DAIRY FARM BUSINESS SUMMARY

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PRO-DAIRY

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NEW YORK SMALL HERD FARMS, 80 COWS OR FEWER 2007

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2007 DAIRY FARM BUSINESS SUMMARY
SMALL HERD DAIRY FARMS*

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 New York for 2007 with herds of 80 cows or fewer and no milking parlors.

Small farms are facing increasing management challenges in their efforts to control costs and remain profitable. This publication reports the average performance and characteristics of small farms and the average of the top 25 percent of those small farms with the highest rate of return on assets without appreciation. Thus, not only can the average performance of small farms be used as a benchmark, but the performance of the most profitable small farms as well. Identifying strengths and areas for improvement by comparing your business to that of similar farms is an important first step in focusing attention on ways to improve the business.

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 report follows the same general format as the 2007 DFBS individual farm report received by participating dairy farmers. The analysis tables have a column that compares the average to the top 25% of the farms by rate of return on all capital without appreciation. This report may be used by any dairy farm manager who wants to compare his or her business with the average data of small farms. The individual farm data, the averages and other data can then be used to establish goals for the business. Non-DFBS participants can download a DFBS Data Check-in Form at http://dfbs.cornell.edu. After collecting the data on the form, it can be entered in the U. S. Top Dairies business summary program at the same web site to obtain a summary of their business.

This report features:

(1) an income statement including accrual adjustments for farm business expenses and receipts, as well as measures of profitability with and without appreciation,

(2) a complete balance sheet with analytical ratios;

(3) a statement of owner equity which shows the sources of the change in owner equity during the year;

(4) a cash flow statement and debt repayment ability analysis;

(5) an analysis of crop acreage, yields, and expenses;

(6) an analysis of dairy livestock numbers, production, and expenses;

(7) a capital and labor efficiency analysis; and

(8) progress of the farm business over the past two years.

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*The small herd summary is comprised of farms with 80 or fewer cows and that do not use a milking parlor. Many counties had farms that met this criteria in 2007. This report was written by Wayne A. Knoblauch, Professor, Farm Management; Mariane Kiraly, Cooperative Extension Educator in Delaware County; and Jason Karszes, Senior Extension Associate, Pro-Dairy. Linda Putnam was in charge of data preparation.

PROGRESS OF THE FARM BUSINESS

In 2007, the dairy industry came back into profitable territory after one of the worst years in memory. Inputs continued to rise during the year but there was a great opportunity to make money in what became a much better than average year due to favorable weather, decent milk prices, and cautious spending.

The average number of cows per farm was 55, up one cow from 2006. Heifer inventory increased by 7 percent due to a bullish attitude and the fact that replacements were very expensive. Total milk sold was up just 0.1 percent but milk sold per cow was down by 2.2 percent and the labeling issues surrounding rBST may have affected this number as some producers agreed not to use the product in hopes of a premium from processors. Also, some producers may have fed calves milk instead of milk replacer as milk prices made milk replacer a very expensive input. Worker equivalent went up 2.4 percent and could be attributed to more money to spend and a few more head to manage. Although hay yield remained unchanged at 2.1 tons per acre, the favorable weather contributed to an increase in corn silage yield from 14.2 to 16.8 tons per acre.

Cows per worker remained unchanged due to a little more labor for a few more cows. Milk sold per worker was also down 2.2 percent perhaps as a result of lower milk production per cow. Hired labor costs were up a whopping 22.5 percent per hundredweight, due to a combination of increased wages and lower milk sold per worker equivalent. The labor itself actually cost less by nearly 4 percent, but since milk prices were high, they were a smaller portion of the milk check. Grain and concentrate as a percentage of milk sales fell by 20 percent as feed prices remained fairly low and milk prices rose. Dairy feed and crop expenses rose by 16.2 percent as it cost more to make crops given the increase in crop inputs. Total farm operating expenses were up 12.9 percent to $16.46 per hundredweight because of the general increase in nearly all inputs. Interest costs rose as rates charged by venders and banks increased over previous years. The real sharp increase in the operating cost to produce a hundredweight of milk (+23 percent) revealed that even the best producers could not contain costs as input costs rose, and appear to be here to stay. Energy, feed and parts all cost a lot more than they did just a few years ago and very few will be able to maintain a $10 operating cost to produce a hundredweight of milk.

Farm capital per cow continues to rise, up 3.8 percent as a result of competing interests in farmland. Machinery, even used, holds its value as metal and manufacturing costs rise and machinery and equipment per cow rose 3.1 percent. Asset turnover ratio rose 26.5 percent, with the large increase in gross revenue more than offsetting the increase in average asset value per cow on these farms.

Gross milk sales per cow rose 45.8 percent due to a much better price for milk in 2007. Sales per hundredweight were up 49.1 percent for the same reason. Farmers' net price was up 53.4 percent as deductions remained fairly constant. Farmers were able to cull out the low producers and problem cows that they hung onto in 2006. However, they bought fewer cows due to quality and market conditions. Bull calves did not bring much money as farmers were much more interested in buying heifers given the high milk prices. There was little assistance needed from government programs and government payments were down 35.8 percent.

Farmers had higher net farm incomes, with or without appreciation, up dramatically from 2006, at $77,144 and $57,663, respectively. Labor and management incomes averaged $22,172, a 268 percent increase. Rates of return on equity capital without appreciation averaged 3.2 percent and 3.8 percent was the return on all capital without appreciation, a decent return. However, the attitude after riding out 2006 was one of caution. Some replaced aging equipment, others did not depending on their situation and sense for what might happen in 2008. Debt accrued in 2006 was reduced and farm debt per cow fell by 8.9 percent. Foreboding of inflationary times in 2008 kept most farmers on the edge of their seats at years end.

PROGRESS OF THE FARM BUSINESS

Same 38 Small Herd Dairy Farms, 2006 & 2007

Selected Factors	Average of 38 Farms 2006	2007	Percent Change
Size of Business			
Average number of cows	54	55	1.9
Average number of heifers	43	46	7.0
Milk sold, lbs.	1,025,135	1,026,212	0.1
Worker equivalent	2.12	2.17	2.4
Total tillable acres	177	177	0.0
Rates of Production			
Milk sold per cow, lbs.	18,947	18,525	-2.2
Hay DM per acre, tons	2.1	2.1	0.0
Corn silage per acre, tons	14.2	16.8	18.3
Labor Efficiency & Costs			
Cows per worker	26	26	0.0
Milk sold/worker, lbs.	483,554	472,909	-2.2
Hired labor cost/cwt.	$0.89	$1.09	22.5
Hired labor cost/worker	$20,962	$20,176	-3.8
Hired labor cost as % of milk sales	6.4%	5.3%	-17.2
Cost Control			
Grain & concentrate purchased as % of milk sales	30%	24%	-20.0
Grain & concentrate per cwt. milk	$4.20	$4.88	16.2
Dairy feed & crop expense per cwt. milk	$5.31	$6.17	16.2
Labor & machinery costs/cow	$1,713	$1,847	7.8
Total farm operating expenses per cwt. sold	$14.58	$16.46	12.9
Interest costs per cwt. milk	$0.75	$0.80	6.7
Milk marketing costs per cwt. milk sold	$1.09	$1.08	-0.9
Operating cost of producing cwt. of milk	$10.89	$13.40	23.1
Capital Efficiency(average for the year)			
Farm capital per cow	$10,591	$10,989	3.8
Machinery & equipment per cow	$2,044	$2,107	3.1
Asset turnover ratio	0.34	0.43	26.5
Income Generation			
Gross milk sales per cow	$2,616	$3,815	45.8
Gross milk sales per cwt.	$13.81	$20.59	49.1
Net milk sales per cwt.	$12.72	$19.51	53.4
Dairy cattle sales per cow	$281	$224	-20.3
Dairy calf sales per cow	$72	$35	-51.4
Government receipts per cwt.	$0.95	$0.61	-35.8
Profitability			
Net farm income without appreciation	$15,382	$57,663	274.9
Net farm income with appreciation	$27,651	$77,144	179.0
Labor & management income per oper./manager	$-13,174	$22,172	268.3
Rate of return on equity capital without apprec.	-6.2%	3.2%	151.6
Rate of return on all capital without appreciation	-3.4%	3.8%	211.8
Financial Summary			
Farm net worth, end year	$441,075	$501,582	13.7
Debt to asset ratio	0.24	0.21	-12.5
Farm debt per cow	$2,568	$2,340	-8.9

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. The following table shows important farm business characteristics and the number of farms with each characteristic. Farms with a parlor milking system were eliminated from the small herd (80 or fewer cows) group of dairy farms.

BUSINESS CHARACTERISTICS
47 Small Herd Dairy Farms, 2007

Type of Farm	Number
Dairy	47
Part-time dairy	0
Dairy cash-crop	0
Certified organic milk producer	0
Rotational grazing farms	12

Type of Ownership	Number
Owner	47
Renter	0

Type of Business	Number
Sole Proprietorship	42
Partnership	5
Corporation	0

Type of Barn	Number
Stanchion or Tie-Stall	44
Freestall	1
Combination	2

Milking Frequency	Number
2 times per day	46
3 times per day	1
Other	0

Breed of Herd	Percent
Holstein	83
Jersey	10
Other	7

Milking System	Number
Bucket & carry	0
Dumping station	1
Pipeline	46
Herringbone parlor	0
Other parlor	0

Production Records	Number
Testing service	39
On-farm system	1
Other	0
None	7

bST Usage	Number
Used consistently	6
Used inconsistently	0
Started usage in 2007	0
Stopped usage in 2007	0
Not used in 2007	41
Average percent usage, if used	49%

Business Record System	Number
Account Book	14
Accounting Service	16
On-farm computer	16
Other	1

Income Statement

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

Cash paid is the actual cash outlay during the year and does not necessarily represent the cost of goods and services actually used in 2007.

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

Change in prepaid expenses (noted 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.

CASH AND ACCRUAL FARM EXPENSES

47 Small Herd Dairy Farms, 2007

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
Hired Labor	$ 12,075		$ -4	<<	$ -34		$ 12,046
Feed							
Dairy grain & concentrate	51,657		2,339		-1,209		48,110
Dairy roughage	3,695		245		197		3,648
Nondairy	6		0		0		6
Professional nutritional services	71		0	<<	0		71
Machinery							
Machinery hire, rent & lease	3,832		0	<<	-552		3,280
Machinery repairs & farm vehicle exp.	15,194		25		-42		15,126
Fuel, oil & grease	8,268		260		-6		8,002
Livestock							
Replacement livestock	1,015		0	<<	0		1,015
Breeding	3,271		96		55		3,230
Veterinary & medicine	5,112		45		-46		5,020
Milk marketing	10,806		0	<<	-4		10,803
Bedding	1,987		79		-74		1,833
Milking supplies	5,270		37		7		5,240
Cattle lease & rent	0		0	<<	0		0
Custom boarding	308		0	<<	0		308
bST	516		-1		0		517
Livestock professional fees	1,270		161	<<	-6		1,102
Other livestock expense	2,807		2		-81		2,724
Crops							
Fertilizer & lime	6,150		1,023		-435		4,692
Seeds & plants	2,402		277		-83		2,042
Spray, other crop expense	1,930		78		-59		1,793
Crop professional fees	75		0	<<	0		75
Real Estate							
Land, building & fence repair	2,879		84		8		2,803
Taxes	5,756		0	<<	84		5,840
Rent & lease	1,956		0	<<	-10		1,946
Other							
Insurance	3,561		15	<<	-51		3,496
Utilities (farm share)	7,915		17	<<	27		7,925
Interest paid	8,444		0	<<	-109		8,336
Other professional fees	901		0	<<	0		901
Miscellaneous	1,989		8		134		2,115
Total Operating	$ 171,117		$ 4,787		$ -2,286		$ 164,043
Expansion livestock	0		0	<<	0		0
Extraordinary expense	234		0	<<	0		234
Machinery depreciation							10,940
Building depreciation							4,604
TOTAL ACCRUAL EXPENSES							$ 179,822

Change in accounts payable: An increase in accounts payable from beginning to end of year is added when calculating accrual expenses because these expenses were incurred (resources used) in 2007 but not paid for. A decrease is subtracted because it represents payment for resources used before 2007.

