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# DAIRY FARM BUSINESS SUMMARY

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## NEW YORK ORGANIC DAIRY FARMS 2010



**Wayne A. Knoblauch  
Richard K. Overton  
Linda D. Putnam  
Cathryn Dymond**

**Charles H. Dyson School of Applied Economics and Management  
College of Agriculture and Life Sciences  
Cornell University, Ithaca, New York 14853-7801**

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For additional copies, please contact:

Linda Putnam  
Cornell University  
Charles H. Dyson School of Applied Economics and Management  
216 Warren Hall  
Ithaca, NY 14853-7801

E-mail: [ldp2@cornell.edu](mailto:ldp2@cornell.edu)  
Fax: 607-255-1589  
Voice: 607-255-8429  
Or visit:  
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**2010 DAIRY FARM BUSINESS SUMMARY  
NEW YORK ORGANIC DAIRY FARMS**

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## 2010 NEW YORK ORGANIC DAIRY FARM BUSINESS SUMMARY

### INTRODUCTION

Dairy farm operators throughout New York State submit business records for summarization and analysis through Cornell Cooperative Extension's Farm Business Management Program. Averages from a compilation of the individual farm reports are published in three regional summaries and in one statewide summary.<sup>1</sup>

Accrual procedures have been used to provide the most accurate accounting of farm receipts and farm expenses for measuring farm profits. An explanation of these procedures is found on pages 3-5. Three measures of farm profits are calculated on pages 6 and 7. The balance sheet, statement of owner equity, and cash flow statement are featured on pages 8-15. The dairy program analysis includes data on the costs of producing milk (pages 18 and 19).

This New York Organic Dairy Farm Business Summary is an average of 17 businesses that are certified organic dairy farms. The farm income, financial summary, and business analysis sections of this report include comparisons with average data for 113 non-organic dairy farms in New York that are similar in size and location to the organic farms. This report is prepared in workbook form for organic dairy farm operators to use in the systematic study of their farm business operations.

#### Use Comparative Data With Caution

Care should be exercised when using average data from the 17 organic farms. Management styles and length of time producing and selling organic products varies between individual producers. We are presenting this data as an average of the farms that have a wide range of herd size and therefore have a significant variance in some of the management factors employed. If you are planning to use this data for benchmarking purposes, please use caution and factor in your particular management style for your herd size. The comparisons of averages between organic and non-organic producers is meant for information only and should not be used as the only factor to determine if your farm operation would benefit from the production of organic milk.

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<sup>1</sup>Wayne A. Knoblauch, Linda D. Putnam, Jason Karszes, Richard Overton, Cathryn Dymond, Dairy Farm Management Business Summary, New York State, 2010, R.B. 2011-03, November 2011.

## SUMMARY AND ANALYSIS OF THE FARM BUSINESS

### Business Characteristics and Resources Used

Recognition of important business characteristics and identification of the farm resources used are necessary for evaluating management performance. The combination of resources and management practices is known as farm organization. Important farm business characteristics, the number of farms reporting these characteristics, and a listing of the average labor, land, and dairy cattle resources used are presented in the following table.

### BUSINESS CHARACTERISTICS AND RESOURCES USED 17 New York Organic Dairy Farms, 2010

<u>Type of Business</u>	<u>Number</u>	<u>Milking Frequency</u>	<u>Number</u>
Single proprietorship	12	2 times a day	16
Partnership	1	3 times a day	0
Limited liability corporation	2	Other	1
Subchapter S or C corporation	2		
		<u>Breed of Herd</u>	<u>My Farm</u>
		Holstein	49
		Jersey	18
		Other	33
<u>Milking System</u>	<u>Number</u>	<u>Labor Force*</u>	<u>My Farm</u>
Dumping station	0	Operator 1	13.6
Pipeline	8	Operator 2	9.5
Herringbone parlor	3	Family paid	2.0
Other parlor	6	Family unpaid	1.2
		Hired	23.9
		Total	50.3
		Worker equivalent	
		(total ÷ 12)	4.19
		Operator/Manager Equivalent	1.72
<u>Dairy Records Service</u>	<u>Number</u>	<u>Land Use</u>	<u>My Farm</u>
Testing service	10	Total owned acres	411
On-farm system	1	Total tillable acres (owned + rented)	549
Other	0		
None	6		
<u>Business Record System</u>	<u>Number</u>	<u>Number of Cows</u>	<u>My Farm</u>
Account book	6	Beg. year (owned)	126
Accounting service	1	End year (owned & leased)	138
On-farm computer	10	Average for year (owned & leased)	130
Other	0		

\*Based on hours actually worked by owner/operator, instead of standard 12 months per full-time owner/operator. The standard 12 months is used for operator/manager equivalent when calculating labor and management income per operator.

Predominate business characteristics of the 17 organic dairy farms include the single proprietorship, parlor milking system, freestall barn, two time a day milking, herd records with a testing service, and an on-farm computer record system.

The average size of the labor force on the organic dairy farms was similar to the 3.84 worker equivalent on non-organic dairy farms. The organic dairy farms averaged 549 tillable acres compared to 347 tillable acres on the 113 non-organic dairy farms. The non-organic dairy farms averaged 34 cows per worker, and the organic dairy farms averaged 31 cows per worker. In 2010, the non-organic dairy farms used labor resources more efficiently than the organic dairy farms when comparing pounds of milk sold per worker.

Income Statement

The accrual income statement begins with an accounting of all farm business expenses.

CASH AND ACCRUAL FARM EXPENSES  
17 New York Organic Dairy Farms, 2010

Expense Item	Cash Paid	- Change in Inventory or Prepaid Exp.	+	Change in Accounts Payable	=	Accrual Expenses	Percent of Total
<u>Hired Labor</u>	\$ 77,030	\$ 36	<<*	\$ 108		\$ 77,102	19
<u>Feed</u>							
Dairy grain & concentrate	79,869	-4,360		-665		83,564	20
Dairy roughage	2,856	-457		794		4,107	1
Nondairy feed	305	0		0		305	<1
Professional nutritional services	195	0	<<	0		195	<1
<u>Machinery</u>							
Machinery, hire, rent & lease	17,195	0	<<	1,928		19,123	5
Mach. repair & farm vehicle exp.	36,188	0		1,742		37,930	9
Fuel, oil & grease	26,995	284		-97		26,613	7
<u>Livestock</u>							
Replacement livestock	1,734	0	<<	0		1,734	<1
Breeding	6,288	-31		-24		6,295	2
Veterinary & medicine	8,664	86		2		8,580	2
Milk marketing	9,288	0	<<	88		9,376	2
Bedding	3,700	-117		-150		3,667	1
Milking supplies	10,971	-42		16		11,029	3
Cattle lease & rent	443	0	<<	0		443	<1
Custom boarding	1,599	0	<<	0		1,599	<1
Livestock professional fees	2,333	0	<<	0		2,333	1
Other livestock expense	3,603	-9		0		3,612	1
<u>Crops</u>							
Fertilizer & lime	6,211	-3,279		260		9,750	2
Seeds & plants	10,775	468		-946		9,361	2
Spray, other crop expense	2,127	0		0		2,127	1
Crop professional fees	531	0	<<	0		531	<1
<u>Real Estate</u>							
Land, building & fence repair	12,285	-762		-176		12,871	3
Taxes	13,033	0	<<	1,186		14,219	3
Rent & lease	13,706	0	<<	0		13,706	3
<u>Other</u>							
Insurance	7,077	0	<<	0		7,077	2
Utilities (farm share)	12,864	0	<<	15		12,879	3
Interest paid	18,188	0	<<	0		18,188	4
Other professional fees	5,030	0	<<	0		5,030	1
Miscellaneous	5,874	-95		-5		5,964	1
Total Operating	\$396,956	\$ -8,277		\$ 4,076		\$ 409,309	100
Expansion livestock	\$ 713	\$ 0	<<	\$ 0		\$ 713	
Extraordinary expense	3,346	0	<<	5,154		8,500	
Machinery depreciation						47,265	
Building depreciation						21,631	
TOTAL ACCRUAL EXPENSES						\$ 487,419	

\*A change in prepaid expense is noted by <<.

