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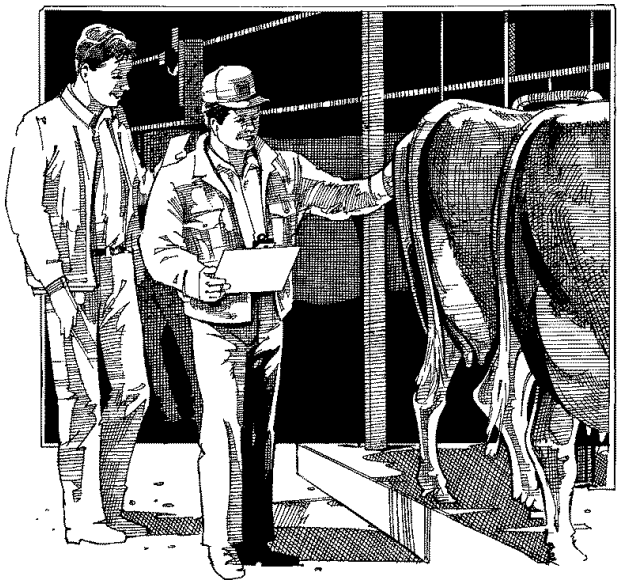
DAIRY FARM BUSINESS SUMMARY

AUGUST 2004 *E.B. 2004-11*

WESTERN AND CENTRAL PLAIN REGION 2003



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WESTERN AND CENTRAL PLAIN REGION
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2003 DAIRY FARM BUSINESS SUMMARY
WESTERN AND CENTRAL PLAIN REGION*

INTRODUCTION

Dairy farm managers throughout New York State have been participating in Cornell Cooperative Extension's farm business summary and analysis program since the early 1950's. Managers of each participating farm business receive a comprehensive summary and analysis of their farm business. The information in this report represents averages of the data submitted from dairy farms in the Western and Central Plain Region for 2003.

Program Objective

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

Format Features

This regional report follows the same general format as the 2003 DFBS individual farm report received by participating dairy farmers. The analysis tables have an open column or section labeled My Farm. It may be used by any dairy farm manager who wants to compare his or her business with the average data of this region. The individual farm data, the regional averages and other data can then be used to establish goals for the business. A DFBS Data Check-in Form can be used by non-DFBS participants to summarize their businesses.

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 Western and Central Plain Region of New York State, with the number of participating farms in parentheses, is comprised of Cayuga (6), Erie (6), Genesee (5), Livingston (2), Niagara (1), Ontario (1), Orleans (2), Wayne (2), Wyoming (28), and Yates (3) Counties. This report was written by Wayne A. Knoblauch, Professor, Farm Management. Linda Putnam was in charge of data preparation. Farm business data were collected by Cooperative Extension Educators Judith Barry; Regional Specialists John Hanchar and Jason Murphy; and Senior Extension Associate in PRO-DAIRY, Jason Karszes.

SUMMARY AND ANALYSIS OF THE FARM BUSINESS

Business Characteristics

Planning optimal management strategies is a crucial component of operating a successful farm. Various combinations of farm resources, enterprises, business arrangements, and management techniques are used by the dairy farmers in this region. The following table shows important farm business characteristics and the number of farms with each characteristic.

BUSINESS CHARACTERISTICS
56 Western and Central Plain Region Dairy Farms, 2003

Type of Farm	Number
Dairy	56
Part-time dairy	0
Dairy cash-crop	0
Certified organic milk producer	0
Rotational grazing farm	3

Type of Ownership	Number
Owner	53
Renter	3

Type of Business	Number
Sole Proprietorship	22
Partnership	14
Limited Liability Corporation	11
Subchapter S Corporation	9
Subchapter C Corporation	0

Type of Barn	Number
Stanchion or Tie-Stall	3
Freestall	51
Combination	2

Milking Frequency	Number
2 times per day	24
3 times per day	28
Other	4

Breed of Herd	Percent
Holstein	95
Jersey	3
Other	2

Milking System	Number
Bucket & carry	0
Dumping station	0
Pipeline	6
Herringbone conventional exit	19
Herringbone rapid exit	9
Parallel	16
Parabone	4
Rotary	0
Other	2

Production Records	Number
Testing Service	47
On Farm System	8
Other	1
None	0

bST Usage	Number
Used consistently	33
Used inconsistently	9
Started using in 2003	1
Stopped using in 2003	1
Not used in 2003	12
Average percent usage, if used	59%

Business Record System	Number
Account Book	4
Accounting Service	3
On-farm computer	48
Other	1

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

Income Statement

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

Cash paid is the actual cash outlay during the year and does not necessarily represent the cost of goods and services actually used in 2003.