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

CASH AND ACCRUAL FARM RECEIPTS
47 Small Herd Dairy Farms, 2007

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	$ 197,977				$ 5,536		$ 203,513
Dairy cattle	8,235		$ 2,859		-5		11,088
Dairy calves	2,373		-553		0		1,820
Other livestock	1,369		301		4		1,673
Crops	1,370		2,796		353		4,519
Government receipts	6,522		0 *		-140		6,382
Custom machine work	175				0		175
Gas tax refund	112				0		112
Other	4,010				-80		3,931
Less nonfarm noncash capital**		(-)	0 **			(-)	0
Total Receipts	$ 222,143		$ 5,403		$ 5,667		$ 233,213

*Change in advanced government receipts.
**Gifts or inheritances of cattle or crops included in inventory.

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

Changes in inventory of assets produced by the business are calculated by subtracting beginning of year values from end of year values excluding appreciation. Increases in livestock inventory caused by herd growth and/or quality are added, and decreases caused by herd reduction and/or quality are subtracted. Changes in inventories of crops grown are also included. An increase in advanced government receipts is subtracted from cash income because it represents income received in 2007 for the 2008 crop year in excess of funds earned for 2007. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2007 but received in 2006.

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. Payments in January 2008 for milk produced in December 2007 compared to January 2007 payments for milk produced in 2006 are included as a change in accounts receivable in determining accrual milk sales.

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

Profitability Analysis

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

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

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

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

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

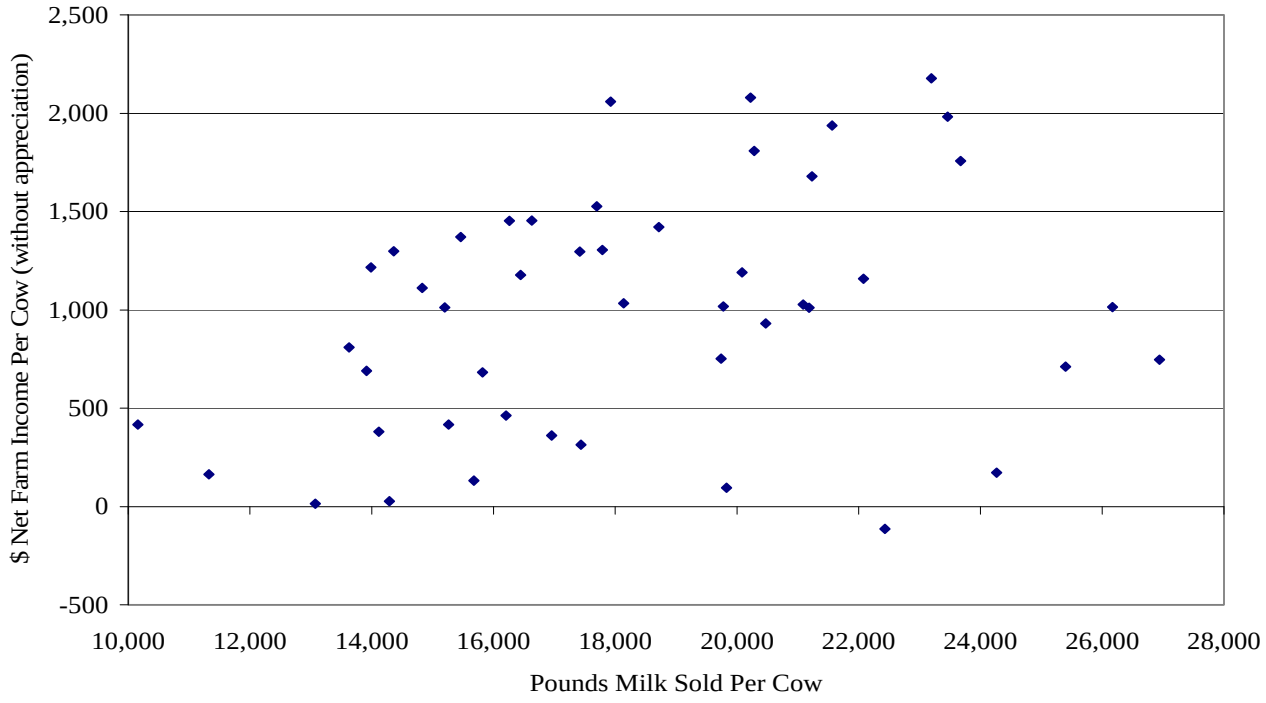
NET FARM INCOME
47 Small Herd Dairy Farms, 2007

Item	Average 47 Farms Total	Average 47 Farms Per Cow	Top 25% Farms* Total	Top 25% Farms* Per Cow
Total accrual receipts	$ 233,213		$ 271,400	
Appreciation: Livestock	6,113		11,283	
Machinery	2,502		342	
Real Estate	9,878		3,122	
Other Stock & Certificates	38		45	
Total Including Appreciation	$ 251,743		$ 286,192	
Total accrual expenses	- 179,822		- 172,766	
Net Farm Income (with appreciation)	$ 71,922	$ 1,326	$ 113,426	$ 1,844
Net Farm Income (without appreciation)	$ 53,391	$ 985	$ 98,634	$ 1,604

*Top 25% of small herd farms by rate of return on all assets without appreciation.

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
47 Small Herd Dairy Farms, 2007



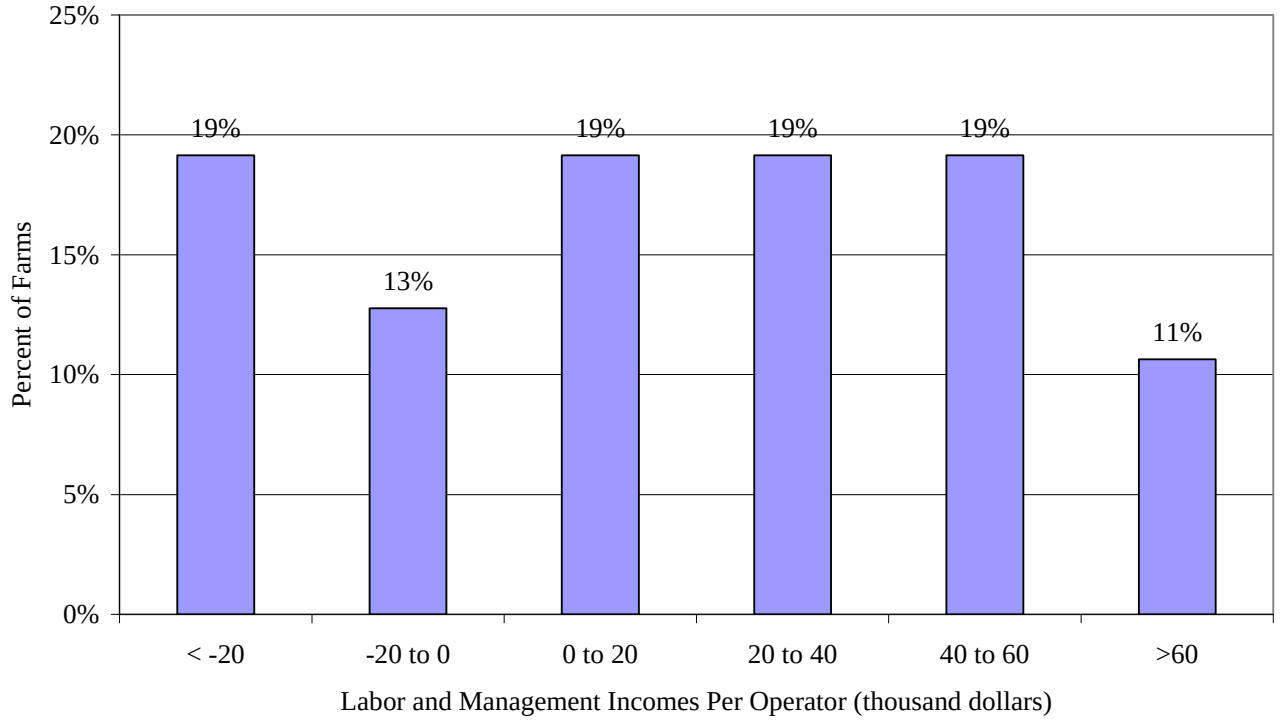
Labor and management income is the return which farm operators receive for their labor and management used in the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and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

LABOR AND MANAGEMENT INCOME
47 Small Herd Dairy Farms, 2007

Item	Average 47 Farms	Top 25% Farms
Net farm income without appreciation	$ 53,391	$ 98,634
Family labor unpaid @ $2,400 per month	- 7,879	- 5,400
Interest on $497,577 average equity capital @ 5% real rate	- 24,879	- 23,697
($473,943 average equity capital for top 25% farms)		
Labor & Management Income per farm (1.14 Operators/farm)	$ 20,633	$ 69,537
(1.21 operators per farm for top 25% farms)		
Labor & Management Income per Operator/Manager	$ 18,100	$ 57,469

Labor and management income per operator averaged $18,100 on these 47 farms in 2007. The range in labor and management income per operator was from less than $-44,900 to more than $83,100. Returns to labor and management were less than $0 on 32 percent of the farms. Labor and management incomes per operator were between $0 and $40,000 on 38 percent of the farms while 30 percent had labor and management incomes per operator greater than $40,000.

DISTRIBUTION OF LABOR & MANGEMENT INCOMES PER OPERATOR
47 Small Herd Dairy Farms, 2007



Return on equity capital measures the net return remaining for the farmer's equity or owned capital after a charge has been made for the owner-operator's labor and management. The earnings or amount of net farm income allocated to labor and management is the opportunity cost of operators' labor and management estimated by the cooperators. Return on equity capital is calculated with and without appreciation. The rate of return on equity capital is determined by dividing the amount returned by the average farm net worth or equity capital. Rate of return on total capital is calculated by adding interest paid to the return on equity capital and then dividing by average farm assets. Net farm income from operations ratio is net farm income (without appreciation) divided by total accrual receipts.

RETURN ON EQUITY CAPITAL AND RETURN ON TOTAL CAPITAL
47 Small Herd Dairy Farms, 2007

Item	Average 47 Farms	Top 25% Farms
Net farm income with appreciation	$ 71,922	$ 113,426
Family labor unpaid @ $2,400 per month	- 7,879	- 5,400
Value of operators' labor & management	- 34,411	- 39,833
Return on equity capital with appreciation	$ 29,631	$ 68,193
Interest paid	+ 8,336	+ 6,612
Return on total capital with appreciation	$ 37,967	$ 74,805
Return on equity capital without appreciation	$ 11,101	$ 53,401
Return on total capital without appreciation	$ 19,436	$ 60,012
Rate of return on average equity capital:		
with appreciation	6.0%	14.4%
without appreciation	2.2%	11.3%
Rate of return on average total capital:		
with appreciation	5.9%	13.0%
without appreciation	3.0%	10.4%
Net farm income from operations ratio	0.23	0.36

Farm and Family Financial Status

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

Financial lease obligations are included in the balance sheet. The present value of all future payments is listed as a liability since the farmer is committed to make the payments by signing the lease. The present value is also listed as an asset, representing the future value the item has to the business. For 2007, lease payments were discounted by 9.06 percent to obtain their present value.

Advanced government receipts are included as current liabilities. Government payments received in 2007 that are for participation in the 2008 program are the end year balance and payments received in 2006 for participation in the 2007 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.