Cash paid is the actual amount of money paid out during the year and does not necessarily represent the cost of goods and services actually used.

Change in inventory: An increase in inventory is subtracted in computing accrual expenses because it represents purchased inputs not actually used during the year. A decrease in inventory is added to expenses because it represents the cost of inputs purchased in a prior year and used this year.

Changes in prepaid expenses apply to non-inventory categories (noted by << in the tables). Include any expenses that have been paid for in advance of their use, for example, 2011 rent paid in 2010. A positive change is the amount the prepayment account increased from beginning to end year, a negative change indicates a decline in the account.





CASH AND ACCRUAL FARM RECEIPTS  
17 New York Organic Dairy Farms, 2010

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk Sales	\$ 529,233				\$ 6,992		\$ 536,225
Dairy cattle	17,043		\$ 25,479		-57		42,465
Dairy calves	3,008		2,282		0		5,291
Other livestock	325		2,465		0		2,790
Crops	2,180		27,485		518		30,182
Government receipts	7,693		0*		870		8,563
Custom machine work	5,147				0		5,147
Gas tax refund	244				0		244
Other	13,247				-161		13,086
- Nonfarm noncash capital**	_____		(-) _____		_____		(-) _____
<b>Total Accrual Receipts</b>	<b>\$ 578,119</b>		<b>\$ 57,711</b>		<b>\$ 8,161</b>		<b>\$ 643,991</b>

\*Change in advanced government receipts.

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

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

Changes in inventory are calculated by subtracting beginning of year values from end of year values excluding appreciation. Increases in livestock inventory caused by herd growth and/or quality are added and decreases caused by herd reduction and for quality are subtracted. Changes in inventories of crops grown are also calculated. Changes in advanced government receipts are calculated by subtracting the end year balance from the beginning year balance (balances are listed with the current liabilities on the Balance Sheet).

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. The January milk check for this December's marketings compared with the previous January's check is included as a change in accounts receivable.

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

CASH AND ACCRUAL FARM RECEIPT WORKSHEET

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk Sales	\$ _____				\$ _____		\$ _____
Dairy cattle	_____		\$ _____		_____		_____
Dairy calves	_____		_____		_____		_____
Other livestock	_____		_____		_____		_____
Crops	_____		_____		_____		_____
Government receipts	_____		_____		_____		_____
Custom machine work	_____		_____		_____		_____
Gas tax refund	_____		_____		_____		_____
Other	_____		_____		_____		_____
- Nonfarm noncash capital**	_____		(-) _____		_____		(-) _____
<b>Total Accrual Receipts</b>	<b>\$ _____</b>		<b>\$ _____</b>		<b>\$ _____</b>		<b>\$ _____</b>

### Profitability Analysis

Farm owners/operators contribute labor, management, and capital to their businesses and the best combination of these resources maximizes income. 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.

Net farm income is the total combined return to the farm operator(s) and other unpaid family members for their labor, management, and equity capital. It is the farm family's net annual return from working, managing, financing, and owning 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 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). Appreciation is a major factor contributing to changes in farm net worth and must be included for a complete profitability analysis.

#### NET FARM INCOME New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	17 Organic Dairy Farms	113* Non-organic Dairy Farms	My Farm
Total accrual receipts	\$ 643,991	\$ 577,380	\$ _____
+ Appreciation: Livestock	4,747	-615	_____
Machinery	12,500	5,913	_____
Real Estate	15,459	19,310	_____
Other Stock & Certificates	<u>3,398</u>	<u>263</u>	_____
= Total Including Appreciation	\$ 680,096	\$ 602,252	\$ _____
- Total accrual expenses	<u>487,419</u>	<u>507,661</u>	_____
= Net Farm Income (with appreciation)	\$ 192,677	\$ 94,591	\$ _____
Per cow	\$ 1,479	\$ 714	\$ _____
Net Farm Income (without appreciation)	\$ 156,573	\$ 69,719	\$ _____
Per cow	\$ 1,202	\$ 526	\$ _____

\*These are 113 non-organic dairy farms in New York that are similar in size and location to the organic farms.

Labor and management income is the return which farm operators receive for their labor and management used in operating 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 from net farm income excluding appreciation a charge for unpaid family labor and the opportunity cost of using equity capital at a 5 percent interest rate. The interest charge of 5 percent reflects the long-term average rate of return that a farm operator might expect to earn in comparable risk investments in a low inflation economy.

LABOR AND MANAGEMENT INCOME  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	17 Organic Dairy Farms	113 Non-organic Dairy Farms	My Farm
Net farm income without appreciation	\$ 156,573	\$ 69,719	\$ _____
- Family labor unpaid @ \$2,500 per month	- 3,103	- 6,675	- _____
- Interest on average equity capital @ 5% real rate	- <u>64,601</u>	- <u>51,546</u>	- _____
= Labor & Management Income	\$ 88,869	\$ 11,498	\$ _____
Labor & Management Income per Operator/Manager	\$ 51,668	\$ 7,231	\$ _____

Return to equity capital measures the net return remaining for the farm operator's equity or owned capital after a charge has been made for unpaid family labor and 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 to 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 or equity capital. Return to all capital is calculated by adding interest paid to the return to equity capital and then dividing by average farm assets to calculate the rate of return on average total capital. Net farm income from operations ratio is net farm income (without appreciation) divided by total accrual receipts.

RETURN TO EQUITY CAPITAL AND RETURN TO ALL CAPITAL  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	17 Organic Dairy Farms	113 Non-organic Dairy Farms	My Farm
Net farm income with appreciation	\$ 192,677	\$ 94,591	\$ _____
- Family labor unpaid @ \$2,500 per month	\$ 3,103	\$ 6,675	\$ _____
- Value of operators' labor & management	<u>66,526</u>	<u>57,559</u>	_____
= Return to equity capital with appreciation	\$ 123,048	\$ 30,357	\$ _____
+ Interest paid	<u>18,188</u>	<u>18,013</u>	_____
= Return to all capital with appreciation	\$ 141,236	\$ 48,369	\$ _____
Return to equity capital without appreciation	\$ 86,943	\$ 5,485	\$ _____
Return to all capital without appreciation	\$ 105,132	\$ 23,497	\$ _____
Rate of return on average equity capital:			
with appreciation	9.5%	2.9%	_____
without appreciation	6.7%	0.5%	_____
Rate of return on all capital:			
with appreciation	8.4%	3.3%	_____
without appreciation	6.3%	1.6%	_____
Net farm income from operations ratio	0.24	0.12	_____

Farm and Family Financial Status

The first step in evaluating the financial status of the farm is to construct a balance sheet, which identifies 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.

