
Interest paid	91,026	0	<<	0		91,026
Other professional fees	12,180	-164	<<	31		12,376
Miscellaneous	15,085	0		-48		15,037
Total Operating	\$2,641,547	\$19,566		\$ -24,702	-	\$2,597,279
Expansion livestock	14,518	\$19,500 0	<<	<sup>3</sup> -24,702 0		14,518
Extraordinary expense	2,187	0	<<	0		2,187
Machinery depreciation	2,107	v		0		136,932
Building depreciation						93,899
TOTAL ACCRUAL EXPENSES					•	\$2,844,816
I OTAL ACCRUAL EAFEINSES						<i>φ</i> ∠,0 <del>1</del> 4,010

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

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

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

### CASH AND ACCRUAL FARM RECEIPTS

39 Northern New York Region Dairy Farms, 2010

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
	Receipts		inventory		Receivable		Receipts
Milk sales	\$2,834,585				\$50,103		\$2,884,688
Dairy cattle	113,328		\$87,836		51		201,215
Dairy calves	12,340		-967		0		11,372
Other livestock	767		1,073		0		1,840
Crops	42,298		69,375		-1,393		110,280
Government receipts	16,661		0 *		-27		16,635
Custom machine work	7,059				16		7,076
Gas tax refund	154				0		154
Other	48,134				391		48,525
Less nonfarm noncash capital**		(-)	0_**			(-)	0
Total Receipts	\$3,075,327		\$157,316		\$49,142		\$3,281,785

\*Change in advanced government receipts.

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

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

<u>Changes in inventory</u> of assets produced by the business are calculated by subtracting beginning of year values from end of year values <u>excluding appreciation</u>. Increases in livestock inventory caused by herd growth and/or quality are added, and decreases caused by herd reduction and/or quality are subtracted. Changes in inventories of crops grown are also included. An increase in advanced government receipts is subtracted from cash income because it represents income received in 2010 for the 2011 crop year in excess of funds earned for 2010. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2010 but received in 2009.

<u>Changes in accounts receivable</u> are calculated by subtracting beginning year balances from end year balances. Payments in January 2011 for milk produced in December 2010 compared to January 2010 payments for milk produced in 2009 are included as a change in accounts receivable in determining accrual milk sales.

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

### **Profitability Analysis**

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

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

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

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

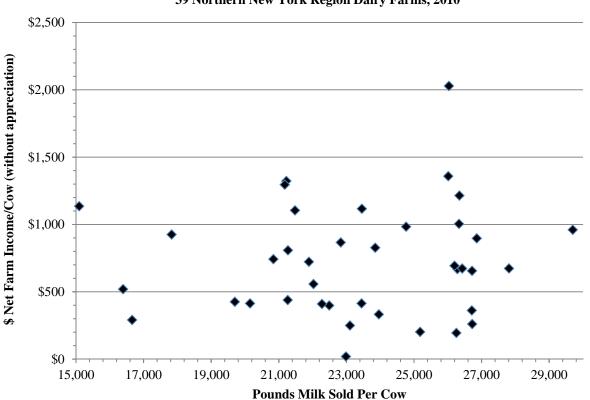
Net farm income is computed both with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, machinery, real estate inventory, and stocks and certificates (other than Farm Credit stock required for loan borrowings). Appreciation is a major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

	Ave	erage	M	y Farm
Item	Total	Per Cow	Total	Per Cow
Total accrual receipts	\$ 3,281,785		\$	
Appreciation: Livestock	2,188			
Machinery	47,092			
Real Estate	121,365			
Other Stock & Certificates	643			
Total Including Appreciation	\$ 3,453,073		\$	
Total accrual expenses	2,844,816			
Net Farm Income (with appreciation)	\$ 608,257	\$ 921	\$	\$
Net Farm Income (without appreciation)	\$ 436,970	\$ 662	\$	\$

### NET FARM INCOME

39 Northern New York Region Dairy Farms, 2010

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 39 Northern New York Region Dairy Farms, 2010

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

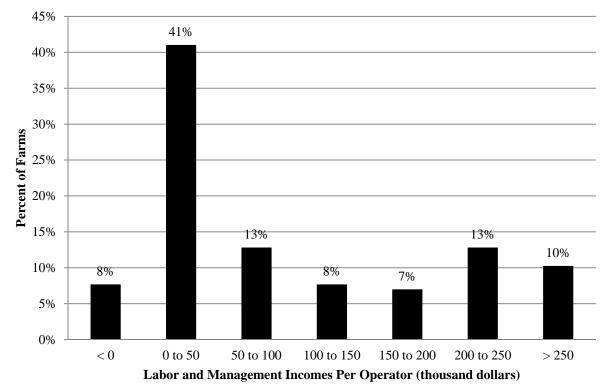
### LABOR AND MANAGEMENT INCOME

39 Northern New York Region Dairy Farms, 2010

Item	Average	My Farm
Net farm income without appreciation	\$ 436,970	\$
Family labor unpaid @ \$2,500 per month	- 2,455	
Interest on \$3,597,606 average equity capital @ 5% real rate	- 181,329	
Labor & Management Income per farm (2.00 Operators/farm)	\$ 253,185	\$
Labor & Management Income per Operator/Manager	\$ 126,593	\$

Labor and management income per operator averaged \$126,593 on these 39 farms in 2010. The range in labor and management income per operator was from about \$-46,000 to more than \$660,000. Returns to labor and management were less than \$50,000 on 49 percent of the farms. Labor and management incomes per operator were between \$50,000 and \$200,000 on 28 percent of the farms, while 23 percent had labor and management incomes of \$200,000 or more per operator.

### DISTRIBUTION OF LABOR AND MANAGEMENT INCOMES PER OPERATOR 39 Northern New York Region Dairy Farms, 2010



<u>Return on equity capital</u> 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. <u>Rate of return on total capital</u> is calculated by adding interest paid to the return on equity capital and then dividing by average farm assets (market value). <u>Net farm income from operations ratio</u> is net farm income (without appreciation) divided by total accrual receipts.

### RETURN ON EQUITY CAPITAL AND RETURN ON TOTAL CAPITAL

39 Northern New York Region Dairy Farms, 2010

Item	Average	My Farm
Net farm income with appreciation	\$ 608,257	\$
Family labor unpaid @ \$2,500 per month	- 2,455	
Value of operators' labor & management	- 116,490	
Return on equity capital with appreciation	\$ 489,313	\$
Interest paid	+ 91,026	+
Return on total capital with appreciation	\$ 580,339	\$
Return on equity capital without appreciation	\$ 318,025	\$
Return on total capital without appreciation	\$ 409,051	\$
Rate of return on average equity capital:		
with appreciation	13.6%	%
without appreciation	8.8%	%
Rate of return on average total capital:		
with appreciation	9.9%	%
without appreciation Net Farm Income from Operations Ratio	7.0% 0.13	%

### Farm and Family Financial Status

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

<u>Financial lease</u> obligations are included in the balance sheet. The present value of all future payments is listed as a liability since the farmer is committed to make the payments by signing the lease. The present value is also listed as an asset, representing the future value the item has to the business. For 2010, lease payments were discounted by 7 percent to obtain their present value.

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

Current Portion or principal due in the next year for intermediate and long term debt is included as a current liability.

Form Acceta	Ion 1	Dec. 31	Farm Liabilities & Net Worth		Ion 1	Dec. 21
Farm Assets	Jan. 1	Dec. 51	æ Net worth		Jan. 1	Dec. 31
Current			Current			
Farm cash, checking			Accounts payable	\$	79,412	\$ 54,710
& savings	\$ 42,249	\$ 32,915	Operating debt		127,031	128,562
Accounts receivable	179,905	229,048	Short Term		10,897	18,382
Prepaid expenses	9,824	1,489	Advanced govt. receipts		0	0
Feed & supplies	555,859	653,135	Current Portion:			
11			Intermediate		191,146	212,519
			Long Term		64,230	66,455
Total Current	\$ 787,838	\$ 916,587	Total Current	\$	472,715	\$ 480,627
Intermediate			Intermediate			
Dairy cows:			Structured debt			
owned	\$ 902,751	\$ 950,818	1-10 years	\$	803,933	\$ 807,814
leased	681	48	Financial lease			
Heifers	499,386	540,312	(cattle/machinery)		3,481	1,691
Bulls & other livestock	3,760	4,898	Farm Credit stock		1,995	 2,031
Mach. & equip. owned	955,712	996,968	Total Intermediate	\$	809,410	\$ 811,536
Mach. & equip. leased	2,800	1,642				
Farm Credit stock	1,995	2,031				
Other stock/certificate	87,151	104,065				
Total Intermediate	\$ 2,454,237	\$2,600,782				
Long Term			Long Term			
Land & buildings:			Structured debt			
owned	\$ 2,388,230	\$2,574,208	>10 years	\$	976,679	\$ 975,703
leased	1,108	625	Financial lease			
Total Long Term	\$ 2,389,338	\$2,574,833	(structures)		1,108	 625
			Total Long Term	\$	977,787	\$ 976,328
Total Farm Assets	\$ 5,631,413	\$6,092,201	-			
			Total Farm Liabilities	\$ 1	2,259,911	\$ 2,268,491
			FARM NET WORTH	\$ 3	3,371,502	\$ 3,823,710
Nonfarm Assets, Liabiliti	es & Net Worth	(Average of 9 farm	ns reporting)			
Assets	Jan. 1	Dec. 31	Liabilities & Net Worth		Jan. 1	Dec. 31

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

39 Northern New York Region Dairy Farms, 2010

Assets Jan. I Liabilities & Net Worth Dec. 31 Jan. I Dec. 31 Personal cash, checking & savings \$ 77,083 Nonfarm Liabilities \$ 4,430 \$ 13,750 \$ 82,673 Cash value life insurance 101,777 104,140 Nonfarm real estate 667 667 Auto (personal share) 10,222 9,667 Stocks & bonds 169,912 201,268 Household furnishings 5,111 5,111 All other nonfarm assets 3,590 16,367 NONFARM **Total Nonfarm Assets** NET WORTH \$368,362 \$419,893 \$363,932 \$406,143 Farm & Nonfarm Assets, Liabilities, and Net Worth\* Jan. 1 Dec. 31 **Total Assets** \$ 5,999,775 \$ 6,512,094 **Total Liabilities** 2,264,341 2,282,241 TOTAL FARM & NONFARM NET WORTH \$ 3,735,434 \$ 4,229,853

\*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.