2007 FARM BUSINESS & NONFARM BALANCE SHEET

47 Small Herd Dairy Farms, 2007

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 4,251	$ 6,856	Accounts payable	$ 8,721	$ 6,435
Accounts receivable	11,213	16,880	Operating debt	7,709	5,512
Prepaid expenses	16	205	Short Term	348	511
Feed & supplies	32,805	40,199	Advanced govt. receipts	0	0
			Current Portion:		
			Intermediate	7,879	10,051
			Long Term	4,178	4,494
Total Current	$ 48,285	$ 64,141	Total Current	$ 28,835	$ 27,003
Intermediate			Intermediate		
Dairy cows:			Structured debt		
owned	$ 81,707	$ 85,446	1-10 years	$ 56,753	$ 55,647
leased	0	0	Financial lease		
Heifers	44,138	48,795	(cattle/machinery)	237	112
Bulls & other livestock	2,173	2,498	Farm Credit stock	427	478
Mach. & equip. owned	108,476	120,273	Total Intermediate	$ 57,417	$ 56,237
Mach. & equip. leased	237	112			
Farm Credit stock	427	478			
Other stock/certificate	2,688	2,932			
Total Intermediate	$ 239,847	$ 260,534			
			Long Term		
Long Term			Structured debt		
Land & buildings:			>10 years	$ 61,684	$ 56,212
owned	$ 329,350	$ 340,384	Financial lease		
leased	0	0	(structures)	0	0
Total Long Term	$ 329,350	$ 340,384	Total Long Term	$ 61,684	$ 56,212
			Total Farm Liabilities	$ 147,935	$ 139,452
Total Farm Assets	$ 617,482	$ 665,059	FARM NET WORTH	$ 469,546	$ 525,607

Nonfarm Assets, Liabilities & Net Worth (Average of 29 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	$ 14,157	$ 15,111	Nonfarm Liabilities	$ 2,364	$ 2,141
Cash value life insurance	14,646	14,813			
Nonfarm real estate	15,621	15,621			
Auto (personal share)	7,934	7,317			
Stocks & bonds	35,617	38,624			
Household furnishings	13,293	13,328			
All other nonfarm assets	1,913	1,867			
Total Nonfarm Assets	$ 103,182	$ 106,682	NONFARM NET WORTH	$ 100,819	$ 104,541

Farm & Nonfarm Assets, Liabilities, and Net Worth*	Jan. 1	Dec. 31
Total Assets	$ 720,664	$ 771,741
Total Liabilities	150,299	141,593
TOTAL FARM & NONFARM NET WORTH	$ 570,365	$ 630,148

*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 dollar 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
47 Small Herd Dairy Farms, 2007

Item			Average 47 Farms		Top 25% Farm	
Financial Ratios - Farm:						
Percent equity			79%		85%	
Debt/asset ratio:	total		0.21		0.15	
	long-term		0.17		0.17	
	intermediate/current		0.26		0.14	
Leverage ratio			0.27		0.18	
Current ratio			2.38		3.89	
Working capital	$37,138	As % of total Expenses:	21%	$55,433	32%	
Farm Debt Analysis:						
Accounts payable as % of total debt			5%		0%	
Long-term liabilities as a % of total debt			40%		45%	
Current & intermediate liabilities as a % of total debt			60%		55%	
Cost of term debt (weighted average)			5.4%		5.4%	

Farm Debt Levels:	Per Cow	Per Tillable Acre Owned	Per Cow	Per Tillable Acre Owned
Total farm debt	$2,561	$1,299	$1,494	$837
Long-term debt	1,032	524	670	375
Intermediate & long term	2,065	1,048	1,184	664
Intermediate & current debt	1,529	775	824	462

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

FARM INVENTORY BALANCE
47 Small Herd Dairy Farms, 2007

Item	Average 47 Farms			
	Real Estate		Machinery & Equipment	
Value beginning of year		$ 329,350		$ 108,476
Purchases	$ 10,907*		$ 20,533	
Gift & inheritance	+ 0		+ 0	
Lost capital	- 3,249			
Sales	- 1,899		- 297	
Depreciation	- 4,604		- 10,940	
Net investment		= 1,156		= 9,296
Appreciation		+ 9,878		+ 2,502
Value end of year		$ 340,384		$ 120,273

*$1,676 land and $9,232 buildings and/or depreciable improvements.

The Statement of Owner Equity has two purposes. It allows (1) verification that the accrual income statement and market value balance sheet are consistent (in accountants terms, they reconcile) and (2) identification of the causes of change in equity that occurred on the farm during the year. The Statement of Owner Equity allows you to determine to what degree the change in equity was caused by (1) earnings from the business, and nonfarm income, in excess of withdrawals being retained in the business (called retained earnings), (2) outside capital being invested in the business or farm capital being removed from the business (called contributed/withdrawn capital) , (3) increases or decreases in the value (price) of assets owned by the business (called change in valuation equity), and (4) the error in the business cash flow accounting.

Retained earnings is an excellent indicator of farm generated financial progress.

STATEMENT OF OWNER EQUITY (RECONCILIATION)
47 Small Herd Dairy Farms, 2007

Item	Average 47 Farms		Top 25% Farms	
Beginning of year farm net worth		$ 469,546		$ 436,601
Net farm income without appreciation	$ 53,391		$ 98,634	
+Nonfarm cash income	+ 9,484		+ 5,014	
-Personal withdrawals & family expenditures excluding nonfarm borrowings	- 32,734		- 42,314	
RETAINED EARNINGS		+ $ 30,142		+$ 61,334
Nonfarm noncash transfers to farm	$ 0		$ 0	
+Cash used in business from nonfarm capital	+ 9,643		+ 1,763	
-Note or mortgage from farm real estate sold (nonfarm)	- 1,277		- 0	
CONTRIBUTED/WITHDRAWN CAPITAL		+ $ 8,366		+$ 1,763
Appreciation	$ 18,530		$ 14,792	
-Lost capital	- 3,249		- 2,850	
CHANGE IN VALUATION EQUITY		+ $ 15,281		+$ 11,942
IMBALANCE/ERROR		- $ -2,271		- $ 354
End of year net worth*		= $525,607		=$ 511,285

Change in Net Worth		
Without appreciation	$ 37,530	$59,892
With appreciation	$ 56,061	$74,684

*May not add to total 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
47 Small Herd Dairy Farms, 2007

Item			Average 47 Farms	
Cash Flow from Operating Activities				
Cash farm receipts		$ 222,143		
- Cash farm expenses		171,117		
- Extraordinary expense		234		
= Net cash farm income			$ 50,792	
Personal withdrawals & family expenses				
including nonfarm debt payments		$ 32,905		
- Nonfarm income		9,484		
- Net cash withdrawals from the farm			$ 23,421	
= Net Provided by Operating Activities				$ 27,371
Cash Flow From Investing Activities				
Sale of assets:	machinery	$ 297		
	+ real estate	622		
	+ other stock & cert.	30		
= Total asset sales			$ 950	
Capital purchases:	expansion livestock	$ 0		
	+ machinery	20,533		
	+ real estate	10,907		
	+ other stock & cert.	237		
- Total invested in farm assets			$ 31,678	
= Net Provided by Investment Activities				$ -30,728
Cash Flow From Financing Activities				
Money borrowed (intermediate & long term)		$ 17,494		
+ Money borrowed (short term)		598		
+ Increase in operating debt		0		
+ Cash from nonfarm capital used in business		9,643		
+ Money borrowed - nonfarm		171		
= Cash inflow from financing			$ 27,905	
Principal payments (intermediate & long term)		$ 21,583		
+ Principal payments (short term)		436		
+ Decrease in operating debt		2,197		
- Cash outflow for financing			$ 24,215	
= Net Provided by Financing Activities				$ 3,690
Cash Flow From Reserves				
Beginning farm cash, checking & savings			$ 4,251	
- Ending farm cash, checking & savings			6,856	
= Net Provided from Reserves				$ -2,605
Imbalance (error)				$ -2,271

ANNUAL CASH FLOW STATEMENT

Top 25% Small Herd Dairy Farms, 2007

Item			Top 25% Farms	
Cash Flow from Operating Activities				
	Cash farm receipts	$ 252,496		
-	Cash farm expenses	172,820		
-	Extraordinary expense	280		
=	Net cash farm income		$ 79,396	
	Personal withdrawals & family expenses including nonfarm debt payments	$ 41,772		
-	Nonfarm income	5,014		
-	Net cash withdrawals from the farm		$ 36,758	
=	Net Provided by Operating Activities			$ 42,638
Cash Flow From Investing Activities				
	Sale of assets: machinery	$ 390		
	+ real estate	0		
	+ other stock & cert.	83		
=	Total asset sales		$ 473	
	Capital purchases: expansion livestock	$ 0		
	+ machinery	20,483		
	+ real estate	7,410		
	+ other stock & cert.	386		
-	Total invested in farm assets		$ 28,279	
=	Net Provided by Investment Activities			$ -27,806
Cash Flow From Financing Activities				
	Money borrowed (intermediate & long term)	$ 11,138		
+	Money borrowed (short term)	0		
+	Increase in operating debt	0		
+	Cash from nonfarm capital used in business	1,220		
+	Money borrowed - nonfarm	0		
=	Cash inflow from financing		$ 12,358	
	Principal payments (intermediate & long term)	$ 21,341		
+	Principal payments (short term)	1,331		
+	Decrease in operating debt	1,278		
-	Cash outflow for financing		$ 23,950	
=	Net Provided by Financing Activities			$ -11,592
Cash Flow From Reserves				
	Beginning farm cash, checking & savings		$ 7,276	
-	Ending farm cash, checking & savings		10,162	
=	Net Provided from Reserves			$ -2,886
Imbalance (error)				$ 354

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 2008. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2008 debt payments shown below.

FARM DEBT PAYMENTS PLANNED
Small Herd Dairy Farms, 2006 & 2007

	Same 38 Dairy Farms			Same 11 Top 25% Farms		
	2007 Payments		Planned	2007 Payments		Planned
Debt Payments	Planned	Made	2008	Planned	Made	2008
Long-term	$ 8,547	$ 9,514	$ 8,162	$ 6,871	$ 8,783	$ 7,196
Intermediate-term	13,694	20,634	13,602	12,118	19,709	11,499
Short-term	471	561	0	1,591	1,519	0
Operating (net reduction)	939	2,877	703	364	2,011	0
Accounts payable (net reduction)	332	5,127	262	0	6,046	0
Total	$ 23,982	$ 38,712	$ 22,729	$ 20,943	$ 38,067	$ 18,695
Per cow	$ 433	$ 699		$ 342	$ 621	
Per cwt. 2007 milk	$ 2.34	$ 3.77		$ 1.87	$ 3.39	
Percent of total 2007 receipts	10%	16%		8%	14%	
Percent of 2007 milk receipts	12%	18%		9%	16%	

The cash flow coverage ratio and debt coverage ratio measure the ability of the farm business to meet its planned debt payments schedule. The ratios show the percentage of payments planned for 2007 (as of December 31, 2006) that could have been made with the amount available for debt service in 2007. Farmers who did not participate in DFBS in 2006 have their 2007 cash flow coverage ratio based on planned debt payments for 2008.