2010 FARM BUSINESS & NONFARM BALANCE SHEET  
17 New York Organic Dairy Farms

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 13,787	\$ 13,083	Accounts payable	\$ 5,155	\$ 14,385
Accounts receivable	42,555	50,716	Operating debt	12,345	16,564
Prepaid expenses	412	448	Short term	2,138	1,720
Feed & supplies	<u>166,708</u>	<u>185,879</u>	Advanced gov't. receipt	0	0
Total Current	\$ 223,461	\$ 250,125	Current portion:		
			Intermediate	41,794	48,185
			Long term	<u>12,965</u>	<u>15,639</u>
			Total Current	\$ 74,398	\$ 96,493
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy Cows:			Structured debt		
owned	\$ 209,329	\$ 232,000	1-10 years	\$ 103,532	\$ 95,039
leased	0	427	Financial lease		
Heifers	106,835	116,520	(cattle & machinery)	4,439	3,461
Bulls & other livestock	3,000	5,618	Farm Credit stock	<u>476</u>	<u>484</u>
Mach. & equip. owned	294,819	347,426	Total Intermediate	\$ 108,447	\$ 98,984
Mach. & equip. leased	4,439	3,034			
Farm Credit stock	476	484	<u>Long Term</u>		
Other stock & cert.	<u>26,160</u>	<u>28,398</u>	Structured debt		
Total Intermediate	\$ 645,058	\$ 733,907	≥ 10 years	\$ 173,815	\$ 216,690
<u>Long Term</u>			Financial lease		
Land & buildings:			(structures)	<u>0</u>	<u>0</u>
owned	\$ 715,024	\$ 785,298	Total Long Term	\$ 173,815	\$ 216,690
leased	<u>0</u>	<u>0</u>			
Total Long Term	\$ 715,024	\$ 785,298	Total Farm Liabilities	\$ 356,660	\$ 412,168
Total Farm Assets	\$ 1,583,543	\$ 1,769,331	FARM NET WORTH	\$ 1,226,883	\$ 1,357,163
(Average for 9 farms reporting)			Nonfarm Liabilities*		
Nonfarm Assets*	Jan.1	Dec. 31	& Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	\$ 611	\$ 233	Nonfarm Liabilities	\$ 0	\$ 0
Cash value life ins.	14,324	14,626	NONFARM NET WORTH	\$ 124,647	\$ 135,337
Nonfarm real estate	55,556	55,556			
Auto (personal share)	510	277	FARM & NONFARM**	Jan. 1	Dec. 21
Stocks & bonds	44,923	55,534	Total Assets	\$ 1,708,190	\$ 1,904,668
Household furn.	8,722	9,111	Total Liabilities	<u>356,660</u>	<u>412,168</u>
All other	<u>0</u>	<u>0</u>			
Total Nonfarm	\$ 124,647	\$ 135,337	TOTAL FARM & NON- FARM NET WORTH	\$ 1,351,530	\$ 1,492,500

\*Assumes that average nonfarm assets and liabilities for the nonreporting farms were the same as for those reporting.

Financial lease obligations are included in the balance sheet. The present value of all future payments is listed as a liability since the farm operator 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.

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

Date \_\_\_\_\_

2010 FARM BUSINESS & NONFARM BALANCE SHEET

Farm Assets		Jan. 1	Dec. 31	Farm Liabilities & Net Worth		Jan. 1	Dec. 31
<u>Current</u>				<u>Current</u>			
Farm cash, checking & savings		_____	_____	Accounts payable		_____	_____
				Operating debt		_____	_____
Accounts receivable		_____	_____				
				Short term		_____	_____
Prepaid expenses		_____	_____				
Feed & supplies		_____	_____	Advanced gov't. receipt		_____	_____
Total Current		_____	_____	Current portion:			
				Intermediate		_____	_____
				Long term		_____	_____
				Total Current		_____	_____
<u>Intermediate</u>				<u>Intermediate</u>			
Dairy Cows:							
owned		_____	_____				
leased		_____	_____	Financial lease		_____	_____
Heifers		_____	_____	(cattle & machinery)			
Bulls & other livestock		_____	_____	Farm Credit stock		_____	_____
Mach. & equip. owned		_____	_____	Total Intermediate		_____	_____
Mach. & equip. leased		_____	_____				
Farm Credit stock		_____	_____	<u>Long Term</u>			
Other stock & cert.		_____	_____				
Total Intermediate		_____	_____	Financial lease		_____	_____
<u>Long Term</u>				(structures)			
Land & buildings:				Total Long Term		_____	_____
owned		_____	_____				
leased		_____	_____	Total Farm Liabilities		_____	_____
Total Long Term		_____	_____				
Total Farm Assets		_____	_____	FARM NET WORTH		_____	_____
Nonfarm Assets		Jan.1	Dec. 31	Nonfarm Liabilities & Net Worth		Jan. 1	Dec. 31
Personal cash, checking & savings		_____	_____	Nonfarm Liabilities		_____	_____
Cash value life ins.		_____	_____				
Nonfarm real estate		_____	_____				
Auto (personal share)		_____	_____				
Stocks & bonds		_____	_____	Total Nonfarm Liabilities		_____	_____
Household furn.		_____	_____				
All other		_____	_____	Nonfarm Net Worth		_____	_____
Total Nonfarm		_____	_____				
<b>TOTAL FARM &amp; NONFARM</b>						<b>Jan. 1</b>	<b>Dec. 31</b>
Total Farm and Nonfarm Assets						_____	_____
Less Total Farm & Nonfarm Liabilities						_____	_____
Farm & Nonfarm Net Worth						_____	_____

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. The debt to asset ratio is compiled by dividing liabilities by assets. Low debt to asset ratios reflect business solvency and the potential capacity to borrow. The leverage ratio is the dollars of debt per dollar of equity, computed by dividing total farm liabilities by farm net worth. Debt levels per productive unit represent old standards that are still useful if used with measures of cash flow and repayment ability. A current ratio of less than 1.5 or that has been falling warrants additional evaluation. The amount of working capital that is adequate must be related to the size of the farm business.

**BALANCE SHEET ANALYSIS**  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	17 Organic Dairy Farms	113 Non-organic Dairy Farms	My Farm
<u>Financial Ratios - Farm:</u>			
Percent equity	77%	71%	_____ %
Debt/asset ratio: total	0.23	0.29	_____
long term	0.28	0.26	_____
intermediate & current	0.20	0.31	_____
Leverage ratio	0.30	0.40	_____
Current ratio	2.59	1.82	_____
Working capital     \$153,632     as % of total expenses	32%	(\$82,724) 16%	_____ %
<u>Farm Debt Analysis:</u>			
Accounts payable as % of total debt	3%	7%	_____ %
Long term liabilities as a % of total debt	53%	42%	_____ %
Current & intermediate liabilities as a % of total debt	47%	58%	_____ %
Cost of term debt (weighted average)	4.2%	4.2%	_____ %
<u>Farm Debt Levels Per Cow:</u>			
Total farm debt	\$ 2,987	\$ 3,188	\$ _____
Long term debt	\$ 1,570	\$ 1,341	\$ _____
Intermediate & long term debt	\$ 2,288	\$ 2,437	\$ _____
Intermediate & current debt	\$ 1,417	\$ 1,847	\$ _____

Farm inventory balance is an accounting of the value of machinery and equipment 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 MACHINERY AND EQUIPMENT INVENTORY BALANCE**  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	17 Organic Dairy Farms	113 Non-organic Dairy Farms	My Farm
Value beginning of year	\$ 294,819	\$ 282,303	\$ _____
Purchases	\$ 91,265	\$ 26,316	\$ _____
+ Nonfarm noncash transfer	0	611	_____
- Net Sales	3,892	1,113	_____
- Depreciation	<u>47,265</u>	<u>24,491</u>	_____
= Net investment	40,108	1,323	_____
+ Appreciation	<u>12,500</u>	<u>5,913</u>	_____
= Value end of year	\$ 347,426	\$ 289,539	\$ _____

The Statement of Owner Equity has two purposes. It allows (1) verification that the accrual income statement and market value balance sheet are interrelated and 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 the farm operator 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) and (3) increases or decreases in the value (price) of assets owned by the business (called change in valuation equity).

The change in farm net worth without appreciation is an excellent indicator of farm generated financial progress.