Item			Average		My Farm
Financial Ratios - Fa	<u>rm</u> :				
Percent equity			63%		%
Debt/asset ratio: tota	al		.37		
lon	g-term		.38		
inte	ermediate/current		.37		
Leverage Ratio:			.59		
Current Ratio:			1.91		
Working capital	\$435,959	As % of total expe	nses: 15%		
Farm Debt Analysis:					
Accounts payable as	% of total debt		2%		%
Long-term liabilities	as a % of total debt		43%		%
Current & inter. liab	ilities as a % of tota	l debt	57%		%
Cost of term debt (we	eighted average)		4.1%		%
			Per Tillable		Per Tillable
Farm Debt Levels:		Per Cow	Acre Owned	Per Cow	Acre Owned
Total farm debt		\$ 3,368	\$ 2,958	\$	\$
Long-term debt		1,449	1,273		
Intermediate & long	term	2,654	2,332		
Intermediate & curre	nt debt	1,918	1,685		

### BALANCE SHEET ANALYSIS

39 Northern New York Region Dairy Farms, 2010

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

### FARM INVENTORY BALANCE

39 Northern New York Region Dairy Farms, 2010

Item	Average of H	Region's Farms
	Real Estate	Machinery & Equipment
Value beginning of year	\$ 2,388,230	\$ 955,712
Purchases	\$ 197,536*	\$ 134,463
Gift & inheritance	+ 21,949	+ 1,513
Lost capital	- 60,204	
Sales	- 769	- 4,880
Depreciation	- 93,899	- 136,932
Net investment	= 64,613	= -5,836
Appreciation	+ 121,365	+ 47,092
Value end of year	\$ 2,574,208	\$ 996,968

\*\$48,178 land and \$149,358 buildings and/or depreciable improvements.

<u>The Statement of Owner Equity</u> 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)

39 Northern New York Region Dairy Farms, 2010

Item	Average	My Farm
Beginning of year farm net worth	\$3,371,502	\$
Net farm income without appreciation +Nonfarm cash income -Personal withdrawals & family expenditures excluding	\$ 436,970 + 9,209	\$ +
nonfarm borrowings RETAINED EARNINGS	<u>- 130,946</u> +\$ 315,232	+\$
Nonfarm noncash transfers to farm +Cash used in business	\$ 23,462	\$
from nonfarm capital -Note or mortgage from farm	+ 4,178	+
real estate sold (nonfarm) CONTRIBUTED/WITHDRAWN CAPITAL	<u>- 86</u> +\$ 27,554	+\$
Appreciation	\$ 171,288	\$
-Lost capital CHANGE IN VALUATION EQUITY	<u>- 60,204</u> + \$ 111,084	+\$
IMBALANCE/ERROR	- 1,662	- \$
End of year net worth*	= \$3,823,710	=\$
Change in Net Worth		
Without appreciation	\$ 280,921	\$
With appreciation	\$ 452,209	\$

\*May not add due to rounding.

### **Cash Flow Statement**

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

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

### ANNUAL CASH FLOW STATEMENT

Item			Average		
Cash Flow from Operating Activities			<u> </u>		
Cash farm receipts	\$ 3,075,327				
- Cash farm expenses	2,641,547				
- Extraordinary expense	2,187				
= Net cash farm income		\$	431,593		
			,		
Personal withdrawals & family expenses					
including nonfarm debt payments	\$ 133,449				
- Nonfarm income	9,209				
- Net cash withdrawals from the farm		\$	124,240		
<ul> <li>Net Provided by Operating Activities</li> </ul>				\$	307,352
Cash Flow From Investing Activities					
Sale of assets: machinery	\$ 4,880				
+ real estate	683				
+ other stock & cert.	2,048				
= Total asset sales		\$	7,611		
Capital purchases: expansion livestock	\$ 14,518				
+ machinery	134,463				
+ real estate	197,536				
+ other stock & cert.	18,319				
- Total invested in farm assets	10,017	\$	364,835		
<ul> <li>Net Provided by Investment Activities</li> </ul>		Ψ	501,055	\$	-357,225
-					
Cash Flow From Financing Activities					
Money borrowed (intermediate & long term)	\$ 253,376				
+ Money borrowed (short term)	12,828				
+ Increase in operating debt	1,531				
+ Cash from nonfarm capital used in business	4,178				
+ Money borrowed - nonfarm	2,503				
= Cash inflow from financing		\$	274,416		
			- 7 -		
Principal payments (intermediate & long term)	\$ 226,873				
+ Principal payments (short term)	5,343				
+ Decrease in operating debt	0				
- Cash outflow for financing	<u>~</u>	\$	232,216		
<ul> <li>Net Provided by Financing Activities</li> </ul>		<u> </u>	202,210	\$	42,200
- · · · · · · · · · · · · · · · · · · ·				Ŧ	,_ • •
Cash Flow From Reserves					
Beginning farm cash, checking & savings		\$	42,249		
- Ending farm cash, checking & savings			32,915		
= Net Provided from Reserves			- 1	\$	9,334
				•	
Imbalance (error)				\$	1,662

### ANNUAL CASH FLOW STATEMENT

Item	1	My Farm	
	h Flow from Operating Activities		
	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		\$
Casł	h Flow From Investing Activities		
	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		\$
	h Flow From Financing Activities		
	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	\$	
=	Cash hirlow from mancing	φ	
	Principal payments (intermediate & long term)	\$	
	Principal payments (short term)		
	Decrease in operating debt		
	Cash outflow for financing	\$	
=	Net Provided by Financing Activities		\$
Casł	h Flow From Reserves		
	Beginning farm cash, checking & savings	\$	
	Ending farm cash, checking & savings	·	
	Net Provided from Reserves		\$
Imba	alance (error)		\$

### **Repayment Analysis**

A valuable use of cash flow analysis is to compare the debt payments planned for the last year with the amount actually paid. The measures listed below provide a number of different perspectives on the repayment performance of the business. However, the critical question to many farmers and lenders is whether planned payments can be made in 2011. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2011 debt payments shown below.

	Average				My Farm			
		2010 Pa	aymei	nts	Planned	2010	) Payments	Planned
Debt Payments	Pla	anned		Made	2011	Planned	Made	2011
Long term	\$	94,129	\$	109,418	\$ 104,475	\$	\$	\$
Intermediate term		91,023		219,239	270,275	Ψ	Ψ	Ψ
Short term	1	8,275		6,147	14,175			
Operating (net		, -		,	,			
reduction)		27,179		25,126	31,345			
Accounts payable								
(net reduction)		11,765		27,663	11,247			
Total	\$ 3	32,371	\$	387,593	\$ 431,517	\$	_ \$	\$
Per cow	\$	472	\$	551		\$	\$	
Per cwt. 2010 milk	\$	1.88	\$	2.20		\$		
Percent of total								-
2010 farm receipts		10%		11%				
Percent of 2010								
milk receipts		11%		13%				

**FARM DEBT PAYMENTS PLANNED** Same 34 Northern New York Region Dairy Farms, 2009 & 2010

The <u>cash flow coverage ratio</u> and <u>debt coverage ratio</u> measure the ability of the farm business to meet its planned debt payment schedule. The ratios show the percentage of payments planned for 2010 (as of December 31, 2009) that could have been made with the amount available for debt service in 2010. Farmers who did not participate in DFBS in 2009 have their 2010 ratios based on planned debt payments for 2011.

### **COVERAGE RATIOS**

Same 34 Northern New York Region Dairy Farms, 2009 & 2010

Item	Average	Item	Average
Cash Flow Coverage Ratio		Debt Coverage Ratio	
Cash farm receipts	\$3,297,315	Net farm income (w/o appreciation)	\$482,881
- Cash farm expenses	2,816,345	+ Depreciation	257,151
+ Interest paid (cash)	93,484	+ Interest paid (accrual)	93,484
- Net personal withdrawals from farm*	<u>137,078</u>	- Net personal withdrawals from farm*	<u>137,078</u>
<ul><li>(A) = Amount Available for Debt Service</li><li>(B) = Debt Payments Planned for 2010</li></ul>	\$437,377	<ul><li>(A') = Repayment Capacity</li><li>(B) = Debt Payments Planned for 2010</li></ul>	\$696,438
(a)	\$332,371 1.32	(A'/B)= Debt Coverage Ratio for 2010	\$332,371 2.10

\*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.