COVERAGE RATIOS
Same 38 Small Herd Dairy Farms, 2006 & 2007

Item	Average	Item	Average
Cash Flow Coverage Ratio		Debt Coverage Ratio	
Cash farm receipts	$231,322	Net farm income (without appreciation)	$57,663
- Cash farm expenses	177,617	+ Depreciation	15,823
+ Interest paid (cash)	8,359	+ Interest paid (accrual)	8,224
- Net personal withdrawals from farm*	23,966	- Net personal withdrawals from farm*	23,966
(A) = Amount Available for Debt Service	$ 38,098	(A') = Repayment Capacity	$57,745
(B) = Debt Payments Planned for 2007 (as of December 31, 2006)	$ 23,982	(B) = Debt Payments Planned for 2007 (as of December 31, 2006)	$23,982
(A/ B)= Cash Flow Coverage Ratio for 2007	1.59	(A'/B)= Debt Coverage Ratio for 2007	2.41

Same 11 Top 25% Dairy Farms, 2006 & 2007

(A) = Amount Available for Debt Service	$ 47,051	(A') = Repayment Capacity	$ 79,291
(B) = Debt Payments Planned for 2007	20,943	(B) = Debt Payments Planned for 2007	20,943
(A/ B)= Cash Flow Coverage Ratio for 2007	2.25	(A'/B)= Debt Coverage Ratio for 2007	3.79

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

ANNUAL CASH FLOW WORKSHEET

47 Small Herd Dairy Farms, 2007

Item	Average 47 Farms Per Cow	Per Cwt.	Total
Number cows and cwt. milk	54	9,929	
Accrual Operating Receipts			
Milk	$3,753	$20.50	$203,513
Dairy cattle	204	1.12	11,088
Dairy calves	34	0.18	1,820
Other livestock	31	0.17	1,673
Crops	83	0.46	4,519
Miscellaneous receipts	195	1.07	10,600
Total	$4,300	$23.49	$233,213
Accrual Operating Expenses			
Hired labor	$ 222	$ 1.21	$ 12,046
Dairy grain & concentrate	887	4.85	48,110
Dairy roughage	67	0.37	3,648
Nondairy feed	0	0.00	6
Professional nutritional services	1	0.01	71
Machinery hire/rent/lease	60	0.33	3,280
Machinery repair & farm vehicle expense	279	1.52	15,126
Fuel, oil & grease	148	0.81	8,002
Replacement livestock	19	0.10	1,015
Breeding	60	0.33	3,230
Veterinary & medicine	93	0.51	5,020
Milk marketing	199	1.09	10,803
Bedding	34	0.18	1,833
Milking supplies	97	0.53	5,240
Cattle lease	0	0.00	0
Custom boarding	6	0.03	308
bST expense	10	0.05	517
Livestock professional fees	20	0.11	1,102
Other livestock expense	50	0.27	2,724
Fertilizer & lime	87	0.47	4,692
Seeds & plants	38	0.21	2,042
Spray & other crop expenses	33	0.18	1,793
Crop professional fees	1	0.01	75
Land, building, fence repair	52	0.28	2,803
Taxes	108	0.59	5,840
Real estate rent/lease	36	0.20	1,946
Insurance	64	0.35	3,496
Utilities	146	0.80	7,925
Miscellaneous	56	0.30	3,016
Total Less Interest Paid	$2,871	$15.68	$155,708
Net Accrual Operating Income (without interest paid)	$1,429	$ 7.81	$ 77,505
- Change in livestock/crop inventory*	100	0.54	5,403
- Change in accounts receivable	105	0.57	5,667
- Change in feed/supply inventory**	88	0.48	4,787
+ Change in accts. payable***	-40	-0.22	-2,177
NET CASH FLOW	$1,097	$ 5.99	$ 59,470
- Net personal withdrawals from farm (see footnote on p. 15)	379	2.07	20,573
Available for Farm Debt Payments & Investments	$ 717	$ 3.92	$ 38,898
- Farm debt payments	678	3.70	36,779
Available for Farm Investment	$ 39	$ 0.21	$ 2,118
- Capital purchases: cattle, machinery & improvements	584	3.19	31,678
Additional Capital Needed	$ 545	$ 2.98	$ 29,560

*Includes change in advance government receipts. **Includes change in prepaid expenses.

***Excludes change in interest account payable.

ANNUAL CASH FLOW WORKSHEET

Top 25% Small Herd Dairy Farms, 2007

Item	Average Top 25% Farms		
	Per Cow	Per Cwt.	Total
Number of cows or cwt. milk	62	11,360	
Accrual Operating Receipts			
Milk	$3,827	$20.72	$235,386
Dairy cattle	276	1.49	16,974
Dairy calves	34	0.18	2,081
Other livestock	7	0.04	450
Crops	99	0.54	6,094
Miscellaneous receipts	169	0.92	10,416
Total	$4,413	$23.89	$271,400
Accrual Operating Expenses			
Hired labor	$ 157	$ 0.85	$ 9,662
Dairy grain & concentrate	809	4.38	49,732
Dairy roughage	64	0.35	3,955
Nondairy feed	0	0.00	0
Professional nutritional services	0	0.00	8
Machinery hire/rent/lease	80	0.43	4,939
Machinery repair & farm vehicle expense	240	1.30	14,751
Fuel, oil & grease	135	0.73	8,286
Replacement livestock	11	0.06	678
Breeding	49	0.27	3,026
Veterinary & medicine	86	0.46	5,281
Milk marketing	145	0.79	8,923
Bedding	17	0.09	1,061
Milking supplies	80	0.43	4,897
Cattle lease	0	0.00	0
Custom boarding	10	0.05	589
bST expense	0	0.00	0
Livestock professional fees	22	0.12	1,379
Other livestock expense	31	0.17	1,890
Fertilizer & lime	113	0.61	6,978
Seeds & plants	25	0.14	1,568
Spray & other crop expenses	21	0.11	1,285
Crop professional fees	2	0.01	130
Land, building, fence repair	54	0.29	3,306
Taxes	84	0.45	5,138
Real estate rent/lease	57	0.31	3,531
Insurance	56	0.30	3,462
Utilities	111	0.60	6,821
Miscellaneous	44	0.23	2,678
Total Less Interest Paid	$2,503	$13.55	$153,953
Net Accrual Operating Income (without interest paid)	$1,910	$10.34	$117,447
- Change in livestock/crop inventory*	183	0.99	11,229
- Change in accounts receivable	125	0.68	7,676
- Change in feed/supply inventory**	110	0.60	6,781
+ Change in accounts payable***	-89	-0.48	-5,475
NET CASH FLOW	$1,403	$ 7.60	$ 86,287
- Net personal withdrawals from farm (see footnote p.15)	593	3.21	36,454
Available for Farm Debt Payments & Investments	$ 810	$ 4.39	$ 49,833
- Farm debt payments	589	3.19	36,245
Available for Farm Investment	$ 221	$ 1.20	$ 13,588
- Capital purchases: cattle, machinery & improvements	460	2.49	28,279
Additional Capital Needed	$ 239	$ 1.29	$ 14,691

*Includes change in advance government receipts. **Includes change in prepaid expenses.

***Excludes change in interest account payable.

Cropping Analysis

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

LAND RESOURCES AND CROP PRODUCTION
47 Small Herd Dairy Farms, 2007

Item	Average 47 Farms				Top 25% Farm			
Land	Owned	Rented	Total		Owned	Rented	Total	
Tillable	107	73	180		111	61	172	
Nontillable	52	13	65		19	26	45	
Other nontillable	81	7	88		79	17	96	
Total	240	93	333		209	104	313	
Crop Yields	Farms	Acres*	Prod/Acre		Farms	Acres	Prod/Acre	
Hay crop	46	138	2.01	tn DM	12	123	2.24	tn DM
Corn silage	32	33	17.21	tn	8	32	15.53	tn
			5.84	tn DM			5.25	tn DM
Other forage	4	19	1.41	tn DM	0	0	0.00	tn DM
Total forage	46	162	2.54	tn DM	12	147	2.65	tn DM
Corn grain	8	43	130	bu	2	42	119	bu
Oats	3	11	38	bu	0	0	0	bu
Wheat	0	0	0	bu	0	0	0	bu
Other crops	3	37			2	45		
Tillable pasture	12	34			4	34		
Idle	6	22			0	0		
Total Tillable Acres	47	180			12	172		

*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were hay crop 135, corn silage 22, corn grain 7, oats 1, tillable pasture 9, and idle 3.

Average crop acres and yields 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
47 Small Herd Dairy Farms, 2007

Item	Average 47 Farms	Top 25% Farm
Total tillable acres per cow	3.39	2.80
Total forage acres per cow	2.99	2.38
Harvested forage dry matter, tons per cow	7.58	6.31

Cropping Analysis (continued)

A number of cooperators have allocated crop expenses among the hay crop, corn, and other crops produced. Fertilizer and lime, seeds and plants, and spray and other crop expenses have been computed per acre and per production unit for hay and corn. Additional expense items such as fuels, labor, and machinery repairs are not included. Intensive grazing was used on 12 farms, 5 of which are in the "top 25% farms" group.

CROP RELATED ACCRUAL EXPENSES
Small Herd Dairy Farms Reporting, 2007

Item	Total Per Tillable Acre	All Corn Per Acre	Corn Silage Per Ton DM	Corn Grain Per Dry Sh. Bu.	Hay Crop Per Acre	Hay Crop Per Ton DM	Pasture Per Tillable Acre	Pasture Per Total Pasture Acre
No. of farms reporting	46	4			4		0	
Ave. number of acres	184	56			150		0	0
Fert. & lime	$ 29.39	$ 91.17	$ 18.31	$ 0.14	$ 39.97	$ 16.59	$ 0.00	$ 0.00
Seeds & plants	12.04	54.29	10.84	0.09	5.75	2.62	0.00	0.00
Spray & other crop expense	10.12	47.44	8.69	0.13	7.78	4.02	0.00	0.00
TOTAL	$ 51.55	$ 192.90	$ 37.84	$ 0.36	$ 53.50	$ 23.23	$ 0.00	$ 0.00
Top 25% Farms								
No. of farms reporting	12	----------None Reported----------						
Ave. number of acres	172	---						
Fert. & lime	$ 42.13							
Seeds & plants	9.76							
Spray & other crop exp.	9.02							
TOTAL	$ 60.91							

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
46 Small Herd Dairy Farms That Grow Forages, 2007

Machinery Expense	Average 46 Farms Total Expenses	Average 46 Farms Per Tillable Acre	Top 25% Farms Total Expenses	Top 25% Farms Per Tillable Acre
Fuel, oil & grease	$ 8,045	$ 43.69	$ 8,286	$ 48.15
Machinery repair & vehicle expense	15,194	82.52	14,751	85.72
Machine hire, rent & lease	3,351	18.20	4,939	28.70
Interest (5%)	5,792	31.45	5,789	33.64
Depreciation	11,048	60.00	7,856	45.65
Total	$ 43,430	$ 235.86	$ 41,621	$ 241.86

Dairy Analysis

Analysis of the dairy enterprise can reveal strengths and weaknesses of the dairy farm business. Information on this page should be used in conjunction with DHI and other dairy production information. Changes in dairy herd size and market values that occur during the year are identified in the table below. The change in inventory value without appreciation is attributed to physical changes in herd size and quality. Any change in inventory is included as an accrual farm receipt when calculating all of the profitability measures on pages 8 and 9.

DAIRY HERD INVENTORY
47 Small Herd Dairy Farms, 2007

	Dairy Cows		Heifer					
			Bred		Open		Calves	
Item	No.	Value	No.	Value	No.	Value	No.	Value
Average 47 Farms:								
Beg. year (owned)	54	$ 81,707	14	$ 19,861	16	$ 16,228	14	$ 8,050
+ Change w/o apprec.		146		2,195		518		-553
+ Appreciation		3,593		1,266		570		661
End year (owned)	54	$ 85,446	15	$ 23,321	17	$ 17,316	13	$ 8,157
End including leased	54							
Average number	54		44	(all age groups)				
Top 25% Farms:								
Beg. year (owned)	61	$ 90,379	13	$ 19,571	16	$ 15,800	15	$ 8,417
+ Change w/o apprec.		1,904		1,892		3,717		-650
+ Appreciation		6,888		2,154		925		1,317
End year (owned)	62	$ 99,171	15	$ 23,617	19	$ 20,442	14	$ 9,083
End including leased	62							
Average number	62		47	(all age groups)				

Total milk sold and milk sold per cow are extremely valuable measures of size and productivity, respectively, on the dairy farm. These measures of milk output are based on pounds of milk marketed during the year. Farm managers on DHI should compare milk sold per cow with their rolling herd average on the test date nearest December 31 to see how close the DHI estimate of milk produced is to actual milk sales.