STATEMENT OF OWNER EQUITY (RECONCILIATION)  
17 New York Organic Dairy Farms, 2010

Item	Average 17 Organic Dairy Farms	My Farm
Beginning of year farm net worth	\$1,226,883	\$ _____
Net farm income without appreciation	\$ 156,573	\$ _____
+ Nonfarm cash income	+ 4,960	+ _____
- Personal withdrawals & family expenditures excluding nonfarm borrowings	<u>- 67,978</u>	- _____
RETAINED EARNINGS	+\$93,554	+ \$ _____
Nonfarm noncash transfers to farm	\$ 0	\$ _____
+ Cash used in business from nonfarm capital	+ 15,044	+ _____
- Note/mortgage from farm real estate sold (nonfarm)	<u>- 0</u>	- _____
CONTRIBUTED/WITHDRAWN CAPITAL	+\$15,044	+ \$ _____
Appreciation	\$ 36,104	\$ _____
- Lost capital	<u>- 14,861</u>	- _____
CHANGE IN VALUATION EQUITY	+\$21,243	+ \$ _____
IMBALANCE/ERROR	<u>-\$439</u>	- \$ _____
End of year farm net worth*	=\$1,357,163	= \$ _____
Change in net worth with appreciation.	\$130,280	\$ _____
<hr/>		
<u>Change in Net Worth</u>		
Without appreciation	\$ 94,176	\$ _____
With appreciation	\$ 130,280	\$ _____

\*May not add due to rounding.



Cash Flow Statement

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

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

ANNUAL CASH FLOW STATEMENT  
17 New York Organic Dairy Farms, 2010

Item	Average 17 Organic Dairy Farms	
<u>Cash Flow from Operating Activities</u>		
Cash farm receipts	\$ 578,119	
- Cash farm expenses	396,956	
- Extraordinary expense	<u>3,346</u>	
= Net cash farm income		\$ 177,817
Personal withdrawals & family expenses including nonfarm debt payments	\$ 67,978	
- Nonfarm income	<u>4,960</u>	
- Net cash withdrawals from the farm		<u>\$ 63,018</u>
= Net Provided by Operating Activities		\$ 114,799
<u>Cash Flow From Investing Activities</u>		
Sale of assets: Machinery	\$ 3,892	
+ real estate	1,155	
+ other stock & certificates	<u>2,144</u>	
= Total asset sales		\$ 7,191
Capital purchases: expansion livestock	\$ 713	
+ machinery	91,265	
+ real estate	92,403	
+ other stock & certificates	<u>984</u>	
- Total invested in farm assets		<u>\$ 185,365</u>
= Net Provided by Investment Activities		\$ -178,174
<u>Cash Flow From Financing Activities</u>		
Money borrowed (intermediate & long term)	\$ 114,521	
+ Money borrowed (short term)	0	
+ Increase in operating debt	4,219	
+ Cash from nonfarm capital used in business	15,044	
+ Money borrowed - nonfarm	<u>0</u>	
= Cash inflow from financing		\$ 133,784
Principal payments (intermediate & long term)	\$ 71,134	
+ Principal payments (short term)	418	
+ Decrease in operating debt	<u>0</u>	
- Cash outflow for financing		<u>\$ 71,552</u>
= Net Provided by Financing Activities		\$ 62,232
<u>Cash Flow From Reserves</u>		
Beginning farm cash, checking & savings	\$ 13,787	
- Ending farm cash, checking & savings	<u>13,083</u>	
= Net Provided from Reserves		<u>\$ 704</u>
<u>Imbalance (error)</u>		\$ -439

## ANNUAL CASH FLOW STATEMENT

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

### Repayment Analysis

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

#### FARM DEBT PAYMENTS PLANNED Same 8 New York Organic Dairy Farms, 2009 & 2010\*

Debt Payments	Average			My Farm		
	2010 Payments		Planned 2011	2010 Payments		Planned 2011
	Planned	Made		Planned	Made	
Long-term	\$ 34,386	\$ 45,244	\$ 42,779	\$ _____	\$ _____	\$ _____
Intermediate-term	76,810	103,437	98,099	_____	_____	_____
Short-term	4,203	0	0	_____	_____	_____
Operating (net red.)	1,859	6,112	0	_____	_____	_____
Accounts payable (net reduction)	<u>2,011</u>	<u>1,497</u>	<u>0</u>	_____	_____	_____
Total	\$ 119,269	\$ 156,290	\$ 140,878	\$ _____	\$ _____	\$ _____
Per cow	\$ 569	\$ 745		\$ _____	\$ _____	
Per cwt. 2010 milk	\$ 3.84	\$ 5.03		\$ _____	\$ _____	
Percent of total 2010 receipts	12%	14%		_____	_____	
Percent of 2010 milk receipts	13%	17%		_____	_____	

\*Farms that completed Dairy Farm Business Summaries for both 2009 and 2010.

The cash flow coverage ratio and debt coverage ratio measure the ability of the farm business to meet its planned debt payment schedule. The ratios show the percentage of planned payments (as of December 31, 2009) that could have been made with the amount available for debt service in 2010. Farm operators that did not participate in DFBS last year will find in their report coverage ratios based on planned debt payments for 2011.

#### COVERAGE RATIOS Same 8 New York Organic Dairy Farms, 2009 & 2010

Item	Average	Item	Average
<u>Cash Flow Coverage Ratio</u>		<u>Debt Coverage Ratio</u>	
Cash farm receipts	\$981,230	Net farm income (w/o appreciation)	\$ 289,253
- Cash farm expenses	673,045	+ Depreciation	113,076
+ Interest paid (cash)	28,445	+ Interest paid (accrual)	28,445
- Net personal withdrawals from farm*	<u>109,031</u>	- Net personal withdrawals from farm*	<u>109,031</u>
(A) = Amount Available for Debt Service	\$227,599	(A') = Repayment Capacity	\$ 321,743
(B) = Debt Payments Planned for 2010 (as of December 31, 2009)	\$119,269	(B) = Debt Payments Planned for 2010 (as of December 31, 2009)	\$ 119,269
(A/B)=Cash Flow Coverage Ratio for 2010	1.91	(A'/B)=Debt Coverage Ratio for 2010	2.70

#### Same 95 New York Non-organic Dairy Farms, 2009 & 2010

(A) = Amount Available for Debt Service	\$ 60,330	(A') = Repayment Capacity	\$ 89,727
(B) = Debt Payments Planned for 2010	61,216	(B) = Debt Payments Planned for 2010	61,216
(A/B)=Cash Flow Coverage Ratio for 2010	0.99	(A'/B)=Debt Coverage Ratio for 2010	1.47

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

## ANNUAL CASH FLOW WORKSHEET

Item	17 Organic	My Farm		Expected Change	2011 Projection
	Dairy Farms	Total	Per Cow		
Average number of cows	130				
<u>Accrual Operating Receipts</u>	(per cow)				
Milk	\$4,117	\$ _____	\$ _____		\$ _____
Dairy cattle	326				
Dairy calves	41				
Other livestock	21				
Crops	232				
Miscellaneous receipts	<u>208</u>				
Total	\$4,945	\$ _____	\$ _____		\$ _____
<u>Accrual Operating Expenses</u>					
Hired labor	\$ 592	\$ _____	\$ _____		\$ _____
Dairy grain & concentrate	642				
Dairy roughage	32				
Nondairy feed	2				
Professional nutritional services	2				
Machinery hire, rent & lease	147				
Machinery repair & vehicle exp.	291				
Fuel, oil & grease	204				
Replacement livestock	13				
Breeding	48				
Vet & medicine	66				
Milk marketing	72				
Bedding	28				
Milking supplies	85				
Cattle lease	3				
Custom boarding	12				
Livestock professional fees	18				
Other livestock expense	28				
Fertilizer & lime	75				
Seeds & plants	72				
Spray & other crop expense	16				
Crop professional fees	4				
Land, building & fence repair	99				
Taxes	109				
Real estate rent & lease	105				
Insurance	54				
Utilities	99				
Misc. & other professional fees	<u>84</u>				
Total Less Interest Paid	\$3,003	\$ _____	\$ _____	\$ _____	\$ _____
<u>Net Accrual Operating Income</u>	(Total)				
(without interest paid)	\$ 252,870	\$ _____			\$ _____
- Change in livestock & crop inv.	57,711				
- Change in accounts receivable	8,161				
- Change in feed & supply inv.*	-8,277				
+ Change in accounts payable**	<u>4,076</u>				
NET CASH FLOW	\$ 199,351	\$ _____			\$ _____
- Net family withdrawals	<u>61,780</u>				
Available for Farm Debt & Investments	\$ 137,572	\$ _____			\$ _____
- Farm debt payments	<u>94,344</u>				
Available for Farm Investments	\$43,228	\$ _____			\$ _____
- Capital purchases: cattle, machinery & improvements	<u>185,365</u>	\$ _____		\$ _____	\$ _____
Additional Capital Needed	\$ 142,138	\$ _____			\$ _____