A	NNUAL CAS	<u>H FLOW W</u> O	RKSHEET		
	39 Norther	n New York	My Farm		
	Region D	airy Farms	Per Cow/	Expected	2011
Item	Per Cow	Per Cwt.	Per Cwt.	Change	Projection
Average number of cows	660				*
Total cwt. of milk sold		164,336			
Accrual Operating Receipts					
Milk	\$4,368	\$17.55	\$		\$
Dairy cattle	305	1.22			
Dairy calves	17	0.07			
Other livestock	3	0.01			
Crops	167	0.67			
Miscellaneous Receipts	110	0.44			
Total	\$4,969	\$19.97	\$		\$
Accrual Operating Expenses					
Hired labor	\$ 594	\$ 2.39	\$		\$
Dairy grain & concentrate	1,273	5.11			
Dairy roughage	59	0.24			
Nondairy feed	0	0.00			
Professional nutritional services	0	0.00			
Machinery hire, rent & lease	97	0.39			
Machinery repair & vehicle expense	187	0.75			
Fuel, oil & grease	157	0.63			
Replacement livestock	17	0.05			
Breeding	47	0.19			
Veterinary & medicine	149	0.19			
Milk marketing	149	0.00			
•	88	0.77			
Bedding	88 97				
Milking supplies		0.39			
Cattle lease	1	0.00			
Custom boarding	147	0.59			
bST expense	67	0.27			
Livestock professional fees	7	0.03			
Other livestock expense	14	0.06			
Fertilizer & lime	104	0.42			
Seeds & plants	92	0.37			
Spray & other crop expense	50	0.20			
Crop professional fees	6	0.02			
Land, building & fence repair	57	0.23			
Taxes	47	0.19			
Real estate rent & lease	54	0.22			
Insurance	40	0.16			
Utilities	110	0.44			
Other professional fees	19	0.08			
Miscellaneous	23	0.09			
Total Less Interest Paid	\$3,795	\$15.25	\$		\$
Net Accrual Operating Income		otal			
(without interest paid)		5,532	\$		\$
- Change in livestock /crop inventory*		7,316	-		-
- Change in accounts receivable		9,142			
- Change in feed & supply inventory**		9,566			
+ Change in accounts payable***		4,702			
NET CASH FLOW		4,806	\$		\$
- Net family withdrawals		+,800 ),120	Ψ		Ψ
Available for Farm		1,686	\$		
			Φ		
- Farm debt payments		9,478	<u></u>		¢
Available for Farm Investment		5,208	\$		<u></u> р
- Capital purchases		4,835	<u></u>		<u></u>
a dattopol L'opitol Noodod	V 2/1	1611	×		N

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

Additional Capital Needed

\$ 329,627

\$

\$

### **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

39 Northern New York Region Dairy Farms, 2010

Item		Average			My Farm	
<u>Land</u> Tillable Nontillable Other nontillable Total	<u>Owned</u> 767 41 <u>279</u> 1,087	<u>Rented</u> 632 2 <u>2</u> 636	<u>Total</u> 1,399 43 <u>281</u> 1,723	<u>Owned</u>	<u>Rented</u>	<u>Total</u>
<u>Crop Yields</u> Hay crop Corn silage	<u>Farms</u> 38 38	<u>Acres*</u> 640 493	Production/Acre 3.35 tons DM 20.10 tons 6.78 tons DM	<u>Acr</u>	<u>res Pro</u>	duction/Acre tons DM tons tons tons DM
Other forage Total forage Corn grain Oats Wheat	6 38 30 3 3	90 1,146 244 58 83	2.46 tons DM 4.81 tons DM 141 bushels 71 bushels 65 bushels			tons DM tons DM tons DM bushels bushels bushels
Other crops Tillable pasture Idle Total Tillable Acres	14 3 5 39	183 23 119 1,399				

\*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were hay crop 623, corn silage 480, corn grain 188, oats 4, tillable pasture 2, and idle 15.

Average crop acres and yields compiled for the region are for the farms reporting each crop. Yields of forage crops have been converted to tons of dry matter using dry matter coefficients reported by the farmers. Grain production has been converted to bushels of dry grain equivalent based on dry matter information provided.

The following crop/dairy ratios indicate the relationship between forage production, forage production resources, and the dairy herd.

### **CROP/DAIRY RATIOS**

39 Northern New York Region Dairy Farms, 2010

Item	Average*	My Farm
Total tillable acres per cow	2.19	
Total forage acres per cow	1.75	
Harvested forage dry matter, tons per cow	8.42	

\*Excludes farms that do not harvest forages.

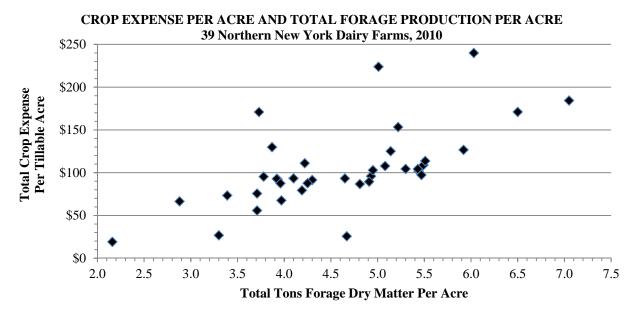
### Cropping Analysis (continued)

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

### **CROP RELATED ACCRUAL EXPENSES**

Northern New York Region Dairy Farms Reporting, 2010

	Average 38 Farms	My Farm
Item	Total Per Tillable Acre	Total Per Tillable Acre
Number of farms reporting	38	
Average number of acres	1,432	
Fertilizer & lime expenses	\$ 46.57	\$
Seeds & plants	36.46	
Spray & other crop expenses	21.54	
Total	\$ 104.57	\$



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

38 Northern New York Region Dairy Farms, 2010\*

	Av	erage	My Farm		
Machinery	Total	Per Tillable	Total	Per Tillable	
Expense	Expenses	Acre	Expenses	Acre	
Fuel, oil & grease	\$ 105,014	\$ 73.31	\$	\$	
Mach. repair & vehicle expense	123,460	86.18			
Machine hire, rent & lease	65,703	45.86			
Interest (5%)	50,067	34.95			
Depreciation	<u>139,778</u>	97.57			
Total	\$484,022	\$337.87	\$	\$	

\*Excludes farms that do not harvest forages.

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.

	D	airy Cows	_			Heifer		
				Bred		Open		Calves
Item	No.	Value	No.	Value	No.	Value	No.	Value
Beg. year (owned) + Change w/o apprec. + Appreciation	641	\$ 902,751 45,051 3,015	191	\$ 273,821 30,209 1,599	175	\$ 150,955 12,576 -1,508	175	\$ 74,610 -967 -983
End year (owned) End including leased	673 674	\$ 950,818	212	\$ 305,628	189	\$ 162,023	173	\$ 72,660
Average number	660		558	(all age groups)				
<u>My Farm</u> :								
Beg. year (owned) + Change w/o apprec.		\$		\$		\$		\$
+ Appreciation End year (owned) End including leased		\$		\$		\$		\$
Average number		-		(all age groups)				

### DAIRY HERD INVENTORY

39 Northern New York Region Dairy Farms, 2010

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

39 Northern New York Region Dairy Farms, 2010

Item	Average	My Farm
Total milk sold, pounds	16,433,638	
Milk sold per cow, pounds	24,882	
Average milk plant test, percent butterfat	3.61%	

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

### ANIMALS LEAVING THE HERD

39 Northern New York Region Dairy Farms, 2010

	Ave	orage	My Farm		
Item	Number	Percent*	Number	Percent*	
Cows sold for beef	180	27			
Cows sold for dairy	4	1			
Cows died	42	6			
Culling rate**		34			

\*Percent of average number of cows in the herd. \*\*Cows sold for beef plus cows died.