MILK PRODUCTION
47 Small Herd Dairy Farms, 2007

Item	Average 47 Farms	Top 25% Farms
Total milk sold, lbs.	992,873	1,136,023
Milk sold per cow, lbs.	18,309	18,472
Average milk plant test, percent butterfat	3.78	3.79

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
47 Small Herd Dairy Farms, 2007

	Average 47 Farms		Top 25% Farms	
Item	Number	Percent*	Number	Percent*
Cows sold for beef	13	23.5	13	21.3
Cows sold for dairy	1	1.5	2	3.3
Cows died	2	4.0	3	4.5
Culling rate**		27.5		25.7

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

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

ACCRUAL RECEIPTS FROM DAIRY, COSTS OF PRODUCING MILK, AND PROFITABILITY

47 Small Herd Dairy Farms, 2007

Item	Average 47 Farms			Top 25% Farms		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Accrual Cost of Producing Milk						
Operating costs	$ 134,343	$ 2,477	$ 13.53	$ 124,551	$ 2,025	$ 10.96
Purchased inputs costs	$ 150,121	$ 2,768	$ 15.12	$ 136,752	$ 2,224	$ 12.04
Total costs	$ 217,291	$ 4,007	$ 21.89	$ 205,682	$ 3,344	$ 18.11
Accrual Receipts From Milk	$ 203,513	$ 3,753	$ 20.50	$ 235,386	$ 3,827	$ 20.72
Net Milk Receipts	$ 192,710	$ 3,550	$ 19.41	$ 226,463	$ 3,736	$ 19.93
Net Farm Income without Appreciation	$ 53,391	$ 985	$ 5.38	$ 98,634	$ 1,604	$ 8.68
Net Farm Income with Appreciation	$ 71,922	$ 1,326	$ 7.24	$ 113,426	$ 1,844	$ 9.98

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

47 Small Herd Dairy Farms, 2007

Item	Average 47 Farms		Top 25% Farms	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrate	$ 887	$ 4.85	$ 809	$ 4.38
Purchased dairy roughage	67	0.37	64	0.35
Total Purchased Dairy Feed	$ 954	$ 5.21	$ 873	$ 4.73
Purchased grain & conc. as % of milk receipts	23%		21%	
Purchased feed & crop expense	$ 1,113	$ 6.08	$ 1,035	$ 5.60
Purchased feed & crop expense as % of milk receipts	30%		27%	
Breeding	$ 60	$ 0.33	$ 49	$ 0.27
Veterinary & medicine	93	0.51	86	0.46
Milk marketing	199	1.09	145	0.79
Bedding	34	0.18	17	0.09
Milking supplies	97	0.53	80	0.43
Cattle lease	0	0.00	0	0.00
Custom boarding	6	0.03	10	0.05
bST	10	0.05	0	0.00
Livestock professional fees	20	0.11	22	0.12
Other livestock expense	50	0.27	31	0.17

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.

CAPITAL EFFICIENCY
47 Small Herd Dairy Farms, 2007

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Average 47 Farms:				
Farm capital	$295,516	$11,825	$3,558	$5,974
Real estate		6,175		3,120
Machinery & equipment	52,788	2,112	636	
Ratios				
Asset turnover	Operating Expense	Interest Expense		Depreciation Expense
0.39	0.67	0.04		0.07
Top 25% Farms:				
Farm capital	$270,312	$ 9,362	$3,346	$5,203
Real estate		4,045		2,248
Machinery & equipment	54,358	1,883	673	
Ratios				
Asset turnover	Operating Expense	Interest Expense		Depreciation Expense
0.50	0.57	0.02		0.04

LABOR FORCE INVENTORY AND ANALYSIS
47 Small Herd Dairy Farms, 2007

Labor Force	Months	Age	Years of Education	Value of Labor & Management
Average 47 Farms:				
Operator number 1	13.9	50	13	$ 30,445
Operator number 2	1.7	51	13	3,966
Family paid	3.0			
Family unpaid	3.3			
Hired	4.1			
Total	26.0	/ 12 = 2.17 Worker Equivalent		
		1.14 Operator/Manager Equivalent		
Top 25% Farms: Total	25.5	/ 12 = 2.13 Worker Equivalent		
Operator's		1.21 Operator/Manager Equivalent		

Labor Efficiency	Average 47 Farms Total	Average 47 Farms Per Worker	Top 25% Farms Total	Top 25% Farms Per Worker
Cows, average number	54	25	62	29
Milk sold, pounds	992,873	458,249	1,136,023	533,762
Tillable acres	180	83	172	81

Labor Costs	Average 47 Farms Total	Average 47 Farms Per Cow	Average 47 Farms Per Cwt.	Top 25% Farms Total	Top 25% Farms Per Cow	Top 25% Farms Per Cwt.
Value of operator(s) labor ($2,400/month)	$ 37,440	$ 690	$ 3.77	$38,904	$ 633	$ 3.42
Family unpaid ($2,400/month)	7,872	145	0.79	5,400	88	0.48
Hired	12,046	222	1.21	9,662	157	0.85
Total Labor	$ 57,358	$ 1,058	$ 5.78	$53,966	$ 878	$ 4.75
Machinery Cost	$ 43,076	$ 794	$ 4.34	$41,621	$ 677	$ 3.66
Total Labor & Machinery	$ 100,434	$ 1,852	$ 10.12	$95,587	$ 1,555	$ 8.41
Hired labor expense per hired worker equivalent		$20,302			$16,377	
Hired labor expense as % of milk sales		5.9%			4.1%	

COMPARATIVE ANALYSIS OF THE FARM BUSINESS

Comparison to Top 25 Percent

Comparing your business with average data from DFBS cooperators that participated in both of the last two years can be helpful in establishing your goals for these parameters. Both the average of the same 38 farms and the top 25% of farms based on rate of return of all assets without appreciation are presented below. 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 38 Small Herd Dairy Farms, 2006 & 2007

	Average of Same 38 Farms*		Average of Same 11 Top 25% Farms*	
Selected Factors	2006	2007	2006	2007
Size of Business				
Average number of cows	54	55	58	61
Average number of heifers	43	46	44	48
Milk sold, lbs.	1,025,135	1,026,212	1,096,964	1,121,290
Worker equivalent	2.12	2.17	1.97	2.10
Total tillable acres	177	177	170	179
Rates of Production				
Milk sold per cow, lbs.	18,947	18,525	18,825	18,300
Hay DM per acre, tons	2.1	2.1	2.3	2.2
Corn silage per acre, tons	14.2	16.8	14.6	15.4
Labor Efficiency				
Cows per worker	26	26	30	29
Milk sold/worker, lbs.	483,554	472,909	556,835	533,947
Cost Control				
Grain & concentrate purchased as % of milk sales	30%	24%	30%	21 %
Dairy feed & crop expense per cwt. milk	$ 5.31	$ 6.17	$ 5.14	$ 5.65
Labor & machinery costs/cow	$ 1,713	$ 1,847	$ 1,490	$ 1,561
Operating cost of producing cwt. of milk	$ 10.89	$ 13.40	$ 10.03	$ 11.07
Capital Efficiency**				
Farm capital per cow	$ 10,591	$ 10,989	$ 9,091	$ 9,207
Machinery & equipment per cow	$ 2,044	$ 2,107	$ 1,838	$ 1,851
Asset turnover ratio	0.34	0.43	0.38	0.50
Profitability				
Net farm income w/o appreciation	$ 15,382	$ 57,663	$ 31,679	$ 97,080
Net farm income with appreciation	$ 27,651	$ 77,144	$ 38,962	$ 111,245
Labor & management income per operator/manager	$ -13,174	$ 22,172	$ 3,331	$ 59,307
Rate of return on equity capital with appreciation	-3.4%	7.3%	-1.0%	14.9%
Rate of return on all capital with appreciation	-1.3%	7.0%	0.4%	13.3%
Financial Summary				
Farm net worth, end year	$ 441,075	$ 501,582	$ 427,426	$ 496,655
Debt to asset ratio	0.24	0.21	0.21	0.16
Farm debt per cow	$ 2,568	$ 2,340	$ 1,855	$ 1,535

*Farms participating both years.
**Average for the year.

RECEIPTS AND EXPENSES PER COW AND PER CWT.

Same 38 Small Herd Dairy Farms, 2006 & 2007

	2006		2007	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	54		55	
Cwt. Of Milk Sold		10,251		10,262
ACCRUAL OPERATING RECEIPTS				
Milk	$2,616	$13.81	$3,815	$20.59
Dairy cattle	281	1.48	224	1.21
Dairy calves	72	0.38	35	0.19
Other livestock	31	0.16	30	0.16
Crops	84	0.44	85	0.46
Miscellaneous receipts	280	1.48	192	1.04
Total Receipts	$3,363	$17.75	$4,382	$23.65
ACCRUAL OPERATING EXPENSES				
Hired labor	$ 168	$ 0.89	$ 202	$ 1.09
Dairy grain & concentrate	796	4.20	904	4.88
Dairy roughage	76	0.40	75	0.40
Nondairy feed	1	0.00	0	0.00
Professional nutritional services	0	0.00	2	0.01
Machine hire/rent/lease	50	0.27	63	0.34
Mach. repair & vehicle exp.	221	1.16	283	1.53
Fuel, oil & grease	137	0.72	152	0.82
Replacement livestock	25	0.13	21	0.11
Breeding	57	0.30	60	0.32
Veterinary & medicine	98	0.52	99	0.53
Milk marketing	207	1.09	201	1.08
Bedding	35	0.19	32	0.17
Milking supplies	91	0.48	97	0.52
Cattle lease	0	0.00	0	0.00
Custom boarding	11	0.06	5	0.03
bST expense	11	0.06	12	0.06
Livestock professional fees	21	0.11	20	0.11
Other livestock expense	31	0.17	52	0.28
Fertilizer & lime	70	0.37	91	0.49
Seeds & plants	33	0.17	40	0.22
Spray/other crop expense	31	0.16	32	0.17
Crop professional fees	1	0.00	1	0.00
Land, building, fence repair	65	0.34	48	0.26
Taxes	103	0.54	107	0.58
Real estate rent/lease	35	0.18	40	0.22
Insurance	68	0.36	66	0.36
Utilities	138	0.73	149	0.80
Interest paid	142	0.75	148	0.80
Other professional fees	15	0.08	16	0.09
Miscellaneous	26	0.14	32	0.17
Total Operating Expenses	$2,762	$14.58	$3,050	$16.46
Expansion Livestock	49	0.26	0	0.00
Extraordinary Expense	12	0.06	5	0.03
Machinery Depreciation	174	0.92	205	1.11
Real Estate Depreciation	83	0.44	81	0.43
Total Expenses	$3,080	$16.26	$3,341	$18.03
Net Farm Income Without Appreciation	$ 284	$ 1.50	$1,041	$ 5.62

RECEIPTS AND EXPENSES PER COW AND PER CWT.