\*Includes change in prepaid expenses.

\*\*Excludes change in interest account payable.

Cropping Program Analysis

The cropping program is an important part of the dairy farm business and sometimes it is overlooked and neglected. A complete evaluation of available land resources, how they are being used, how well crops are producing and what it costs to produce them, is required to evaluate alternative cropping and feed purchasing choices.

LAND RESOURCES AND CROP PRODUCTION  
New York Organic Dairy Farms Reporting, 2010

Item	Average of Farms Reporting			My Farm	
	Farms	Acres	Production/Acre*	Acres	Production/Acre
Crop Yields					
Hay crop	17	292	2.36 tons DM	_____	_____ tons DM
Corn silage	4	56	11.24 tons 4.07 tons DM	_____	_____ tons _____ tons DM
Other forage	2	78	2.55 tons DM	_____	_____ tons DM
Total forage	17	314	2.44 tons DM	_____	_____ tons DM
Corn grain	7	74	106 bushels	_____	_____ bushels
Oats	3	40	57 bushels	_____	_____ bushels
Wheat	5	18	35 bushels	_____	_____ bushels
Other crops	9	55		_____	
Tillable pasture	13	197		_____	
Idle	0	0		_____	
Total Tillable Acres	17	549		_____	

\*2010 average yields for 108 non-organic dairy farms in New York included: all hay crops, 2.7 tons dry matter per acre; corn silage, 18.6 tons per acre.

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

The following measures of crop management indicate how efficiently the land resource is being used and how well total forage requirements are being met.

CROP MANAGEMENT FACTORS FOR FARMS GROWING FORAGES  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

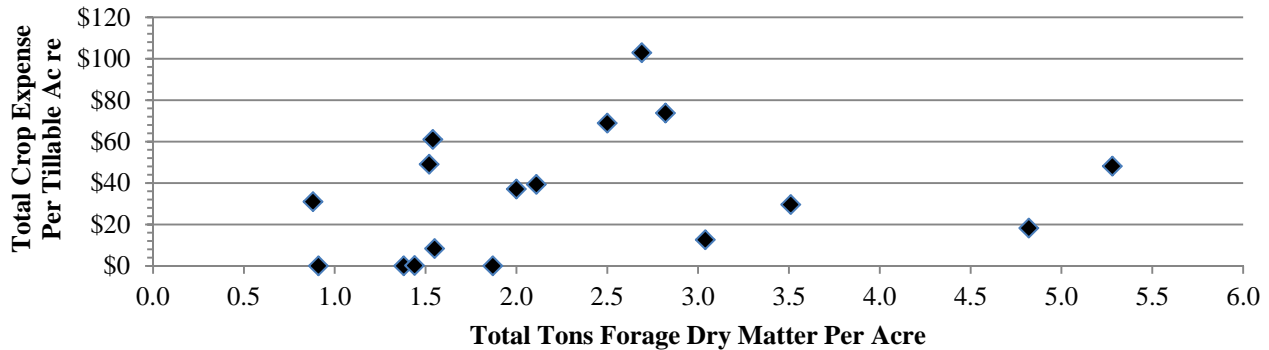
Item	17	113	My Farm
	Organic Dairy Farms	Non-organic Dairy Farms	
Total tillable acres per cow	4.22	2.70	_____
Total forage acres per cow	2.41	2.28	_____
Harvested forage dry matter, tons per cow	5.89	8.43	_____

Average fertilizer and lime, seeds and plants, and spray and other crop expenses have been computed per tillable acre for all farms that grew forages. Additional expense items such as fuel, labor, and machinery repairs are not included. Rotational grazing was used on all 17 organic farms and 25 non-organic dairy farms.

**CROP RELATED ACCRUAL EXPENSES FOR FARMS GROWING FORAGES**  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	Average Per Tillable Acre		
	17 Organic Dairy Farms	108 Non-Organic Dairy Farms	My Farm
Average number of acres	549	359	
Fertilizer and lime expense	\$15.65	\$38.33	\$ _____
Seeds & plants	14.17	25.69	_____
Spray and other crop expense	<u>4.30</u>	<u>15.06</u>	_____
Total	\$34.12	\$79.08	\$ _____

**CROP EXPENSE PER ACRE BY TOTAL FORAGE PRODUCTION PER ACRE**  
Organic Dairy Farms That Grow Forages, 2010



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

**ACCRUAL MACHINERY EXPENSES FOR FARMS GROWING FORAGES**  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	Average Per Tillable Acre		My Farm	
	17 Organic Dairy Farms	108 Non-organic Dairy Farms	Total Expenses	Per Tillable Acre
Fuel, oil & grease	\$ 48.46	\$ 63.42	\$ _____	\$ _____
Machine repair & farm vehicle expense	69.07	83.30	_____	_____
Machine hire, rent & lease	34.82	35.99	_____	_____
Interest (5%)	29.58	40.97	_____	_____
Depreciation	<u>86.07</u>	<u>68.59</u>	_____	_____
Total	\$268.00	\$292.27	\$ _____	\$ _____

Dairy Program Analysis

Analysis of the dairy enterprise can tell a great deal about the strengths and weaknesses of the dairy farm business. Information on the following 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. This increase in inventory is included as an accrual farm receipt when calculating profitability without appreciation impacts.

**DAIRY HERD INVENTORY**  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	Dairy Cows		Heifers					
	No.	Value	Bred		Open		Calves	
	No.	Value	No.	Value	No.	Value	No.	Value
<u>17 Organic Dairy Farms:</u>								
Beginning year (owned)	126	\$ 209,329	37	\$ 54,047	42	\$ 38,621	21	\$ 14,168
+ Change w/o appreciation		19,488		4,676		1,315		2,282
+ Appreciation		<u>3,182</u>		<u>823</u>		<u>306</u>		<u>282</u>
End year (owned)	137	\$ 232,000	39	\$ 59,547	43	\$ 40,241	25	\$ 16,732
End including leased	138							
Average number	130		102	(all age groups)				
<u>113 Non-organic Dairy Farms:</u>								
Beginning year (owned)	129	\$ 177,047	38	\$ 52,330	40	\$ 33,061	30	\$ 13,900
+ Change w/o appreciation		5,576		827		26		1,507
+ Appreciation		<u>-650</u>		<u>-133</u>		<u>215</u>		<u>-118</u>
End year (owned)	133	\$ 181,973	39	\$ 53,025	40	\$ 33,301	33	\$ 15,289
End including leased	134							
Average number	132		112	(all age groups)				
<u>My Farm:</u>								
Beginning year (owned)	—	\$ _____	—	\$ _____	—	\$ _____	—	\$ _____
+ Change w/o appreciation		_____		_____		_____		_____
+ Appreciation		_____		_____		_____		_____
End year (owned)	—	\$ _____	—	\$ _____	—	\$ _____	—	\$ _____
End including leased	—							
Average number	—		—	(all age groups)				

Total milk sold and milk sold per cow are extremely valuable measures of productivity on the dairy farm. These measures of milk output are based on pounds of milk marketed during the year.