<u>The cost of producing milk</u> 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, <u>operating costs of producing milk</u> are estimated by deducting nonmilk accrual receipts from total accrual operating expenses including expansion livestock purchased. <u>Purchased inputs cost of producing milk</u> are the operating costs plus depreciation. <u>Total costs of producing milk</u> 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

	Average			My Farm		
Item	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Accrual Cost of						
Producing Milk						
Operating costs	\$ 2,214,700	\$ 3,353	\$ 13.48	\$	\$	\$
Purchased inputs	. , ,	. ,	·			
costs	\$ 2,447,718	\$ 3,706	\$ 14.89	\$	\$	\$
Total Costs	\$ 2,747,992	\$ 4,161	\$ 16.72	\$	\$	\$
Accrual Receipts						
From Milk	\$ 2,884,688	\$ 4,368	\$ 17.55	\$	\$	\$
Net Milk Receipts	\$ 2,758,005	\$ 4,176	\$ 16.78	\$	\$	\$
Net Farm Income						
without Apprec.	\$ 436,970	\$ 662	\$ 2.66	\$	\$	\$
Net Farm Income						
with Appreciation	\$ 608,258	\$ 921	\$ 3.70	\$	\$	\$

39 Northern New York Region Dairy Farms, 2010

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

			Average	e		Ν	⁄Iy Farm
Item	Pe	er Cow		Pe	er Cwt.	Per Cow	Per Cwt.
Purchased dairy grain							
& concentrate	\$	1,273		\$	5.11	\$	\$
Purchased dairy roughage		59			0.24		
Total Purchased							
Dairy Feed	\$	1,331		\$	5.35	\$	\$
Purchased grain & concentrate							
as % of milk receipts			28%			_	%
Purchased feed & crop expense	\$	1,584		\$	6.37	\$	\$
Purchased feed & crop expense							
as % of milk receipts			36%				%
Breeding	\$	47		\$	0.19	\$	\$
Veterinary & medicine		149			0.60		
Milk marketing		192			0.77		
Bedding		88			0.35		
Milking supplies		97			0.39		
Cattle lease		1			0.01		
Custom boarding		147			0.59		
bST expense		67			0.27		
Livestock professional fees		7			0.03		
Other livestock expense		14			0.06		

### **Capital and Labor Efficiency Analysis**

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

	Per	Per	Per Tillabl	e Per Tillable
Item	Worker	Cow	Acre	Acre Owned
Farm capital	\$419,000	\$8,875	\$4,192	2 \$7,644
Real estate	ФПУ,000	3,758	ψ1,192	3,237
Machinery & equipment	69,947	1,482	700	
Ratios				
Asset turnover	Operating Expense	Inte	rest Expense	Depreciation Expense
0.59	0.77		0.03	0.07
<u>My Farm</u>				
Farm capital	\$	\$	_ \$	\$
Real estate			_	
Machinery & equipment				
Ratios				
Asset turnover	Operating Expense	Inte	rest Expense	Depreciation Expense

### CAPITAL EFFICIENCY

39 Northern New York Region Dairy Farms, 2010

### LABOR FORCE INVENTORY

Labor Force	Months	Age	Years of Education	Value of Labor & Management
Operator number 1	12.7	53	15	\$56,697
Operator number 2	8.7	50	13	38,826
Operator number 3	3.9	47	15	15,838
Operator number 4	1.2	45	12	5,128
Family paid	2.8			,
Family unpaid	1.0			
Hired	<u>137.6</u>			
Total	167.9	/ 12 = 13.99 Work	ker Equivalent	
		2.00 Oper-	ator/Manager Equivalent	
<u>My Farm</u> : Total Operator's		/ 12 = Worl / 12 = Oper	ker Equivalent ator/Manager Equivalent	

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

### LABOR EFFICIENCY

39 Northern New York Region Dairy Farms, 2010

Labor	Average		My	/ Farm
Efficiency	Total	Per Worker	Total	Per Worker
Cows, average number	660	47		
Milk sold, pounds	16,433,638	1,174,321		
Tillable acres	1,398	100		

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 AND MACHINERY COSTS

My Farm Average Per Per Per Per Labor Costs Total Cow Cwt. Total Cow Cwt. Value of operator(s) labor (\$2,500/month) \$ \$ \$ \$ 66,350 \$ 100 0.40 Family unpaid (\$2,500/month) 2.450 4 0.01 Hired 392,421 594 2.39 \$ Total Labor \$ 461,221 \$ 698 2.81 \$ 723 Machinery Cost \$ <u>\$ 477,183</u> \$ 2.90 \$ \$ \$ \$ \_\_\_\_ Total Labor & Mach. \$ 938,404 \$ 1,421 \$ 5.71 Hired labor expense per hired worker equivalent 33,538 \$\_\_\_\_ \$ Hired labor expense as % of milk sales 13.6% %

### 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 34 Northern New York Region Dairy Farms, 2009 & 2010

	Average of	34 Farms*		My Farm	
Selected Factors	2009	2010	2009	2010	Goal
Size of Business					
Average number of cows	658	704			
Average number of heifers	514	601			
Milk sold, pounds	16,556,057	17,649,823			
Worker equivalent	14.28	14.82			
Total tillable acres	1,471	1,536			
Rates of Production					
Milk sold per cow, pounds	25,144	25,079			
Hay DM per acre, tons	3.2	3.4			
Corn silage per acre, tons	19	20			
Labor Efficiency					
Cows per worker	46	47			
Milk sold/worker, pounds	1,159,388	1,190,946			
Cost Control					
Grain & conc. purchased					
as % of milk sales	37%	29%	%	%	%
Dairy feed & crop expense					
per cwt. milk	\$ 6.24	\$ 6.27	\$	\$	\$
Labor & mach. costs/cow	\$ 1,423	\$ 1,439	\$ \$	\$ \$	\$ \$
Operating cost of producing	. ,				
cwt. of milk	\$ 13.17	\$ 13.29	\$	\$	\$
Capital Efficiency**					
Farm capital per cow	\$ 9,278	\$ 9,105	\$	\$	\$
Mach. & equipment per cow	\$ 1,581	\$ 1,526	\$	\$ \$	\$
Asset turnover ratio	0.44	0.58			·
Profitability					
Net farm income w/o apprec.	\$ -149,350	\$ 482,881	\$	\$	\$
Net farm income w/apprec.	\$ -112,712	\$ 676,144	\$	\$ \$	\$
Labor & mgmt. income	ф 11 <b>2,</b> , 12	\$ 0,0,111	Ψ	Ŷ	Ψ
per operator/manager	\$ -167,272	\$ 134,333	\$	\$	\$
Rate of return on equity	\$ 107,272	ф 10 1,555	Ψ	Ψ	Ψ
capital with appreciation	-5.9	13.7	%	%	%
Rate of return on all	0.7	10.7	/0	/0	/0
capital with appreciation	-2.4	10.1	%	%	%
Financial Summary	2.1	10.1	/0	/0	/0
Farm net worth, end year	\$3,766,357	\$4,252,905	\$	\$	\$
Debt to asset ratio	0.39	0.36	Ψ	Ψ	Ψ
Farm debt per cow	\$ 3,488	\$ 3,337	\$	\$	\$
r unit debt per ebw	ψ 3,700	Ψ 3,331	Ψ	Ψ	Ψ

\*Farms participating both years.

\*\*Average for the year.

Same 34 Northern New York Region Dairy Farms, 2009 & 2010

	20	09	2010		
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.	
Average Number of Cows	658		704		
Cwt. of Milk Sold		165,561		176,498	
ACCRUAL OPERATING RECEIPTS					
Milk	\$3,451	\$13.72	\$4,389	\$17.50	
Dairy cattle	274	1.09	315	1.25	
Dairy calves	37	0.15	16	0.06	
Other livestock	-1	-0.01	3	0.01	
Crops	78	0.31	178	0.71	
Miscellaneous receipts	206	0.82	113	0.45	
Total Receipts	\$4,044	\$16.08	\$5,014	\$19.99	
ACCRUAL OPERATING EXPENSES					
Hired labor	\$ 610	\$ 2.42	\$ 594	\$ 2.37	
Dairy grain & concentrate	1,272	5.06	1,273	5.08	
Dairy roughage	37	0.15	36	0.14	
Nondairy feed	0	0.00	0	0.00	
Professional nutritional services	0	0.00	0	0.00	
Machine hire, rent & lease	84	0.33	102	0.40	
Machinery repair & vehicle expense	176	0.70	188	0.75	
Fuel, oil & grease	145	0.58	160	0.64	
Replacement livestock	12	0.05	17	0.07	
Breeding	48	0.19	48	0.19	
Veterinary & medicine	145	0.58	151	0.60	
Milk marketing	187	0.74	190	0.76	
Bedding	83	0.33	88	0.35	
Milking supplies	103	0.41	97	0.39	
Cattle lease	2	0.01	1	0.01	
Custom boarding	146	0.58	159	0.63	
bST expense	61	0.24	65	0.26	
Livestock professional fees	7	0.03	7	0.03	
Other livestock expense	16	0.06	14	0.06	
Fertilizer & lime	112	0.45	107	0.43	
Seeds & plants	96	0.38	98	0.39	
Spray & other crop expense	47	0.19	53	0.21	
Crop professional fees	5	0.02	6	0.02	
Land, building & fence repair	58	0.23	59	0.23	
Taxes	51	0.20	48	0.19	
Real estate rent & lease	42	0.17	50	0.20	
Insurance	42	0.17	40	0.16	
Utilities	100	0.40	111	0.44	
Interest paid	124	0.49	133	0.53	
Other professional fees	20	0.08	19	0.08	
Miscellaneous	21	0.08	$\frac{21}{2000}$	0.08	
Total Operating Expenses	\$3,853	\$15.33	\$3,935	\$15.69	
Expansion Livestock	51	0.20	24	0.09	
Extraordinary Expense	2	0.01	4	0.01	
Machinery Depreciation	221	0.88	216	0.86	
Real Estate Depreciation	143	0.57	149	0.59	
Total Expenses	\$4,270	\$16.99	\$4,328	\$17.24	
Net Farm Income Without Appreciation	\$ -227	\$ -0.90	\$ 686	\$ 2.74	