Same 11 Top 25% Small Herd Dairy Farms, 2006 & 2007

	2006		2007	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	58		61	
Cwt. Of Milk Sold		10,970		11,213
ACCRUAL OPERATING RECEIPTS				
Milk	$2,622	$13.93	$3,807	$20.80
Dairy cattle	351	1.86	291	1.59
Dairy calves	53	0.28	27	0.15
Other livestock	1	0.01	8	0.04
Crops	70	0.37	107	0.58
Miscellaneous receipts	235	1.25	172	0.94
Total Receipts	$3,331	$17.69	$4,412	$24.11
ACCRUAL OPERATING EXPENSES				
Hired labor	$ 177	$ 0.94	$ 169	$ 0.92
Dairy grain & concentrate	774	4.11	802	4.38
Dairy roughage	69	0.37	66	0.36
Nondairy feed	2	0.01	0	0.00
Professional nutritional services	0	0.00	0	0.00
Machine hire/rent/lease	40	0.21	81	0.44
Mach. repair & vehicle exp.	209	1.11	248	1.36
Fuel, oil & grease	122	0.65	140	0.76
Replacement livestock	21	0.11	12	0.07
Breeding	49	0.26	48	0.26
Veterinary & medicine	85	0.45	83	0.45
Milk marketing	164	0.87	150	0.82
Bedding	20	0.11	19	0.10
Milking supplies	73	0.39	80	0.43
Cattle lease	0	0.00	0	0.00
Custom boarding	17	0.09	6	0.03
bST expense	0	0.00	0	0.00
Livestock professional fees	24	0.13	25	0.13
Other livestock expense	17	0.09	27	0.15
Fertilizer & lime	86	0.46	117	0.64
Seeds & plants	22	0.12	28	0.15
Spray/other crop expense	16	0.08	19	0.11
Crop professional fees	1	0.01	2	0.01
Land, building, fence repair	94	0.50	39	0.21
Taxes	84	0.45	86	0.47
Real estate rent/lease	56	0.30	61	0.34
Insurance	60	0.32	58	0.32
Utilities	112	0.60	110	0.60
Interest paid	106	0.56	112	0.61
Other professional fees	13	0.07	9	0.05
Miscellaneous	21	0.11	36	0.20
Total Operating Expenses	$2,535	$13.46	$2,630	$14.37
Expansion Livestock	63	0.34	0	0.00
Extraordinary Expense	0	0.00	5	0.03
Machinery Depreciation	118	0.63	123	0.67
Real Estate Depreciation	71	0.38	69	0.38
Total Expenses	$2,787	$14.81	$2,827	$15.45
Net Farm Income Without Appreciation	$ 544	$ 2.89	$1,584	$ 8.66

Regional Farm Business Chart

The Farm Business Chart is a tool which can be used in analyzing your business. Compare your business by drawing a line through or near the figure in each column which represents your current level of performance. The five figures in each column represent the average of each 20 percent or quintile of farms included in the regional summary. Use this information to identify business areas where more challenging goals are needed.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS

47 Small Herd Dairy Farms, 2007

Size of Business			Rate of Production			Labor Efficiency	
Worker Equiv-alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
3.28	74	1,472,913	24,179	3.2	24	40	760,529
2.56	65	1,101,873	20,662	2.5	21	29	579,244
2.06	54	984,135	18,293	2.1	18	25	464,467
1.74	46	860,963	15,992	1.7	15	21	372,932
1.34	36	602,511	13,368	1.1	12	18	284,828

Cost Control						Culling Rates	
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	Death Rate	Sell Rate
(10)	(10)	(11)	(11)	(10)	(10)		
$ 543	16%	$ 492	$ 1,359	$ 739	$ 4.33	0.8%	11.5%
748	21	658	1,602	927	5.30	2.6	18.2
864	24	798	1,843	1,065	5.93	3.6	23.1
1,007	26	962	2,220	1,283	6.87	5.1	29.4
1,306	32	1,189	2,521	1,579	8.36	8.9	36.2

Value and Cost of Milk Production			Profitability			
Milk Receipts Per Cow	Operating Cost Production Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income with Appreciation	Net Farm Income w/o Appreciation	Labor & Mgmt. Income Per Operator	Change in Net Worth with Appreciation
(10)	(10)	(10)	(3)	(3)	(3)	(6)
$ 4,808	$ 9.66	$ 17.67	$ 135,048	$ 110,927	$ 64,414	$ 128,535
4,194	11.79	20.19	100,366	72,448	39,502	76,216
3,752	13.09	22.30	66,180	51,517	21,302	50,042
3,326	15.11	24.50	47,845	31,792	236	29,465
2,841	18.36	28.42	18,751	7,744	-30,760	4,707

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

Supplementary Information

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

SOURCE OF DAIRY REPLACEMENTS
39 New York Dairy Farms, 2007

Animals Entering Herd	Average
Number calving in 2007 for first time	127.4
Animals purchased, %*	5.9%
Animals raised by farm, %**	94.1%
Current Heifer Inventory	
Raised on dairy, %	89.7%
Raised by a custom grower, %	10.3%

* Animals purchased are animals purchased from a different farm and were not the farms genetics.
**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, 127.4 animals calved for the first time in 2007. The breakdown on these animals for source was 5.9 percent purchased and 94.1 percent raised by the farm. Of the current heifer inventory, 89.7 percent were raised on the dairy and 10.3 percent were being raised by a custom grower. There is increased interest in evaluating the dairy replacement enterprise.

Milk Income and Marketing Expense Breakdown

Starting January 1st, 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, 21 small herd dairy farms filled out a detailed form 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 hundredweight 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. Expenses associated with utilizing forward contracting or hedging programs to market milk, such as commission or broker fees, are included in market fees and cooperative dues. 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. Your net farm price can be found on page 12 of your farm's DFBS report.

The table on page 28 reports the averages for these different areas. The table on page 29 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 quartile. Numbers for the different areas will not add to the totals for that quartile 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
21 Small Herd Dairy Farms, 2007

	Pounds	Percent	Price/Pound	Total	$/Cwt of Milk
BASE FARM PRICE					
Butterfat	36,699.57	3.82%	$ 1.47	$ 53,990.00	$ 5.61
Protein	30,008.81	3.12%	$ 3.48	$ 104,480.00	$ 10.86
Solids	52,848.05	5.49%	$ 0.44	$ 23,378.00	$ 2.43
Total Component Contribution					$18.90
PPD	961,979.70			$ 10,138.71	$ 1.05
Base Farm Price					$ 19.95
Premiums					
Quality				$ 1,376.19	$ 0.14
Volume				$ 311.05	$ 0.03
Market Premiums				$ 3,577.48	$ 0.37
Total Premiums					$ 0.54
BASE FARM PRICE + PREMIUM					$ 20.49
Deductions					
Promo				$ 1,863.05	$ 0.19
Hauling + Stop Charges.				$ 6,262.86	$ 0.65
Market Fees & Coop Dues				$ 1,183.00	$ 0.12
Total Deductions					$ 0.96
BASE FARM PRICE + PREMIUMS - DEDUCTIONS					$ 19.55
Marketing Programs					
Futures Contracts, Forward Contracting, Etc.				$ 70.19	$ 0.01
Total Marketing Income					$ 0.01
Patronage Dividends				$ 898.05	$ 0.09
NET PRICE RECEIVED ON FARM, ALL SOURCES					**$ 19.65**
PPD - Hauling, per cwt.					$ 0.40
PPD - Hauling + Market Premiums, per cwt.					$ 0.77
Net Marketing Value, per cwt. (PPD + Total Preimums – Total Deductions)					$ 0.63

*Each calculation of an average is independent of the others. Therefore, math operations on the detail will not result in the totals. However, detail in the "$/Cwt of Milk" column will result in the totals. The average herd size of these 21 farms is 56 cows.

MILK PRICE INFORMATION BY QUARTILE*
(Each Category Sorted Independently)
21 Small Herd Dairy Farms, 2007

	Lowest Quartile	←	→	Highest Quartile
Butterfat, %	3.60	3.75	3.85	4.20
Protein, %	2.92	3.08	3.18	3.39
Other Solids, %	4.94	5.69	5.73	5.85
Butterfat, $ per Cwt.	5.30	5.46	5.69	6.21
Protein, $ per Cwt.	10.10	10.66	11.17	12.08
Other solids, $ per Cwt.	2.34	2.40	2.45	2.55
Total Component Value per Cwt.	**$ 17.83**	**$ 18.68**	**$ 19.17**	**$ 20.71**
PPD, $ per Cwt.	0.74	0.94	1.12	1.50
Base Farm Price per Cwt.	**$ 18.95**	**$ 19.61**	**$ 20.16**	**$ 21.88**
Quality, $ per Cwt.	0.02	0.10	0.17	0.37
Volume, $ per Cwt.	0.00	0.00	0.03	0.11
Market premium, $ per Cwt.	0.04	0.24	0.40	0.83
Total Premium, $ per Cwt.	**0.25**	**0.40**	**0.57**	**1.03**
Base Farm Price + Premiums per Cwt.	**$ 19.60**	**$ 20.19**	**$ 20.53**	**$ 22.46**
Promotion, $ per Cwt.	0.15	0.15	0.18	0.30
Hauling, $ per Cwt.	0.28	0.58	0.79	1.15
Market fees & coop dues per Cwt.	0.01	0.10	0.19	0.22
Total Marketing Expenses per Cwt.	**$ 0.59**	**$ 0.88**	**$ 1.11**	**$ 1.50**
Base + Premiums – Deductions per Cwt.	**$ 18.51**	**$ 19.15**	**$ 19.67**	**$ 21.46**
Futures contract, forward contracting, $ per Cwt.	0.00	0.00	0.00	0.02
Total Marketing Income, $ per Cwt.	**$ 0.00**	**$ 0.00**	**$ 0.00**	**$ 0.02**
Patronage Dividends, $ per Cwt.	**$ 0.00**	**$ 0.00**	**$ 0.00**	**$ 0.31**
Net Price Received From All Sources, $ per Cwt.	**$ 18.52**	**$ 19.20**	**$ 19.85**	**$ 21.54**
PPD - hauling, $ per Cwt.	**0.11**	**0.29**	**0.41**	**0.76**
PPD - hauling + mkt premiums, $ per Cwt.	**0.30**	**0.59**	**0.83**	**1.33**
Net Marketing Value, $ per Cwt. (PPD + Total Premiums – Total Deductions)	**0.16**	**0.38**	**0.75**	**1.22**

*Each calculation of an average is independent of all others. Therefore, math operations on the detail will not result in the totals.

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

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

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS

240 New York Dairy Farms, 2006

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
28.1	1,334	32,838,030	26,422	5.7	26	63	1,408,635
16.3	709	16,957,054	24,798	4.1	22	51	1,164,573
11.0	477	10,783,772	23,910	3.7	20	47	1,039,317
7.6	331	7,448,566	23,018	3.4	19	42	954,496
5.2	214	4,585,983	22,109	3.1	18	39	826,233
4.0	146	2,847,092	20,965	2.7	17	36	731,278
3.4	110	2,130,985	19,752	2.4	16	33	650,759
2.8	81	1,531,301	18,425	2.2	14	30	585,305
2.1	60	1,068,877	16,623	1.9	12	26	478,008
1.5	40	670,582	12,981	1.3	9	20	321,457

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)
$405	17%	$340	$951	$570	$3.30
622	23	464	1,148	800	4.11
706	26	530	1,255	884	4.48
782	27	573	1,336	988	4.76
842	29	621	1,396	1,061	4.99
892	30	658	1,462	1,125	5.17
945	31	702	1,544	1,174	5.36
1,006	33	760	1,679	1,255	5.70
1,057	36	855	1,849	1,325	6.24
1,221	42	1,139	2,320	1,501	7.37

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

FARM BUSINESS CHART FOR
FARM MANAGEMENT COOPERATORS
240 New York Dairy Farms, 2006

Milk Receipts Per Cow	Milk Receipts Per Cwt.	Oper. Cost Milk Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cow	Total Cost Production Per Cwt.
(12)	(12)	(12)	(12)	(12)	(12)
$3,700	$15.39	$1,328	$8.24	$2,373	$12.93
3,413	14.56	1,738	9.69	2,865	14.08
3,274	14.26	2,026	10.30	3,118	14.66
3,163	14.00	2,231	10.74	3,306	15.28
3,061	13.83	2,369	11.27	3,444	15.83
2,909	13.68	2,564	11.93	3,546	16.43
2,720	13.54	2,707	12.44	3,712	17.35
2,565	13.40	2,901	12.94	3,839	18.55
2,338	13.24	3,131	13.62	4,062	20.16
1,808	12.88	3,465	15.95	4,500	24.96

Profitability

Net Farm Income Without Appreciation			Net Farm Income With Appreciation		Labor & Management Income	
Total	Per Cow	Operations Ratio	Total	Per Cow	Per Farm	Per Operator
(4)	(12)	(4)	(4)	(12)	(4)	(4)
$322,100	$811	0.23	$580,521	$1,156	$152,400	$103,004
140,266	557	0.16	251,067	777	43,564	25,997
85,016	444	0.12	162,504	628	12,316	7,456
51,109	344	0.10	103,202	523	-3,736	-2,485
32,171	214	0.06	69,484	416	-18,707	-13,358
18,126	125	0.03	45,567	309	-37,164	-26,146
4,697	34	0.01	29,036	228	-62,910	-45,584
-16,215	-80	-0.02	15,548	100	-88,972	-65,273
-41,972	-194	-0.06	-5,920	-40	-137,571	-96,575
-183,853	-653	-0.25	-76,486	-442	-368,899	-215,708

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 35-39.