**MILK PRODUCTION**  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	17 Organic Dairy Farms	113 Non-organic Dairy Farms	My Farm
Total milk sold, pounds	1,811,926	2,853,742	_____
Milk sold per cow, pounds	13,912	21,547	_____
Average milk plant test, % butterfat	3.8%	3.7%	_____

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

**ANIMALS LEAVING THE HERD**  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	17 Organic Dairy Farms		113 Non-organic Dairy Farms		My Farm	
	Number	Percent*	Number	Percent*	Number	Percent*
Cows sold for beef	28	22	34	25	_____	_____
Cows sold for dairy	1	1	2	2	_____	_____
Cows died	5	4	8	6	_____	_____
Culling rate**		25		31	_____	_____

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

The cost of producing milk has been compiled using the whole farm method, and is featured in the following table. Accrual receipts from milk sales are compared with the accrual costs of producing milk per hundredweight of milk. Using the whole farm method, operating cost of producing milk is estimated by deducting nonmilk accrual receipts from total accrual operating expenses plus expansion livestock purchased. Purchased input cost of producing milk is the operating cost plus depreciation. Total cost of producing milk includes the operating cost plus depreciation on machinery and buildings, the value of unpaid family labor, the value of operator(s) labor and management, and an interest charge for using equity capital.

**COST OF PRODUCING MILK AND ACCRUAL RECEIPTS FROM MILK**  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	17 Organic Dairy Farms		113 Non-organic Dairy Farms		My Farm	
	Total	Per Cwt.	Total	Per Cwt.	Total	Per Cwt.
<u>Accrual Cost of Producing Milk</u>						
Operating cost	\$302,256	\$16.68	\$398,609	\$13.97	\$ _____	\$ _____
Purchased input cost	\$379,653	\$20.95	\$436,685	\$15.30	\$ _____	\$ _____
Total cost	\$513,883	\$28.36	\$552,465	\$19.36	\$ _____	\$ _____
<u>Accrual Receipts from Milk</u>	\$536,225	\$29.59	\$506,404	\$17.75	\$ _____	\$ _____
Net Milk Receipts	\$526,849	\$29.08	\$478,721	\$16.78	\$ _____	\$ _____

The accrual operating expenses most commonly associated with the dairy enterprise are listed in the table below. Evaluating these costs per unit of production enables the comparison of different size dairy farms for strengths and areas for improvement.

**DAIRY RELATED ACCRUAL EXPENSES**  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	Average Per Cwt. Milk		My Farm
	17 Organic Dairy Farms	113 Non-Organic Dairy Farms	Per Cwt.
Purchased dairy grain & concentrate	\$4.61	\$5.19	\$ _____
Purchased dairy roughage	<u>0.23</u>	<u>0.39</u>	_____
Total Purchased Dairy Feed	\$4.84	\$5.58	\$ _____
Purchased grain & concentrate as % of milk receipts	17%	30%	_____ %
Purchased feed & crop expense	\$6.04	\$6.60	\$ _____
Purchased feed & crop expense as % of milk receipts	22%	38%	_____ %
Breeding	\$0.35	\$0.24	\$ _____
Veterinary & medicine	0.47	0.55	_____
Milk marketing	0.52	0.97	_____
Bedding	0.20	0.31	_____
Milking supplies	0.61	0.41	_____
Cattle lease	0.02	0.02	_____
Custom boarding	0.09	0.13	_____
bST expense	0.00	0.14	_____
Livestock professional fees	0.13	0.07	_____
Other livestock expense	0.20	0.15	_____



Capital and Labor Efficiency Analysis

Capital efficiency factors measure how intensively the capital is being used in the farm business. The asset turnover ratio is the ratio of total farm income to total farm assets. It is calculated by dividing total accrual operating receipts plus appreciation by average total farm assets. Measures of labor efficiency are key indicators of management's success in generating products per unit of labor input.

CAPITAL EFFICIENCY  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Item	Per Worker	Per Cow	Per Tillable Acre
<u>17 Organic Dairy Farms:</u>			
Farm capital	\$ 400,104	\$ 12,872	\$ 3,053
Machinery & equipment	77,532	2,494	592
<u>Ratios</u>			
Asset turnover	Operating expense	Interest expense	Depreciation expense
0.41	0.62	0.03	0.11
<u>113 Non-organic Dairy Farms:</u>			
Farm capital	\$ 380,767	\$ 11,040	\$ 4,216
Machinery & equipment	75,474	2,188	836
<u>Ratios</u>			
Asset turnover	Operating expense	Interest expense	Depreciation expense
0.41	0.78	0.03	0.07
<u>My Farm:</u>			
Farm capital	\$ _____	\$ _____	\$ _____
Machinery & equipment	_____	_____	_____
<u>Ratios</u>			
Asset turnover	Operating expense	Interest expense	Depreciation expense
_____	_____	_____	_____

LABOR FORCE ANALYSIS  
New York Organic Dairy Farms and Non-Organic Dairy Farms, 2010

Efficiency	17 Organic Dairy Farms		113 Non-organic Dairy Farms		My Farm	
	Total	Per Worker	Total	Per Worker	Total	Per Worker
Cows, average number	130	31	132	34	_____	_____
Milk sold, pounds	1,811,926	432,097	2,853,742	743,001	_____	_____
Tillable acres	549	131	347	90	_____	_____
Labor Costs	17 Organic Dairy Farms		113 Non-organic Dairy Farms		My Farm	
	Total	Per Cow	Total	Per Cow	Total	Per Cow
Value of operator(s) labor*	\$ 57,825	\$ 444	\$ 53,423	\$ 403	\$ _____	\$ _____
Family unpaid*	3,100	24	6,616	50	_____	_____
Hired	77,102	592	53,997	408	_____	_____
Total Labor	\$ 138,027	\$ 1,060	\$ 114,036	\$ 861	\$ _____	\$ _____
Machinery Cost	\$ 147,175	\$ 1,130	\$ 103,308	\$ 780	\$ _____	\$ _____
Total Labor & Machinery	\$ 285,202	\$ 2,190	\$ 217,344	\$ 1,641	\$ _____	\$ _____
Hired labor expense per hired worker equivalent	\$ 35,654		\$ 29,641		\$ _____	
Hired labor expense as % of milk sales	14.4%		10.7%		_____%	

\*\$2,500 per month.

**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 is one part of a business checkup. It is equally important for you to determine the progress your business has made over the past two or three years and to set targets or goals for the future.