### **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 FO	OR FARM	MANAGEME	NT COOPERATORS

S	Size of Business Ra		Rate of Production	on	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)
35.20	1,869	48,606,553	27,277	4.6	25	60	1,466,973
17.09	764	19,135,984	26,080	3.9	22	48	1,193,452
10.57	459	10,482,527	23,552	3.5	19	43	1,042,851
6.48	245	5,596,899	21,740	2.8	18	38	869,814
3.29	117	2,367,842	18,480	1.8	15	29	580,561
				Cost Control			
Grain	% G	rain is	Machinery	Labor &	Feed & Crop	Fee	ed & Crop
Bought	of	Milk	Costs	Machinery	Expenses	Ex	penses Per
Per Cow	Rea	ceipts	Per Cow	Costs per Cow	Per Cow	C	wt. Milk

39 Northern New York Region Dairy Farms, 2010

Bought Per Cow	of Milk Receipts	Costs Per Cow	Machinery Costs per Cow	Expenses Per Cow	Expenses Per Cwt. Milk
(12)	(12)	(14)	(14)	(12)	(12)
\$779	21%	\$528	\$1,139	\$1,026	\$5.12
1,019	27	685	1,387	1,342	5.92
1,188	29	753	1,505	1,477	6.31
1,350	30	853	1,646	1,644	6.68
1,484	35	994	2,001	1,867	7.37

V	alue and Cost of Pro	oduction		Profitability		
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Producing Milk Per Cwt.	Net Farm Income with Appreciation	Net Farm Income w/o Appreciation	Labor & Mgt. Income Per Operator	Change in Net Worth with Appreciation
(12)	(12)	(12)	(4)	(4)	(4)	(8)
\$4,916	\$9.77	\$15.11	\$1,882,523	\$1,376,219	\$335,198	\$1,388,365
4,493	12.18	16.30	713,715	453,482	157,173	609,066
4,134	13.16	17.06	326,037	246,191	59,569	233,519
3,781	14.30	17.94	192,966	168,056	34,819	113,226
3,235	16.34	20.82	85,329	58,306	2,172	33,888

### **Supplementary Information**

Each year DFBS cooperators volunteer to complete supplementary data collection forms looking at selected management aspects of the business or specific research areas being studied. This is in addition to the normal DFBS data collection form. An area that was examined this year was the source of dairy replacements. Following is a summary of this information.

### SOURCE OF DAIRY REPLACEMENTS 29 New York Dairy Farms, 2010

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

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

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

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

### Milk Income and Marketing Expense Breakdown

Starting January 1<sup>st</sup>, 2000, the northeast switched to multiple components pricing, which changed the format of the milk check and how farmers received payment for their milk. To examine the breakdown of the gross milk income and the marketing expenses, 29 Northern New York farms provided data for all the different sources of income for milk sales and the milk marketing expenses on an accrual basis. This information is reported in the following two tables. The tables are divided into six different areas, each representing a different area of income or expenses.

The first section looks at the value of the milk components on a per cwt. basis. The second area looks at the Producer Price Differential. The third area looks at the premiums a farm receives. Any premiums not specifically noted as quality or volume-related are included in market premiums. The fourth area looks at the expenses associated with marketing milk. A new line item in this section is the expenses associated with utilizing forward contracting or hedging programs to market milk, such as commission or broker fees. The fifth area is income from forward contracting or hedging programs. The sixth area is the patronage dividends or refunds from the milk cooperatives. Equity purchased in the milk cooperative utilizing a monthly deduction from the milk check or a percent of the patronage dividend is treated as a capital purchase and is not a milk marketing expense. The cumulative total for these six areas is the net price received on farms. For participating farms, the net farm price can be found on page 12 of the DFBS report.

The table on page 25 reports the averages for these different areas. The table on page 26 contains the range for each of the individual lines of the report. This table is in farm business chart format with each item sorted independently and ranked by fifths. Numbers for the different areas will not add to the totals for that quintile or to the net price received because the highest farms for each item were averaged, not the same farms throughout the six areas. This table shows the range of income and expenses received by farms for all the different areas.

For your individual farm, compare your accrual numbers following this same format to look at how you compare to other farms in your region and to identify possible areas to generate additional revenue.

## AVERAGE MILK INCOME AND MARKETING REPORT 29 Northern New York Region Dairy Farms, 2010

	Pounds	Percent	Price/Pound	Total	\$/Cwt of Milk
<b>BASE FARM PRICE</b> Butterfat Protein	633,003	3.61%	\$1.85 \$2.21	\$1,172,924	\$6.69 \$7.00
Solids	537,644 1,001,892	3.07% 5.71%	\$2.31 \$0.18	\$1,243,362 \$178,441	\$7.09 \$1.02
<b>Total Component Contribution</b>					\$14.80
PPD	17,536,012			\$291,331	\$1.66
Base Farm Price					\$16.46
<b>Premiums</b> Quality				\$47,157	\$0.27
Volume				\$56,760	\$0.32
Market Premiums				\$73,720	\$0.42
<b>Total Premiums</b>					\$1.01
<b>BASE FARM PRICE + PREMIUM</b>					\$17.47
Deductions Promotion				\$26,279	\$0.15
Hauling + Stop Charges.				\$90,295	\$0.51
Market Fees & Coop Dues				\$27,461	\$0.16
<b>Total Deductions</b>					\$0.82
BASE FARM PRICE + PREMIUMS - DR	EDUCTIONS				\$16.65
Marketing Programs					
Futures Contracts, Forward Contractin	g, Etc.			\$-2,534	\$-0.01
<b>Total Marketing Income</b>					\$-0.01
Patronage Dividends				\$7,682	\$ 0.04
NET PRICE RECEIVED ON FARM, AL	L SOURCES				\$16.68
PPD - Hauling, \$ per cwt.					\$1.15
PPD - Hauling + Market Premiums, \$ per	cwt.				\$1.57
Net Marketing Value (PPD + Total Premi	iums - Total Dec	luctions), \$ p	er cwt.		\$1.85

MILK PRICE INFORMATION BY QUINTILE\* (Each Category Sorted Independently) 29 Northern New York Region Dairy Farms, 2010

	Lowest	•			Highest
	Quintile	2.56	2.62	0.71	Quintile
Butterfat, %	3.51	3.56	3.63	3.71	3.81
Protein, %	2.96	3.03	3.08	3.13	3.17
Other Solids, %	5.50	5.71	5.73	5.77	5.90
Butterfat, \$ per Cwt.	6.51	6.60	6.70	6.87	7.07
Protein, \$ per Cwt.	6.80	6.98	7.08	7.15	7.28
Other solids, \$ per Cwt.	1.00	1.01	1.02	1.02	1.03
Total Component Value per Cwt.	\$14.35	\$14.62	\$14.86	\$14.99	\$15.30
Total component value per ewi.	ψιτισσ	ψ14.02	φ14.00	ψ14.77	φ15.50
PPD, \$ per Cwt.	1.47	1.57	1.59	1.69	2.07
	<b>*</b> 4 <b>=</b> 00	<i><b>ф 4 4 4</b></i>	<b>*</b> 1 < 10		<b>*1= 1</b>
Base Farm Price per Cwt.	\$15.90	\$16.21	\$16.48	\$16.78	\$17.12
Quality, \$ per Cwt.	0.07	0.17	0.26	0.33	0.41
Volume, \$ per Cwt.	0.00	0.04	0.20	0.33	0.41
Market premium, \$ per Cwt.	0.00	0.04	0.13	0.40	1.08
Total Premium, \$ per Cwt.	0.02	0.14	0.34	1.11	
Total Flemium, § per Cwt.	0.41	0.00	0.89	1.11	1.43
Base Farm Price + Premiums per Cwt.	\$16.55	\$17.04	\$17.35	\$17.72	\$18.25
Promotion, \$ per Cwt.	0.15	0.15	0.15	0.15	0.16
Hauling, \$ per Cwt.	0.19	0.35	0.42	0.53	1.02
Market fees & coop dues per Cwt.	0.02	0.10	0.12	0.17	0.24
Market lees & coop dues per Cwt.	0.02	0.10	0.15	0.17	0.24
Total Marketing Expenses per Cwt.	\$0.44	\$0.63	\$0.72	\$0.86	\$1.28
Base + Premiums – Deductions per Cwt.	\$15.90	\$16.34	\$16.66	\$16.93	\$17.20
Futures contract, forward contracting, \$ per Cwt.	-0.02	0.00	0.00	0.00	0.01
Total Marketing Income, \$ per Cwt.	\$-0.02	\$0.00	\$0.00	\$0.00	\$0.01
Patronage Dividends, \$ per Cwt.	\$0.00	\$0.00	\$0.01	\$0.06	\$0.27
Net Price Received From All Sources, \$ per Cwt.	\$15.99	\$16.41	\$16.67	\$16.98	\$17.28
	ψισογγ	φ <b>10</b> -71	φ10.07	<b><i>\</i>\\\\\\\\\\\\\</b>	φ17.20
PPD - Hauling, \$ per cwt.	0.92	1.11	1.20	1.33	1.41
PPD - Hauling + Market Premiums, \$ per cwt.	1.19	1.40	1.50	1.73	2.28
	1.19				2.28 2.32

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

### New York State Farm Business Charts

The Farm Business Chart is a tool which can be used in analyzing a business by drawing a line through the figure in each column which represents the current level of management performance. The figure at the top of each column is the average of the top 10 percent of the 204 farms for that factor. The other figures in each column are the average for the second 10 percent, third 10 percent, etc. **Each column of the chart is independent of the others.** The farms which are in the top 10 percent for one factor would <u>not</u> necessarily be the same farms which make up the top 10 percent for any other factor.