Financial Analysis Chart

The farm financial analysis chart on page 32 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 8, 11, 15, and 22 of this publication. References to DFBS output page numbers for participating dairy farmers are provided in the table headings.

FINANCIAL ANALYSIS CHART

240 New York Dairy Farms, 2006

Liquidity (repayment)							
Planned Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio	Debt Coverage Ratio	Debt Payments as Percent of Milk Sales	Debt Per Cow	Working Capital as % of Total Expenses	Current Ratio
(10)*	(16)	(10)	(10)	(10)	(7)	(7)	(7)
$70	$916	6.08	5.75	2%	$355	44%	21.29
207	677	1.62	1.69	7	1,144	29	4.45
309	570	1.29	1.31	10	1,735	22	2.97
372	518	1.04	1.09	12	2,217	17	2.24
414	451	0.85	0.92	14	2,531	14	1.86
465	371	0.75	0.71	16	2,867	10	1.62
536	290	0.64	0.50	18	3,221	7	1.36
605	186	0.50	0.34	21	3,581	2	1.08
689	90	0.25	0.01	24	4,197	-4	0.80
872	-323	-1.12	-1.67	34	5,299	-18	0.42

Solvency				Operational Ratios		
		Debt/Asset Ratio		Operating	Interest	Depreciation
Leverage Ratio**	Percent Equity	Current & Intermediate	Long Term	Expense Ratio	Expense Ratio	Expense Ratio
(7)	(7)	(7)	(7)	(14)	(14)	(14)
0.03	97%	0.03	0.00	0.65	0.00	0.02
0.16	87	0.11	0.00	0.72	0.02	0.05
0.23	82	0.17	0.02	0.76	0.03	0.05
0.33	76	0.25	0.13	0.79	0.04	0.06
0.45	69	0.29	0.22	0.81	0.04	0.07
0.57	64	0.33	0.31	0.83	0.05	0.08
0.65	61	0.39	0.42	0.85	0.06	0.09
0.85	54	0.48	0.56	0.88	0.07	0.10
1.14	47	0.56	0.68	0.92	0.07	0.12
2.38	34	0.79	0.89	1.09	0.11	0.17

Efficiency (Capital)					Profitability	
Asset Turnover (ratio)	Real Estate Investment Per Cow	Machinery Investment Per Cow	Total Farm Assets Per Cow	Change in Net Worth With Appreciation	Percent Rate of Return with Appreciation on: Equity	Investment***
(14)	(14)	(14)	(14)	(8)	(4)	(4)
0.73	$1,452	$596	$5,471	$370,169	16%	12%
0.60	2,183	872	6,557	125,206	9	8
0.54	2,529	1,087	7,001	70,554	5	5
0.50	2,859	1,305	7,418	35,165	3	4
0.46	3,176	1,508	7,851	14,111	1	3
0.43	3,572	1,681	8,564	3,977	-1	2
0.38	4,041	1,899	9,460	-7,539	-2	0
0.35	4,658	2,211	10,346	-23,182	-5	-2
0.30	5,572	2,670	11,680	-62,442	-10	-4
0.21	8,469	3,845	15,097	-254,438	-27	-11

*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 34 includes the average values for the resulting five groups of dairy farms. The average size of farms in the five groups ranges from 45 cows on the small conventional farms to 737 cows on the largest freestall farms.

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

Farm business charts have been computed for each of the five housing and herd size categories and are on pages 35-39. 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 2006 State Summary*. As herd size increases, the net farm income profitability generally increases (page 48)*. Net farm income without appreciation averaged $5,133 per farm for the less than 50 cow farms and $71,561 per farm for those with more than 600 cows. Return to all capital without appreciation also generally increased as herd size increased.

Assets, liabilities and financial measures are presented on pages 55-58*. All but the smallest herd size category saw an increase in net worth during 2006. The largest herd size category experienced an increase in net worth of more than $55,000. However, percent equity went down as assets increased. The largest herds had the lowest percent equity; while the smaller herds averaged 75 percent.

Crop yields showed little relationship to herd size, but fertilizer and lime expenses, and machinery cost per tillable acre generally increased as herd size increased (pages 59-60)*. The farms with 600 and more cows per farm averaged 34 percent more milk sold per cow than the smallest farms. All of the groups with 200 or more cows averaged above 20,000 pounds of milk sold per cow while the farms smaller than 200 cows averaged 18,788 pounds of milk sold per cow. Farm capital per worker increased, and farm capital per cow decreased as herd size increased. Milk sold per worker increased dramatically as herd size increased, ranging from 394,777 pounds at the lowest herd size category up to 1,139,299 pounds at the largest size category.

*Wayne A. Knoblauch, Linda D. Putnam, and Jason Karszes, Dairy Farm Management Business Summary, New York, 2006, Department of Applied Economics and Management, Cornell University, R.B. 2007-01, October 2007. This publication is available from Linda Putnam, Cornell University, 305 Warren Hall, Ithaca, NY 14853-7801; e-mail ldp2@cornell.edu; phone 607-255-8429, or visit http://aem.cornell.edu/order/index.htm for an order form.

SELECTED BUSINESS FACTORS BY TYPE OF BARN AND HERD SIZE

226 New York Dairy Farms, 2006

Item Farms with:	Conventional <= 60 Cows	Conventional >60 Cows	Freestall <=150 Cows	Freestall 151-300 Cows	Freestall ≥300 Cows
Number of farms	33	31	40	32	90
Cropping Program Analysis					
Total Tillable acres	163	291	268	509	1,412
Tillable acres rented*	72	108	125	227	722
Hay crop acres*	112	177	162	255	671
Corn silage acres*	18	58	70	146	540
Hay crop, tons DM/acre	1.9	2.4	2.6	3.1	3.5
Corn silage, tons/acre	13.0	15.0	15.9	17.7	18.8
Oats, bushels/acre	32	48	67	55	68
Forage DM per cow, tons	6.7	8.2	8.3	8.2	8.0
Tillable acres/cow	3.7	3.3	2.7	2.5	2.0
Fertilizer & lime expense/tillable acre	$18.16	$26.07	$31.06	$35.50	$36.49
Total machinery costs	$30,680	$65,384	$72,772	$139,662	$445,945
Machinery cost/tillable acre	$185	$225	$252	$270	$310
Dairy Analysis					
Number of cows	45	88	103	212	737
Number of heifers	36	73	85	169	594
Milk sold, lbs.	812,007	1,623,888	1,952,823	4,634,237	17,592,917
Milk sold/cow, lbs.	17,985	18,441	19,006	21,889	23,880
Operating cost of producing milk/cwt.	$10.89	$11.43	$12.12	$11.15	$12.21
Total cost of producing milk/cwt.	$19.50	$18.55	$18.29	$15.05	$14.98
Price/cwt. milk sold	$13.70	$13.75	$13.99	$13.72	$13.86
Purchased dairy feed/cow	$827	$742	$917	$916	$1,024
Purchased dairy feed/cwt. milk	$4.60	$4.02	$4.82	$4.18	$4.29
Purchased grain & concentrate as % of milk receipts	31%	29%	32%	28%	29%
Purchased feed & crop expense/cwt milk	$5.28	$4.95	$5.74	$5.02	$4.99
Capital Efficiency					
Farm capital/worker	$272,686	$293,447	$317,114	$345,627	$338,825
Farm capital/cow	$11,234	$9,964	$9,413	$8,358	$7,414
Farm capital/tillable acre owned	$5,572	$4,797	$6,749	$6,281	$7,921
Real estate/cow	$5,840	$3,942	$4,156	$3,620	$2,792
Machinery investment/cow	$2,152	$2,629	$2,015	$1,494	$1,251
Asset turnover ratio	0.30	0.33	0.36	0.46	0.56
Labor Efficiency					
Worker equivalent	1.86	2.99	3.05	5.12	16.12
Operator/manager equivalent	1.13	1.46	1.51	1.64	1.97
Milk sold/worker, lbs.	435,977	542,653	641,321	905,419	1,091,541
Cows/worker	24	29	34	41	46
Labor cost/cow	$1,041	$895	$804	$700	$746
Labor cost/tillable acre	$288	$271	$308	$291	$389
Profitability & Balance Sheet Analysis					
Net farm income (without appreciation)	$11,533	$12,103	$5,886	$64,354	$71,152
Labor & management income/operator	$-14,350	$-21,733	$-24,984	$-1,615	$-48,899
Rate return on all capital with appreciation	-2.5%	-1.2%	-1.2%	3.9%	4.9%
Farm debt/cow	$2,608	$2,137	$2,554	$2,529	$3,048
Percent equity	76%	79%	73%	69%	59%

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

FARM BUSINESS CHART FOR SMALL CONVENTIONAL STALL DAIRY FARMS

33 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 2006

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
2.96	59	1,192,109	24,092	3.7	20	40	815,100
2.50	55	1,022,366	22,470	3.0	18	36	642,167
2.22	52	982,135	20,497	2.6	16	32	566,243
2.07	50	954,362	19,848	2.3	14	28	525,681
1.92	47	889,922	19,286	2.1	13	25	451,840
1.82	45	827,669	17,946	2.0	12	25	423,297
1.58	44	797,005	17,083	1.9	12	23	389,718
1.49	41	747,286	15,205	1.8	11	22	365,412
1.41	36	569,820	14,110	1.5	9	19	321,522
1.17	30	382,780	12,138	0.9	7	16	236,755

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)
$337	16%	$312	$1,070	$465	$3.18
580	24	464	1,303	711	4.12
661	27	525	1,440	820	4.72
701	30	600	1,559	892	4.90
752	31	649	1,725	930	5.10
790	33	712	1,840	1,002	5.18
848	34	737	1,959	1,039	5.60
915	35	815	2,078	1,089	6.20
1,016	39	983	2,416	1,298	7.05
1,155	47	1,191	2,669	1,435	8.30

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
			Total	Per Cow		
(12)	(12)	(12)	(4)	(12)	(4)	(8)
$3,229	$7.01	$13.74	$55,764	$1,111	$35,285	$60,691
3,106	8.72	17.03	36,861	829	7,558	19,430
2,907	9.52	17.99	28,102	687	3,047	14,650
2,724	10.03	18.73	24,784	504	-2,217	11,494
2,604	10.29	19.13	18,710	399	-4,368	7,836
2,454	10.55	19.66	15,313	353	-10,192	3,294
2,361	11.14	21.25	9,672	257	-16,497	529
2,151	12.47	23.35	5,947	161	-30,598	-3,217
1,880	13.21	24.43	-663	-23	-50,984	-6,700
1,664	19.26	27.59	-52,039	-1,077	-64,639	-44,982

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

FARM BUSINESS CHART FOR LARGE CONVENTIONAL STALL DAIRY FARMS

31 Conventional Stall Dairy Farms with More Than 60 Cows, New York, 2006

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
4.35	135	2,472,209	25,249	3.7	20	54	1,078,074
3.76	120	2,158,230	22,777	3.4	20	43	747,577
3.39	97	1,918,592	20,915	3.2	19	39	696,173
3.22	91	1,818,612	20,105	2.7	17	33	632,396
3.13	86	1,675,584	19,567	2.4	16	30	601,404
3.03	78	1,467,295	18,704	2.3	15	29	583,983
2.96	75	1,397,258	17,486	2.1	15	27	536,303
2.71	73	1,310,830	16,462	2.0	13	24	441,855
2.14	69	1,229,133	15,415	1.8	12	23	360,779
1.69	65	999,329	12,042	1.2	10	18	276,423