**PROGRESS OF THE FARM BUSINESS**  
Same 8 New York Organic Dairy Farms, 2009 & 2010

Selected Factors	Average		My Farm		
	2009	2010	2009	2010	Goal
<u>Size of Business</u>					
Average number of cows	199	210	_____	_____	_____
Average number of heifers	165	163	_____	_____	_____
Milk sold, pounds	2,881,776	3,108,333	_____	_____	_____
Worker equivalent	5.21	5.92	_____	_____	_____
Total tillable acres	728	841	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, pounds	14,518	14,819	_____	_____	_____
Hay DM per acre, tons	2.4	2.8	_____	_____	_____
Corn silage per acre, tons	13	11	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	38	35	_____	_____	_____
Milk sold per worker, lbs.	553,124	525,056	_____	_____	_____
<u>Cost Control</u>					
Grain & concentrate purchased as % of milk sales	17%	14%	_____ %	_____ %	_____ %
Dairy feed & crop expense per hundredweight milk	\$7.58	\$5.69	\$ _____	\$ _____	\$ _____
Labor & machinery costs/cow	\$2,150	\$2,220	\$ _____	\$ _____	\$ _____
Operating cost of producing hundredweight milk	\$21.34	\$16.08	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency*</u>					
Farm capital per cow	\$12,305	\$12,723	\$ _____	\$ _____	\$ _____
Machinery & equipment per cow	\$2,418	\$2,657	\$ _____	\$ _____	\$ _____
Asset turnover ratio	0.43	0.43	_____	_____	_____
<u>Profitability</u>					
Net farm income without appreciation	\$184,259	\$289,253	\$ _____	\$ _____	\$ _____
Net farm income with appreciation	\$240,186	\$320,310	\$ _____	\$ _____	\$ _____
Labor & management income per operator/manager	\$45,177	\$95,917	\$ _____	\$ _____	\$ _____
Rate of return on equity capital with appreciation	8.0%	11.7%	_____ %	_____ %	_____ %
Rate of return on all capital with appreciation	7.2%	10.0%	_____ %	_____ %	_____ %
<u>Financial Summary</u>					
Farm net worth, end year	\$1,925,950	\$2,138,632	\$ _____	\$ _____	\$ _____
Debt to asset ratio	0.23	0.25	_____	_____	_____
Farm debt per cow	\$2,794	\$3,104	\$ _____	\$ _____	\$ _____

\*Average for the year.

RECEIPTS AND EXPENSES PER COW AND PER HUNDREDWEIGHT  
Same 8 New York Organic Dairy Farms, 2009 & 2010

Item	2009		2010	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	199		210	
Cwt. of Milk Sold		28,818		31,083
<u>ACCRUAL OPERATING RECEIPTS</u>				
Milk	\$4,419	\$30.44	\$4,383	\$29.58
Dairy cattle	239	1.64	379	2.56
Dairy calves	-6	-0.04	49	0.33
Other livestock	5	0.03	27	0.18
Crops	-2	-0.01	306	2.07
Miscellaneous receipts	<u>329</u>	<u>2.26</u>	<u>194</u>	<u>1.31</u>
Total Receipts	\$4,983	\$34.32	\$5,339	\$36.03
<u>ACCRUAL OPERATING EXPENSES</u>				
Hired labor	\$ 766	\$ 5.27	\$ 702	\$ 4.73
Dairy grain & concentrate	737	5.08	630	4.25
Dairy roughage	95	0.65	26	0.18
Nondairy feed	0	0.00	0	0.00
Professional nutritional services	1	0.01	0	0.00
Machine hire/rent/lease	180	1.24	170	1.15
Machinery repair & vehicle expense	332	2.29	316	2.14
Fuel, oil & grease	192	1.32	219	1.48
Replacement livestock	2	0.01	18	0.12
Breeding	59	0.41	56	0.38
Veterinary & medicine	69	0.48	77	0.52
Milk marketing	88	0.60	69	0.47
Bedding	25	0.17	27	0.18
Milking supplies	63	0.44	76	0.51
Cattle lease	0	0.00	0	0.00
Custom boarding	13	0.09	16	0.11
bST expense	0	0.00	0	0.00
Livestock professional fees	8	0.05	19	0.13
Other livestock expense	46	0.32	31	0.21
Fertilizer & lime	102	0.71	84	0.56
Seeds & plants	155	1.07	83	0.56
Spray/other crop expense	7	0.05	14	0.09
Crop professional fees	5	0.03	5	0.04
Land, building, fence repair	117	0.80	94	0.64
Taxes	99	0.68	100	0.67
Real estate rent/lease	115	0.79	127	0.86
Insurance	47	0.32	56	0.38
Utilities	108	0.75	104	0.70
Interest paid	124	0.85	136	0.92
Other professional fees	28	0.19	43	0.29
Miscellaneous	<u>81</u>	<u>0.56</u>	<u>41</u>	<u>0.28</u>
Total Operating Expenses	\$3,663	\$25.23	\$3,339	\$22.53
Expansion Livestock	0	0.00	0	0.00
Extraordinary Expense	9	0.07	82	0.55
Machinery Depreciation	246	1.70	369	2.49
Real Estate Depreciation	<u>136</u>	<u>0.94</u>	<u>170</u>	<u>1.15</u>
Total Expenses	\$4,054	\$27.94	\$3,960	\$26.72
Net Farm Income Without Appreciation	\$ 928	\$ 6.39	\$1,379	\$ 9.31

Condensed Summary and Selected Business Factors for Two Herd Size Groups

CONDENSED FARM BUSINESS SUMMARY FOR TWO ORGANIC GROUPS BY HERD SIZE  
17 New York Organic Dairy Farms, 2010

Item	9 Organic Dairy Farms with < 100 Cows		8 Organic Dairy Farms with > 100 Cows	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
<b><u>ACCRUAL EXPENSES</u></b>				
Hired labor	\$ 143	\$ 1.37	\$ 721	\$ 4.84
Dairy grain & concentrate	587	5.61	657	4.41
Dairy roughage	51	0.49	26	0.17
Nondairy feed	11	0.10	0	0.00
Professional nutritional services	7	0.06	0	0.00
Machine hire, rent & lease	63	0.60	171	1.15
Machine repairs & farm vehicle expense	201	1.92	317	2.13
Fuel, oil & grease	173	1.65	213	1.43
Replacement livestock	0	0.00	17	0.11
Breeding	30	0.29	54	0.36
Veterinary & medicine	31	0.29	76	0.51
Milk marketing	91	0.87	66	0.45
Bedding	16	0.15	32	0.21
Milking supplies	111	1.06	77	0.52
Cattle lease & rent	15	0.15	0	0.00
Custom boarding	0	0.00	16	0.11
bST expense	0	0.00	0	0
Livestock professional fees	9	0.08	21	0.14
Other livestock expense	21	0.20	30	0.20
Fertilizer & lime	50	0.48	82	0.55
Seeds & plants	32	0.30	83	0.56
Spray & other crop expense	26	0.25	14	0.09
Crop professional fees	0	0.00	5	0.04
Land, building & fence repair	103	0.98	98	0.66
Taxes & rent	167	1.60	228	1.53
Utilities	99	0.95	99	0.66
Interest paid	167	1.60	132	0.88
Other professional fees	16	0.15	45	0.30
Misc. (including insurance)	105	1.00	99	0.66
Total Operating Expenses	\$2,324	\$22.20	\$3,377	\$22.67
Expansion livestock	25	0.23	0	0.00
Extraordinary expense	14	0.13	80	0.54
Machinery depreciation	260	2.49	392	2.63
Building depreciation	148	1.41	171	1.15
Total Accrual Expenses	\$2,771	\$26.46	\$4,021	\$26.99
<b><u>ACCRUAL RECEIPTS</u></b>				
Milk sales	\$3,135	\$29.94	\$4,399	\$29.53
Dairy cattle	147	1.40	377	2.53
Dairy calves	15	0.14	48	0.32
Other livestock	10	0.10	25	0.17
Crops	19	0.18	293	1.97
Miscellaneous receipts	218	2.08	205	1.37
Total Accrual Receipts	\$3,543	\$33.84	\$5,346	\$35.88
<b><u>PROFITABILITY ANALYSIS (Total)</u></b>				
Net farm income (without appreciation)		\$42,309		\$285,118
Net farm income (with appreciation)		\$60,939		\$340,882
Labor & management income/operator		\$3,292		\$102,639
Rates of return on:				
Equity capital without appreciation		-3.4%		10.2%
Equity capital with appreciation		-0.4%		13.0%
All capital without appreciation		-1.6%		8.8%
All capital with appreciation		0.8%		10.9%