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

Size of Business		]	Rates of Product	ion	Labor Efficiency		
Worker Equiv-	No. of	Pounds Milk	Pounds Milk Sold	Tons Hay Crop	Tons Corn Silage	Cows Per	Pounds Milk Sold
alent	Cows	Sold	Per Cow	DM/Acre	Per Acre	Worker	Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
34.5	1,662	43,168,090	27,708	5.5	26	63	1,442,513
21.6	969	24,026,822	26,204	4.4	22	51	1,195,505
16.1	715	17,158,049	25,098	3.9	21	47	1,103,896
12.2	512	11,954,459	24,083	3.5	19	43	1,022,874
8.2	359	8,336,747	23,176	3.2	18	40	927,078
5.4	203	4,407,937	21,930	2.8	17	37	823,127
4.0	136	2,631,526	20,554	2.5	16	34	701,150
3.1	96	1,831,947	19,097	2.3	15	31	618,720
2.4	68	1,198,114	17,092	1.9	13	28	520,658
1.6	47	789,780	13,066	1.5	8	21	346,599

204 New York Dairy Farms, 2009

Cost Control									
Grain	% Grain is	Machinery	Labor &	Feed & Crop	Feed & Crop				
Bought	of Milk	Costs	Machinery	Expenses	Expenses Per				
Per Cow	Receipts	Per Cow	Costs Per Cow	Per Cow	Cwt. Milk				
(12)	(12)	(14)	(14)	(12)	(12)				
\$556	24%	\$392	\$1,050	\$761	\$4.61				
827	31	507	1,241	1,073	5.39				
938	33	568	1,348	1,233	5.83				
1,039	36	611	1,425	1,311	6.15				
1,124	37	653	1,478	1,407	6.41				
1,189	39	688	1,537	1,494	6.67				
1,259	41	726	1,614	1,557	6.94				
1,340	43	779	1,709	1,638	7.25				
1,441	46	834	1,852	1,752	7.64				
1,656	52	1,044	2,273	2,045	9.01				

204 New York Dairy Farms, 2009

Milk Receipts Per Cow	Milk Receipts Per Cwt.	Operating Cost Milk Production Per Cow	Operating Cost Milk Production Per Cwt.	Total Cost Milk Production Per Cow	Total Cost Mill Production Per Cwt.
(12)	(12)	(12)	(12)	(12)	(12)
\$3,904	\$15.04	\$1,539	\$9.36	\$2,786	\$14.64
3,615	14.46	2,107	11.18	3,286	15.73
3,472	14.20	2,412	12.03	3,529	16.34
3,343	13.99	2,604	12.45	3,724	17.04
3,212	13.82	2,863	13.07	3,892	17.59
3,001	13.68	3,031	13.54	4,070	18.31
2,815	13.50	3,193	14.15	4,235	18.90
2,586	13.33	3,437	14.69	4,399	19.92
2,310	13.11	3,726	15.62	4,595	21.92
1,786	12.65	4,115	17.20	5,037	25.94

			Profita	ability		
Ν	Vet Farm Ind	come	Net Farm	Income	Lat	or &
Witho	out Appreci	ation	With App	reciation	Managen	nent Income
	Per	Operations		Per	Per	Per
Total	Cow	Ratio	Total	Cow	Farm	Operator
(4)	(12)	(4)	(4)	(12)	(4)	(4)
\$189,108	\$621	0.17	\$316,867	\$689	\$44,796	\$29,113
50,933	261	0.08	73,223	359	-22,905	-15,857
21,392	129	0.03	32,127	166	-41,298	-27,377
4,190	25	0.01	6,546	49	-61,781	-39,543
-18,397	-107	-0.03	-19,455	-115	-89,481	-57,798
-41,720	-215	-0.06	-38,756	-234	-131,913	-80,521
-70,753	-353	-0.11	-65,741	-320	-219,725	-116,887
-156,846	-502	-0.14	-138,222	-476	-322,905	-187,439
-338,128	-636	-0.19	-294,082	-645	-553,193	-302,719
-861.956	-1,025	-0.35	-945,904	-1,058	-1.234,813	-758.790

Farm Business Charts for farms with freestall barns and 150 cows or less, 151-300 cows, and more than 300 cows; and farms with conventional barns with 60 cows or less and more than 60 cows are shown on pages 32-36.

### **Financial Analysis Chart**

The farm financial analysis chart on page 29 is designed just like the Farm Business Chart and may be used to assess the financial health of the farm business. Most of the financial measures used in the chart are defined on pages 6, 9, 13 and 19 of this publication. References to DFBS output page numbers for participating dairy farmers are provided in the table headings.

### FINANCIAL ANALYSIS CHART

204 New York Dairy Farms, 2009

			Liquidity (1	* *			
				Debt Pay-			
Planned	Available			ments		Working	
Debt	for	Cash Flow	Debt	as Percent		Capital as	
Payments	Debt Service	Coverage	Coverage	of Milk	Debt Per	% of Total	Current
Per Cow	Per Cow	Ratio	Ratio	Sales	Cow	Expenses	Ratio
(10)*	(16)	(10)	(10)	(10)	(7)	(7)	(7)
\$129	\$869	4.73	2.73	4%	\$207	48%	24.00
265	536	1.30	1.07	7	1,172	29	3.80
320	425	0.90	0.68	10	1,925	22	2.67
388	334	0.64	0.39	12	2,513	19	2.09
448	225	0.37	0.13	14	2,914	15	1.75
512	81	0.14	-0.03	17	3,517	11	1.48
592	-6	-0.06	-0.29	19	4,048	6	1.17
684	-132	-0.42	-0.57	22	4,632	0	0.94
841	-278	-0.73	-1.04	25	5,166	-6	0.72
1,321	-587	-1.87	-2.34	38	6,688	-25	0.30
		Solvency				Operational Ra	
			Debt/Asset R	latio	Operating	Interest	Depreciation
Leverage	Percen	it Ci	urrent &	Long	Expense	Expense	Expense
Ratio <sup>**</sup>	Equity	/ Inte	ermediate	Term	Ratio	Ratio	Ratio
(7)	(7)		(7)	(7)	(14)	(14)	(14)
0.08	989	6	0.02	0.00	0.73	0.00	0.02
0.19	88		0.11	0.00	0.83	0.01	0.04
0.28	81		0.22	0.03	0.86	0.02	0.05
0.39	75		0.27	0.11	0.89	0.02	0.06
0.53	69		0.35	0.22	0.91	0.03	0.07
0.73	60		0.42	0.33	0.95	0.04	0.08
0.87	55		0.47	0.44	0.98	0.04	0.09
1.06	49		0.56	0.53	1.03	0.05	0.11
1.39	43		0.67	0.64	1.07	0.06	0.13
3.03	26		0.89	0.98	1.19	0.11	0.18
		y (Capital)				Profita	
Asset	Real Estate	Machinery	Total Far		0	Percent Rate of	
Turnover	Investment	Investment	Assets	Net V		Apprecia	
(ratio)	Per Cow	Per Cow	Per Cov	w With App	preciation	Equity	Investment**
(14)	(14)	(14)	(14)	(8)		(4)	(4)
0.63	\$1,882	\$607	\$6,103	\$130,5		4%	4%
0.52	2,558	968	7,394			-1	1
0.48	2,940	1,229	7,972		052	-3	-1
0.44 0.40	3,319 3,639	1,456 1,618	8,730 9,230			-5 -7	-2 -4
0.40	5,037	1,010	9,230	-,,,,		- /	-4
0.37	4,097	1,803	9,754			-10	-5
0.34	4,625	2,036	10,312			-12	-7
0.30	5,339	2,255	11,366			-15	-8
0.26	6,375	2,560	12,448			-21	-10
0.19	8,932	3,659	15,218	-1,243,2	274	-46	-16

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

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

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

### Comparison by Type of Barn and Herd Size

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

The table on page 31 includes the average values for the resulting five groups of dairy farms. The average size of farms in the five groups ranges from 48 cows on the small conventional farms to 881 cows on the largest freestall farms.

The largest freestall farms averaged the highest milk output per cow and per worker, the lowest total cost of production and investment per cow; however, in 2009 they had the lowest returns to labor, management and capital.

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

### Herd Size Comparisons

A detailed comparison of profitability, financial situation and business analysis factors across herd sizes is contained on pages 48-60 of the 2009 State Summary\*. In most years, as herd size increases, the net farm income increases (page 48)\*; however, that was not the case for 2009. All herd size categories averaged a negative net farm income without appreciation. Net farm income without appreciation averaged \$-1,939 per farm for the less than 60 cow farms and \$-490,500 per farm for those with more than 900 cows. Return to all capital without appreciation generally increased as herd size increased.

Assets, liabilities and financial measures are presented on pages 55-58\*. All herd size categories saw a decrease in net worth during 2009. The largest herd size category experienced a decrease in net worth of \$293,733. However, percent equity went down as assets increased. The 200 to 399 herd size category had the lowest percent equity; while the smaller herds averaged 77 percent.