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)
$237	11%	$340	$970	$433	$2.68
471	19	468	1,286	611	3.47
589	23	568	1,389	764	4.02
652	26	621	1,427	826	4.25
718	28	657	1,519	880	4.64
761	29	687	1,684	915	5.06
860	31	735	1,812	1,059	5.36
916	34	787	1,942	1,139	5.93
1,051	43	942	2,129	1,229	6.92
1,175	49	1,477	2,487	1,399	8.04

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation Total	Net Farm Income Without Appreciation Per Cow	Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
(12)	(12)	(12)	(4)	(12)	(4)	(8)
$3,448	$8.33	$14.05	$61,538	$732	$27,041	$88,608
3,020	9.27	15.24	45,611	582	10,534	61,926
2,923	9.75	16.25	43,602	492	2,418	31,908
2,756	10.33	17.01	29,765	400	-2,914	19,281
2,627	10.94	17.45	24,864	295	-8,611	12,450
2,559	11.59	18.61	16,987	211	-15,394	5,256
2,527	12.10	20.02	11,918	136	-21,575	-5,117
2,275	13.06	21.39	-8,176	-70	-33,407	-15,148
2,130	14.70	21.97	-24,688	-243	-55,561	-30,903
1,667	16.05	31.41	-57,268	-646	-111,988	-78,830

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

FARM BUSINESS CHART FOR SMALL FREESTALL DAIRY FARMS

40 Freestall Barn Dairy Farms with 150 or Less Cows, New York, 2006

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
4.44	147	3,009,202	23,975	5.4	23	54	1,020,554
4.14	138	2,646,140	22,739	4.2	22	45	802,089
3.91	130	2,446,828	21,775	3.7	20	40	740,894
3.45	119	2,248,574	19,910	3.5	19	36	682,575
3.18	109	2,151,144	18,982	3.0	19	34	642,635
2.79	97	2,000,472	18,384	2.6	18	33	614,097
2.55	88	1,671,262	18,043	2.3	16	32	581,642
2.30	84	1,467,241	17,449	2.1	14	30	541,226
2.21	66	1,146,756	15,389	1.7	11	25	484,770
1.51	50	740,611	12,326	1.3	7	21	363,039

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)
$486	22%	$307	$913	$642	$4.14
639	26	382	1,131	840	4.62
716	28	489	1,217	898	4.91
747	30	545	1,290	976	5.24
797	31	601	1,353	1,035	5.64
853	32	638	1,455	1,077	5.96
921	35	717	1,614	1,198	6.20
949	36	865	1,792	1,295	6.65
1,052	38	1,012	1,972	1,371	6.97
1,257	42	1,326	2,540	1,612	7.66

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation Total	Net Farm Income Without Appreciation Per Cow	Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
(12)	(12)	(12)	(4)	(12)	(4)	(8)
$3,308	$8.25	$13.95	$84,862	$786	$20,428	$134,309
3,177	9.72	15.90	54,526	562	7,529	52,952
3,014	10.26	16.71	44,353	411	-2,928	25,788
2,808	10.70	17.26	26,066	255	-9,030	18,006
2,630	11.47	17.87	14,580	155	-19,517	9,120
2,591	12.37	18.63	996	-5	-27,570	3,019
2,492	13.02	19.18	-10,879	-119	-37,765	-6,404
2,377	13.71	20.64	-28,779	-277	-53,931	-18,299
2,200	14.83	21.71	-40,264	-448	-76,273	-33,853
1,775	16.83	25.74	-86,598	-851	-140,434	-66,774

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

FARM BUSINESS CHART FOR MEDIUM FREESTALL DAIRY FARMS

32 Freestall Barn Dairy Farms with 151-300 Cows, New York, 2006

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
6.85	295	6,803,733	26,202	6.2	27	56	1,262,341
6.40	266	6,199,266	24,268	4.2	24	53	1,134,379
6.10	244	5,663,779	23,844	3.7	22	50	1,054,796
5.81	233	5,304,067	22,760	3.5	20	47	984,712
5.32	224	4,893,865	22,360	3.3	18	44	965,082
4.97	210	4,362,160	21,728	3.3	18	41	944,801
4.65	191	3,813,986	21,099	3.2	17	38	854,606
4.41	175	3,700,072	19,976	2.7	15	36	799,302
3.96	160	3,485,104	19,600	2.3	13	34	710,021
3.62	155	3,033,097	17,792	1.2	9	30	609,123

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)
$494	17%	$366	$958	$711	$3.38
609	22	518	1,146	824	4.21
684	25	583	1,226	888	4.46
834	27	615	1,290	1,038	4.93
867	30	648	1,331	1,117	5.07
894	31	722	1,422	1,174	5.16
1,007	31	760	1,526	1,228	5.31
1,035	33	800	1,606	1,282	5.44
1,069	34	833	1,689	1,306	5.74
1,220	40	1,012	1,850	1,492	6.88

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation Total	Net Farm Income Without Appreciation Per Cow	Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
(12)	(12)	(12)	(4)	(12)	(4)	(8)
$3,491	$8.13	$12.15	$180,461	$866	$97,756	$231,312
3,331	9.68	13.28	148,574	624	70,187	151,076
3,243	10.10	14.09	128,360	547	46,110	83,350
3,140	10.44	14.99	112,749	524	21,853	57,576
3,086	10.69	15.46	91,102	427	6,880	49,736
3,011	11.28	15.78	65,600	334	-6,094	33,845
2,888	12.23	16.11	48,907	262	-18,454	14,890
2,808	12.65	16.50	7,306	45	-30,134	-10,534
2,674	13.54	17.13	-22,496	-116	-64,698	-20,075
2,480	14.54	18.65	-49,965	-260	-105,913	-106,776

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

FARM BUSINESS CHART FOR LARGE FREESTALL DAIRY FARMS

90 Freestall Barn Dairy Farms with 300 or More Cows, New York, 2006

Size of Business			Rates of Production			Labor Efficiency	
Worker Equiv-Alent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
36.03	1,810	45,183,773	27,268	6.5	25	72	1,600,266
25.13	1,107	27,312,355	25,866	4.9	23	55	1,299,401
20.33	945	21,841,861	25,141	4.2	21	52	1,228,778
17.33	739	18,196,941	24,602	3.8	20	49	1,158,575
14.55	643	15,574,548	24,086	3.5	20	47	1,098,777
12.45	562	12,842,749	23,589	3.2	18	44	1,031,749
11.07	468	10,755,092	23,022	3.0	18	41	981,735
9.59	418	9,257,135	22,195	2.7	16	39	934,132
8.28	358	8,048,583	21,380	2.3	15	35	818,668
6.41	316	6,916,134	18,120	1.8	12	31	699,839

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)
$643	22%	$391	$981	$846	$3.92
788	24	492	1,119	1,008	4.38
840	26	532	1,226	1,065	4.58
875	27	562	1,309	1,121	4.76
924	28	613	1,368	1,152	4.91
962	29	645	1,398	1,178	5.09
994	30	670	1,456	1,225	5.22
1,026	32	708	1,505	1,282	5.37
1,079	33	762	1,569	1,347	5.70
1,245	35	868	1,726	1,518	6.09

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Operating Cost Producing Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation Total	Net Farm Income Without Appreciation Per Cow	Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
(12)	(12)	(12)	(4)	(12)	(4)	(8)
$3,879	$9.94	$13.10	$505,232	$621	$156,812	$582,002
3,617	10.68	13.80	234,784	455	51,000	231,461
3,486	11.05	14.16	165,121	348	18,977	148,971
3,392	11.48	14.44	135,942	199	-535	112,773
3,310	11.92	14.90	87,077	125	-34,348	65,450
3,242	12.35	15.17	43,559	67	-58,502	2,109
3,157	12.65	15.40	4,213	11	-75,082	-29,412
3,093	12.94	15.87	-32,305	-59	-109,530	-80,368
2,970	13.48	16.31	-78,751	-140	-165,483	-166,542
2,604	14.62	18.09	-353,349	-383	-308,007	-426,908

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

IDENTIFY AND SET GOALS

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

1. Goals should be **S**pecific.

2. Goals should be **M**easurable.

3. Goals should be **A**chievable but challenging.

4. Goals should be **R**ewarding.

5. Goals should be **T**imed 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 26 and 30-32 can be used to help identify strengths and weaknesses of your farm business. Identify three major strengths and three areas of your farm business that need improvement.

Strengths:	Needs improvement:

GLOSSARY AND LOCATION OF COMMON TERMS

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

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

Accrual Expenses - (defined on page 5)

Accrual Receipts - (defined on page 6)

Annual Cash Flow Statement - (defined on page 13)

Appreciation - (defined on page 7)

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

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

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

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

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

Cash Flow Coverage Ratio - (defined on page 15)

Cash Paid - (defined on page 4)

Cash Receipts - (defined on page 6)

Change in Accounts Payable - (defined on page 5)

Change in Accounts Receivable - (defined on page 6)

Change in Inventory - (defined on page 4)

Culling Rate – Culling rate is calculated by dividing the number of animals that left the herd for culling purposes and that died, by the average number of milking and dry cows for the year.

Current Portion - (defined on page 9)

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.

Death Rate – The number of animals that died divided by the average number of milking and dry cows for the year.

Debt Coverage Ratio – (defined on page 15)

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

Debt to Asset Ratios - (defined on page 11)

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-cancellable 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 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.

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

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 8)

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 11)

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

Net Farm Income - (defined on page 7)

Net Farm Income from Operations Ratio - (defined on page 9)

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

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

Operating Costs of Producing Milk - (defined on page 21)

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

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

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

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

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

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

Purchased Inputs Cost of Producing Milk - (defined on page 21)

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

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

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

Return on Equity Capital - (defined on page 9)

Return on Total Capital - (defined on page 9)

Sell Rate – The number of animals that were sold for culling purposes divided by the average number of milking and dry cows for the year.

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 21)

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

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

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OTHER A.E.M. EXTENSION BULLETINS

EB No	Title	Fee (if applicable)	Author(s)
2008-11	Cognitive Therapy for Suicidal Patients (3 Video Tapes) **Outside NYS cost is $25.00**		Mastronardi, K.
2008-10	Dairy Farm Business Summary, Northern Hudson Region, 2007	($12.00)	Conneman, G., Putnam, L., Wickswat, C., Buxton, S., Smith, R. and J. Karszes
2008-09	New York FarmNet Stress on the Farm Video (26min)	($20.00)	Mastronardi, K.
2008-08	An Inventory of Educational Resources for Directors of US Agricultural Cooperatives		Henehan, B. and T. Schmit
2008-07	Dairy Farm Business Summary, Western and Central Plain Region, 2007	($12.00)	Knoblauch, W., Putnam, L., Karszes, J., Hanchar, J. and K. Getty
2008-06	Dairy Farm Business Summary, New York Large Herd Farms, 300 Cows or Larger, 2007	($16.00)	Karszes, J., Knoblauch, W. and L. Putnam
2008-05	Cost of Establishment and Production of Vinifera Grapes in the Finger Lakes Region of New York - 2007		White, G.
2008-04	Economic Analysis of Anaerobic Digestion Systems and the Financial Incentives provided by the New York State Renewable Portfolio Standard (RPS) Customer-Sited Tier (CST) Anaerobic Digester Gas		Enahoro, D. and B. Gloy
2008-03	Inputs for Biogas Economic Assessment		Gloy, B.
2008-02	Creating Renewable Energy From Livestock Waste: Overcoming Barriers to Adoption		Gloy, B.
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