SELECTED BUSINESS FACTORS FOR TWO ORGANIC GROUPS BY HERD SIZE  
17 New York Organic Dairy Farms, 2010

Item	9 Organic Dairy Farms with < 100 Cows	8 Organic Dairy Farms with > 100 Cows
<u>Cropping Program Analysis</u>		
Total acres	401	1,062
Tillable acres	248	889
Hay crop acres*	174	424
Corn silage acres*	25	67
Hay crop, tons DM/acre*	1.5	2.8
Corn silage, tons/acre*	12.0	11.2
Forage DM per cow, tons*	5.1	6.1
Tillable acres/cow*	4.5	4.1
Fertilizer & lime expense/tillable acre*	\$13.93	\$17.58
Machinery cost/tillable acre*	\$178	\$296
<u>Dairy Analysis</u>		
Number of cows	55	215
Number of heifers	41	171
Milk sold, pounds	573,589	3,205,055
Milk sold/cow, pounds	10,471	14,898
Operating cost of producing milk/cwt.	\$18.53	\$16.31
Total cost of producing milk/cwt.	\$39.10	\$26.20
Price/cwt. milk sold	\$29.94	\$29.53
Purchased dairy feed/cow	\$638	\$683
Purchased dairy feed/cwt. milk	\$6.10	\$4.59
Purchased grain & concentrate as % of milk receipts	18%	17%
Purchased feed & crop expense/cwt. milk	\$7.13	\$5.82
<u>Capital Efficiency</u>		
Farm capital/worker	\$298,091	\$449,918
Farm capital/cow	\$14,148	\$12,506
Real estate/cow	\$8,666	\$4,927
Machinery investment/cow	\$2,105	\$2,606
Asset turnover ratio	0.27	0.45
<u>Labor Efficiency</u>		
Worker equivalent	2.60	5.98
Operator/manager equivalent	1.66	1.78
Milk sold/worker, lbs.	220,329	535,813
Cows/worker	21	36
Labor cost/cow	\$1,349	\$977
<u>Financial Measures</u>		
Percent equity	81%	75%
Debt/asset ratio - long term	0.20	0.31
Debt/asset ratio - intermediate & current	0.17	0.21
Change in net worth with appreciation	\$38,901	\$233,082
Total farm debt per cow	\$2,594	\$3,097
Debt payments made per cow	\$577	\$760
Debt payments as % of milk sales	22%	18%
Amount available for debt service	\$51,764	\$234,105
Debt coverage ratio for 2010	7.20	2.49

\*Average of farms growing forages.

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 four figures in each column represent the average of each 25 percent or quartile of farms included in the summary.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS  
17 New York Organic Dairy Farms, 2010

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre**	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
8.11	303	4,540,175	18,469	4.1	12	46	695,030
4.20	128	1,869,935	14,248	2.5	0	31	431,664
2.95	64	789,700	11,507	1.7	0	25	292,519
2.04	47	400,701	7,421	1.2	0	18	156,141

Cost Control

Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(12)	(12)	(14)	(14)	(12)	(12)
\$163	6%	\$548	\$1,627	\$209	\$2.40
507	14	822	1,984	733	5.27
902	22	1,080	2,374	1,119	7.55
1,203	31	1,656	2,898	1,545	12.47

Value and Cost of Production

Profitability

Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Producing Milk Per Cwt.	Net Farm Income With Appreciation	Net Farm Income Without Appreciation	Labor & Management Income Per Operator
(12)	(12)	(12)	(4)	(4)	(4)
\$5,384	\$12.33	\$24.49	\$566,289	\$505,891	\$193,710
4,405	17.70	29.99	159,334	116,699	51,727
3,433	21.64	34.31	67,390	45,634	7,992
2,197	26.20	60.96	20,691	-2,232	-35,039

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

\*\*Most do not grow corn silage.

Financial Analysis Chart

The farm financial analysis chart 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 10, 11, 14 and 20 of this publication. References to DFBS output page numbers for participating dairy farm operators are provided in the table headings.

FINANCIAL ANALYSIS CHART  
17 New York Organic Dairy Farms, 2010

Liquidity (repayment)				
Planned Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio	Debt Payments as Percent of Milk Sales	Debt Per Cow
(10)*	(16)	(10)	(10)	(7)
\$ 0	\$1,778	12.62	8%	\$1,140
0	1000	2.09	14	2,339
362	831	1.36	21	3,309
668	370	0.27	40	4,273

Solvency		Profitability	
Leverage Ratio**	Percent Equity	Debt/Asset Ratio Current & Intermediate	Percent Rate of Return on (with Appreciation): Equity Investment***
(7)	(7)	(7)	(4)
0.08	93%	0.05	26%
0.18	87	0.16	12
0.37	77	0.25	3
0.82	58	0.43	-10

Efficiency (Capital)			
Asset Turnover Ratio	Machinery Investment Per Cow	Total Farm Assets Per Cow	Change in Net Worth With Appreciation
(14)	(14)	(14)	(8)
0.63	\$1,094	\$20,365	\$409,633
0.43	1,529	14,296	123,041
0.37	2,299	11,277	35,558
0.20	4,681	8,843	-11,633

\*Page number of the participant's DFBS 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.

## IDENTIFY AND SET GOALS

If businesses are to be successful, they must have direction. Written goals help provide businesses with an identifiable direction over both the long and the 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 proper direction. Goals should be **SMART**:

1. Goals should be Specific.
2. Goals should be Measurable.
3. Goals should be Achievable but challenging.
4. Goals should be Rewarding.
5. You should designate a Time when each goal will be achieved.

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

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

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

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

### Worksheet for Setting Goals

#### I. Mission and Objectives

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## GLOSSARY AND LOCATION OF COMMON TERMS

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

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

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

**Accrual Receipts** - (defined on page 5)

**Annual Cash Flow Statement** - (defined on page 12)

**Appreciation** - (defined on page 6)

**Asset Turnover Ratio** - (defined on page 20)

**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.

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

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

**Cash Flow Coverage Ratio** - (defined on page 14)

**Cash Paid** - (defined on page 3)

**Cash Receipts** - (defined on page 5)

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

**Change in Accounts Receivable** - (defined on page 5)

**Change in Inventory** - (defined on page 3)

**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 and 9 of the data entry form.

**Culling Rate** - (defined on page 18)

**Current Portion** - Principal due in the next year for intermediate and long term debt.

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

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

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

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

**Debt to Asset Ratios** - (defined on page 10)

**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 15.

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

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

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

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

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

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

**Labor and Management Income** - (defined on page 7)

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

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

**Leverage Ratio** - (defined on page 10)

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

**Net Farm Income** - (defined on page 6)

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

**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 19)

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

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

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

**Part-Time Cash-Crop Dairy (farm)** - Operating and managing this farm is not a full-time occupation, crop sales exceed 10 percent of accrual milk receipts and cropland is owned.

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

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

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

**Purchased Inputs Cost of Producing Milk** - (defined on page 19)

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

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

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

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

**Return to Operators' Labor, Management, and Equity Capital** - (defined on page 6)

**Rotational Grazing** - The dairy herd is on pasture at least three months of the year, changing paddock at least every three days.

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

**Total Costs of Producing Milk** - (defined on page 19)

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

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

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## OTHER A.E.M. EXTENSION BULLETINS

EB No	Title	Fee (if applicable)	Author(s)
2011-10	Examining the Costs of Producing Processing Snap Beans and Green Peas in New York State		Ho, S., Rickard, B., Kikkert, J., Klotzbach, K., Reiners, S. and M. Smith
2011-09	Dairy Farm Business Summary, New York Dairy Farm Renters, 2010	(\$16.00)	Knoblauch, W., Putnam, D. and C. Dymon
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