Crop yields showed little relationship to herd size, but fertilizer and lime expenses, and machinery cost per tillable acre generally increased as herd size increased (pages 59-60)\*. The farms with more than 900 cows averaged more milk sold per cow than any other size category (page 60). With 25,229 pounds of milk sold per cow, farms in the largest herd size group averaged 8.8 percent more milk output per cow than the average of all herds in the summary with less than 900 cows. Farm capital per cow generally decreased as herd size increased. Milk sold per worker increased dramatically as herd size increased, ranging from 453,250 pounds at the lowest herd size category up to 1,217,421 pounds at the largest size category.

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

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

191 New York Dairy Farms, 2009

			<u>k Dairy Farms, 2</u> ntional	.009	Freestall	
		Conve	nuonai		151-300	
Item Farm	ns with:	<= 60 Cows	>60 Cows	<=150 Cows	Cows	≥300 Cow
Number of farms		23	25	27	24	92
Cropping Program Analysis						
Total Tillable acres		153	327	239	556	1,711
Tillable acres rented*		82	132	113	250	878
Hay crop acres <sup>*</sup>		123	228	150	319	768
Corn silage acres <sup>*</sup>		18	53	57	139	681
Hay crop, tons DM/acre		2.3	2.2	2.6	2.7	3.6
Corn silage, tons/acre		16	13.3	16.1	18.6	19.0
Dats, bushels/acre		45	73	79	55	67
Forage DM per cow, tons		8.4	8.1	7.9	8.3	8.3
Fillable acres/cow		3.3	3.5	2.7	2.7	2.0
Fertilizer & lime expense/tillab	le acre	\$27.94	\$26.51	\$33.97	\$54.76	\$48.73
Fotal machinery costs		\$34,204	\$61,040	\$70,419	\$158,061	\$585,211
Machinery cost/tillable acre		\$214	\$187	\$243	\$284	\$336
Dairy Analysis						
Number of cows		48	93	103	210	881
Number of heifers		40	79	84	179	734
Milk sold, lbs.		854,175	1,713,249	1,981,491	4,605,848	22,034,738
Ailk sold/cow, lbs.		17,844	18,446	19,328	21,928	25,024
Dperating cost of producing mi	lk/cwt.	\$12.16	\$13.13	\$12.42	\$13.03	\$13.8
Total cost of producing milk/cv	vt.	\$21.52	\$20.43	\$18.51	\$17.65	\$16.82
Price/cwt. milk sold		\$13.44	\$13.45	\$13.81	\$13.71	\$13.90
Purchased dairy feed/cow		\$891	\$1,044	\$1,207	\$1,155	\$1,358
Purchased dairy feed/cwt. milk		\$5.00	\$5.66	\$6.24	\$5.27	\$5.43
Purchased grain & concentrate	as % of					
milk receipts		35%	41%	39%	38%	3
Purchased feed & crop expense	cwt milk	\$5.99	\$6.58	\$7.21	\$6.36	\$6.38
Capital Efficiency						
Farm capital/worker		\$296,563	\$325,893	\$313,395	\$368,757	\$405,869
Farm capital/cow		\$11,523	\$11,298	\$9,538	\$9,481	\$8,905
farm capital/tillable acre owned	d	\$7,765	\$5,385	\$7,760	\$6,504	\$9,408
Real estate/cow		\$5,772	\$5,506	\$4,368	\$3,994	\$3,563
Machinery investment/cow		\$2,383	\$2,200	\$1,763	\$1,741	\$1,505
Asset turnover ratio		0.26	0.26	0.34	0.38	0.40
<u>Labor Efficiency</u> Vorker equivalent		1.86	3.22	3.11	5.41	19.32
Dperator/manager equivalent		1.09	1.47	1.52	2.01	2.14
Milk sold/worker, lbs.		458,823	531,652	636,283	852,014	1,140,662
Cows/worker		458,825	29	33	39	1,140,002
_abor cost/cow		\$1,124	978	\$862	\$800	\$787
_abor cost/tillable acre		\$352	\$278	\$370	\$302	\$405
Profitability & Balance Sheet A	nalvsis	Ψυυν	Ψ210	ψ570	ψ302	ψτΟς
Net farm income (without appr		\$-2,315	\$-16,922	\$-1,745	\$-28,801	\$-260,522
Labor & management income/c		\$-2,515 \$-31,550	\$-10,922 \$-47,833	\$-1,743 \$-29,326	\$-28,801 \$-49,465	\$-260,322 \$-239,395
Rate return on all capital with a		s-31,330 -7.0%	۶-47,855 6.9%	۶-29,320 -5.0%	-49,403 -4.9%	¢-259,59. -3.2
Farm debt/cow	ррестаноп	-7.0% \$2,661	-6.9% \$3,160	-5.0% \$2,921	-4.9% \$3,177	-3.2 \$3,388
Percent equity		\$2,001 77%	\$3,100 72%	\$2,921 68%	\$3,177 66%	\$3,380 6
*Average of all farms, not only	d		12/0	0070	0070	0

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

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

	Size of Business		R	ates of Production	on	Labor Efficiency		
Worker	No.	Pounds	Pounds	Tons	Tons Corn	Cows	Pounds	
Equiv-	of	Milk	Milk Sold	Hay Crop	Silage	Per	Milk Sold	
alent	Cows	Sold	Per Cow	DM/Acre	Per Acre	Worker	Per Worker	
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)	
2.75	57	1,166,624	23,699	4.5	22	41	814,988	
2.48	55	1,054,704	22,630	3.5	20	35	700,081	
2.22	52	1,027,653	21,999	2.8	20	31	627,340	
2.04	51	1,019,893	20,747	2.4	19	31	569,357	
2.00	51	1,002,706	19,706	2.3	18	29	531,012	
1.79	50	965,943	18,647	2.2	16	26	469,700	
1.63	47	900,255	18,247	2.0	15	25	432,381	
1.58	46	736,147	15,835	1.8	15	24	391,392	
1.50	43	630,256	13,205	1.7	12	21	312,985	
1.25	37	423,753	10,155	1.5	7	18	232,739	

Cost Control									
Grain	% Grain is	Machinery	Labor &	Feed & Crop	Feed & Crop				
Bought	of Milk	Costs	Machinery	Expenses	Expenses Per				
Per Cow	Receipts	Per Cow	Costs Per Cow	Per Cow	Cwt. Milk				
(12)	(12)	(14)	(14)	(12)	(12)				
\$366	21%	\$444	\$1,265	\$466	\$4.26				
622	28	528	1,482	827	4.74				
715	33	607	1,659	925	5.45				
798	36	645	1,746	1,016	6.07				
881	37	666	1,868	1,077	6.31				
938	39	754	1,991	1,173	6.46				
955	40	794	2,120	1,263	6.56				
1,054	40	879	2,160	1,319	6.86				
1,107	43	938	2,263	1,456	7.02				
1,269	44	1,126	2,473	1,633	7.49				

Va	lue and Cost of Prod	uction		Profitability					
Milk	Operating Cost	Total Cost	Net Farn	n Income	Labor &	Change in			
Receipts	Producing Milk	Production	Without A	ppreciation	Mgmt. Income	Net Worth			
Per Cow	Per Cwt.	Per Cwt.	Total	Per Cow	Per Operator	w/Appreciation			
(12)	(12)	(12)	(4)	(12)	(4)	(8)			
\$3,220	\$7.64	\$16.31	\$44,417	\$931	\$10,108	\$60,332			
3,074	10.10	18.97	30,319	617	-6,583	34,450			
2,878	11.11	20.13	16,506	327	-12,640	26,646			
2,804	11.35	20.62	10,951	212	-21,467	10,692			
2,660	12.26	21.20	4,899	92	-23,274	1,252			
2,528	12.90	22.42	1,350	30	-26,611	-3,844			
2,404	13.41	23.00	-2,281	-53	-35,102	-9,513			
2,174	13.59	25.02	-10,140	-225	-37,137	-17,266			
1,774	14.46	27.53	-20,302	-415	-50,867	-24,671			
1,322	19.81	34.87	-58,077	-1,274	-75,119	-38,682			

FARM BUSINESS CHART FOR LARGE CONVENTIONAL STALL DAIRY FARMS

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

	Size of Bus	siness	R	Rates of Production			Labor Efficiency	
Worker	No.	Pounds	Pounds	Tons	Tons Corn	Cows	Pounds	
Equiv-	of	Milk	Milk Sold	Hay Crop	Silage	Per	Milk Sold	
alent	Cows	Sold	Per Cow	DM/Acre	Per Acre	Worker	Per Worker	
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)	
6.20	151	3,110,205	24,463	4.4	27	64	961,921	
4.65	133	2,347,372	22,085	3.6	25	43	801,367	
4.04	120	2,244,457	21,533	3.2	19	41	698,749	
3.64	105	2,129,390	20,958	2.7	17	35	660,705	
3.53	99	1,968,372	20,320	2.6	15	32	646,832	
3.16	85	1,671,792	19,100	2.4	15	30	579,244	
2.91	79	1,463,721	17,581	2.2	12	28	530,941	
2.62	75	1,320,625	15,975	2.0	9	26	483,325	
2.06	67	1,036,449	14,505	1.7	8	22	357,151	
1.41	64	917,955	12,439	1.1	6	18	292,357	

Cost Control							
Grain	% Grain is	Machinery	Labor &	Feed & Crop	Feed & Crop		
Bought	of Milk	Costs	Machinery	Expenses	Expenses Per		
Per Cow	Receipts	Per Cow	Costs Per Cow	Per Cow	Cwt. Milk		
(12)	(12)	(14)	(14)	(12)	(12)		
\$586	24%	\$307	\$1,056	\$711	\$4.58		
812	33	448	1,146	985	5.66		
885	37	514	1,344	1,108	6.08		
935	39	574	1,474	1,186	6.32		
992	42	643	1,661	1,279	6.72		
1,093	44	697	1,745	1,333	7.06		
1,141	45	761	1,911	1,382	7.48		
1,181	48	814	2,012	1,454	7.83		
1,199	52	847	2,232	1,533	7.98		
1,442	61	1,124	2,506	1,557	9.35		

Va	lue and Cost of Prod	uction		_		
Milk	Operating Cost	Total Cost	Net Farm		Labor &	Change in
Receipts	Producing Milk	Production	Without A	ppreciation	Mgmt. Income	Net Worth
Per Cow	Per Cwt.	Per Cwt.	Total	Per Cow	Per Operator	w/Appreciation
(12)	(12)	(12)	(4)	(12)	(4)	(8)
\$3,406	\$8.50	\$15.78	\$71,365	\$653	\$-3,608	\$154,271
3,074	11.50	18.04	24,951	362	-20,187	35,152
2,918	12.37	19.17	16,883	204	-24,084	16,525
2,739	13.03	20.71	9,331	107	-25,483	-3,254
2,720	13.82	21.78	-6,950	-84	-29,384	-14,599
2,605	14.27	22.40	-20,299	-201	-37,412	-23,170
2,300	15.29	22.87	-27,719	-327	-52,118	-28,093
2,175	15.98	23.43	-42,035	-459	-64,432	-50,046
1,912	16.12	23.86	-53,888	-602	-90,066	-87,164
1,695	16.80	27.23	-74,128	-768	-138,716	-130,673

FARM BUSINESS CHART FOR SMALL FREESTALL DAIRY FARMS

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

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

		Cost	Control		
Grain	% Grain is	Machinery	Labor &	Feed & Crop	Feed & Crop
Bought	of Milk	Costs	Machinery	Expenses	Expenses Per
Per Cow	Receipts	Per Cow	Costs Per Cow	Per Cow	Cwt. Milk
(12)	(12)	(14)	(14)	(12)	(12)
\$467	21%	\$314	\$1,023	\$787	\$4.48
769	30	479	1,273	1,128	5.87
896	34	514	1,380	1,210	6.43
987	38	545	1,449	1,250	6.80
1,069	40	607	1,507	1,293	7.18
1,119	43	698	1,569	1,449	7.51
1,172	45	749	1,658	1,564	7.91
1,319	47	833	1,769	1,649	8.79
1,415	51	910	1,864	1,774	9.06
1,614	53	935	1,985	2,386	11.07

		Profitability		Value and Cost of Production		
Change in	Labor &	n Income	Net Farm	Total Cost	Operating Cost	Milk
Net Worth	Mgmt. Income	ppreciation	Without A	Production	Producing Milk	Receipts
w/Appreciatio	Per Operator	Per Cow	Total	Per Cwt.	Per Cwt.	Per Cow
(8)	(4)	(12)	(4)	(12)	(12)	(12)
\$68,524	\$7,874	\$703	\$66,096	\$15.39	\$8.77	\$3,523
43,616	7,181	439	45,760	15.68	10.02	3,279
20,745	1,281	385	41,317	17.07	10.81	3,072
679	-13,034	302	32,225	17.91	11.65	2,880
-19,767	-14,720	203	22,419	18.43	12.26	2,764
-40,170	-33,906	121	11,144	18.92	13.18	2,569
-49,207	-45,973	-183	-14,163	19.94	13.81	2,423
-57,158	-55,457	-350	-36,946	22.96	14.52	2,337
-85,191	-63,526	-482	-54,221	23.70	14.84	2,287
-136,978	-83,719	-876	-78,278	25.89	16.03	1,983

FARM BUSINESS CHART FOR MEDIUM FREESTALL DAIRY FARMS

24 Freestall Barn Dairy Farms with 151-300 Cows, New York, 2009

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

		Cost	Control		
Grain	% Grain is	Machinery	Labor &	Feed & Crop	Feed & Crop
Bought	of Milk	Costs	Machinery	Expenses	Expenses Per
Per Cow	Receipts	Per Cow	Costs Per Cow	Per Cow	Cwt. Milk
(12)	(12)	(14)	(14)	(12)	(12)
\$768	26%	\$519	\$1,102	\$935	\$5.04
849	29	584	1,212	1,159	5.32
920	32	634	1,450	1,262	5.53
1,051	36	692	1,531	1,321	6.29
1,184	39	755	1,581	1,375	6.64
1,226	42	769	1,607	1,511	6.77
1,282	43	789	1,670	1,556	7.12
1,310	45	816	1,723	1,573	7.30
1,378	50	983	1,942	1,613	7.40
1,628	52	1,344	2,392	1,955	8.20

Va	lue and Cost of Prod	uction				
Milk	Operating Cost	Total Cost	Net Farn	n Income	Labor &	Change in
Receipts	Producing Milk	Production	Without A	ppreciation	Mgmt. Income	Net Worth
Per Cow	Per Cwt.	Per Cwt.	Total	Per Cow	Per Operator	w/Appreciation
(12)	(12)	(12)	(4)	(12)	(4)	(8)
\$3,700	\$10.05	\$14.18	\$223,400	\$893	\$66,995	\$66,133
3,516	10.87	15.96	115,179	458	6,815	6,362
3,405	11.66	16.54	70,222	363	-4,802	-35,701
3,382	12.10	17.38	37,526	187	-20,875	-59,710
3,308	12.83	17.76	-2,170	-9	-36,805	-84,042
3,047	14.46	18.40	-36,917	-173	-57,667	-90,400
2,880	14.78	19.08	-53,573	-294	-74,549	-108,938
2,699	14.91	20.32	-92,589	-472	-98,045	-139,590
2,454	16.40	21.78	-128,081	-555	-128,394	-204,765
2,245	19.53	24.68	-227,656	-1,208	-222,738	-242,405

FARM BUSINESS CHART FOR LARGE FREESTALL DAIRY FARMS

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

	Size of Bu	siness	R	ates of Production	on	Labor Efficiency	
Worker Equiv-	No. of	Pounds Milk	Pounds Milk Sold	Tons Hay Crop	Tons Corn Silage	Cows Per	Pounds Milk Sold
Alent	Cows	Sold	Per Cow	DM/Acre	Per Acre	Worker	Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
41.78	2,143	56,150,342	28,614	5.9	26	63	1,607,559
29.50	1,301	33,356,512	26,931	4.6	23	53	1,315,236
23.66	1,084	27,294,228	26,276	4.2	21	50	1,233,968
21.32	936	23,124,149	25,815	3.9	20	48	1,168,917
18.51	816	20,257,627	25,133	3.6	19	47	1,121,327
16.17	696	17,283,563	24,540	3.4	18	44	1,076,082
14.05	616	14,313,270	23,967	3.1	17	42	1,031,329
12.57	513	12,324,387	23,353	2.9	16	40	980,946
10.33	445	10,402,631	22,582	2.6	15	37	920,130
7.60	362	8,623,291	20,199	1.9	13	33	791,677

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

Va	Value and Cost of Production			Profitability				
Milk	Operating Cost	Total Cost	Net Farm	Net Farm Income		Change in		
Receipts	Producing Milk	Production	Without Ap	ppreciation	Mgmt. Income	Net Worth		
Per Cow	Per Cwt.	Per Cwt.	Total	Per Cow	Per Operator	w/Appreciation		
(12)	(12)	(12)	(4)	(12)	(4)	(8)		
\$4,050	\$11.23	\$14.31	\$267,895	\$335	\$30,240	\$195,183		
3,782	12.23	15.39	81,042	118	-49,213	-11,763		
3,648	12.62	15.91	13,375	22	-87,226	-83,254		
3,561	13.08	16.29	-40,315	-65	-117,198	-190,702		
3,494	13.49	16.70	-97,798	-146	-166,437	-262,591		
3,395	13.90	17.14	-206,354	-246	-212,462	-313,100		
3,319	14.37	17.50	-310,032	-432	-266,975	-399,069		
3,234	14.82	18.15	-411,532	-545	-374,959	-609,554		
3,087	15.71	18.66	-584,504	-640	-503,718	-855,267		
2,865	16.60	19.36	-1,178,954	-920	-1,046,215	-1,681,781		

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 <u>Measurable</u>.
- 3. Goals should be <u>Achievable</u> but challenging.
- 4. Goals should be <u>**R**ewarding</u>.
- 5. Goals should be <u>Timed</u> 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:
	-	
	_	
	_	
	_	
	_	
	_	
	-	
	-	
	_	

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### **GLOSSARY AND LOCATION OF COMMON TERMS**

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

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

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)

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

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

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

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

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

Cash Flow Coverage Ratio - (defined on page 13)

Cash Paid - (defined on page 2)

Cash Receipts - (defined on page 4)

<u>Change in Accounts Payable</u> - (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)

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

**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.

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

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

**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 fulltime 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)

<u>Net Milk Receipts</u> – 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)

<u>Operating Expense Ratio</u> – 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.

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

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

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

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

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

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

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

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

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

Return on Total Capital - (defined on page 7)

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

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

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

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

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