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

CASH AND ACCRUAL FARM EXPENSES

56 Western and Central Plain Region Dairy Farms, 2003

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
Hired Labor	$346,963		$ 709	<<	$ 565		$ 346,819
Feed							
Dairy grain & concentrate	463,889		-7,907		28,180		499,976
Dairy roughage	60,340		1,196		-348		58,796
Nondairy	21		2		0		19
Professional nutritional services	3,644		0		3		3,647
Machinery							
Machinery hire, rent & lease	30,395		0	<<	1,428		31,823
Machinery repairs & farm vehicle exp.	67,922		-1,397		3,396		72,715
Fuel, oil & grease	36,474		216		846		37,104
Livestock							
Replacement livestock	20,795		0	<<	-40		20,755
Breeding	21,057		-511		140		21,708
Veterinary & medicine	74,241		59		286		74,468
Milk marketing	79,351		0	<<	399		79,750
Bedding	34,247		-413		857		35,517
Milking supplies	34,148		-860		775		35,783
Cattle lease & rent	1,592		0	<<	196		1,788
Custom boarding	53,695		12	<<	746		54,429
bST	32,990		65		289		33,214
Livestock professional fees	2,857		60		14		2,811
Other livestock expense	11,654		-239		540		12,433
Crops							
Fertilizer & lime	27,236		-1,954		3,163		32,353
Seeds & plants	20,365		-2,764		1,061		24,190
Spray, other crop expense	17,648		-1,953		36		19,637
Crop professional fees	3,415		76		90		3,429
Real Estate							
Land, building & fence repair	14,275		-141		107		14,523
Taxes	21,149		-190	<<	-723		20,616
Rent & lease	35,496		-568	<<	672		36,736
Other							
Insurance	18,651		-133	<<	-264		18,520
Utilities (farm share)	40,679		5	<<	46		40,720
Interest paid	72,418		0	<<	-265		72,153
Other professional fees	9,576		17		-13		-,546
Miscellaneous	9,251		15		-234		9,002
Total Operating	$1,666,435		$ -16,601		$ 41,946		$1,724,982
Expansion livestock	41,162		0	<<	-128		41,034
Extraordinary expense	0		0	<<	0		0
Machinery depreciation							81,097
Building depreciation							62,422
TOTAL ACCRUAL EXPENSES							$1,909,535

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

Change in accounts payable: An increase in accounts payable from beginning to end of year is added when calculating accrual expenses because these expenses were incurred (resources used) in 2003 but not paid for. A decrease is subtracted because it represents payment for resources used before 2003.

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
56 Western and Central Plain Region Dairy Farms, 2003

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	$1,668,612				$ 15,162		$ 1,683,774
Dairy cattle	79,653		$ 51,573		154		131,380
Dairy calves	20,541		10,129		-116		30,554
Other livestock	2,574		-806		0		1,768
Crops	9,091		28,213		20		37,324
Government receipts	34,960		250 *		-2,863		32,347
Custom machine work	6,034				265		6,299
Gas tax refund	480				0		480
Other	17,599				-78		17,521
Less nonfarm noncash capital**		(-)	0 **			(-)	0
Total Receipts	$ 1,839,544		$ 89,359		$ 12,544		$ 1,941,447

*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 2003 for the 2004 crop year in excess of funds earned for 2003. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2003 but received in 2002.

Changes in accounts receivable are calculated by subtracting beginning year balances from end year balances. Payments in January 2004 for milk produced in December 2003 compared to January 2003 payments for milk produced in 2002 are included as a change in accounts receivable in determining accrual milk sales.

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

Profitability Analysis

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

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

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

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

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

NET FARM INCOME

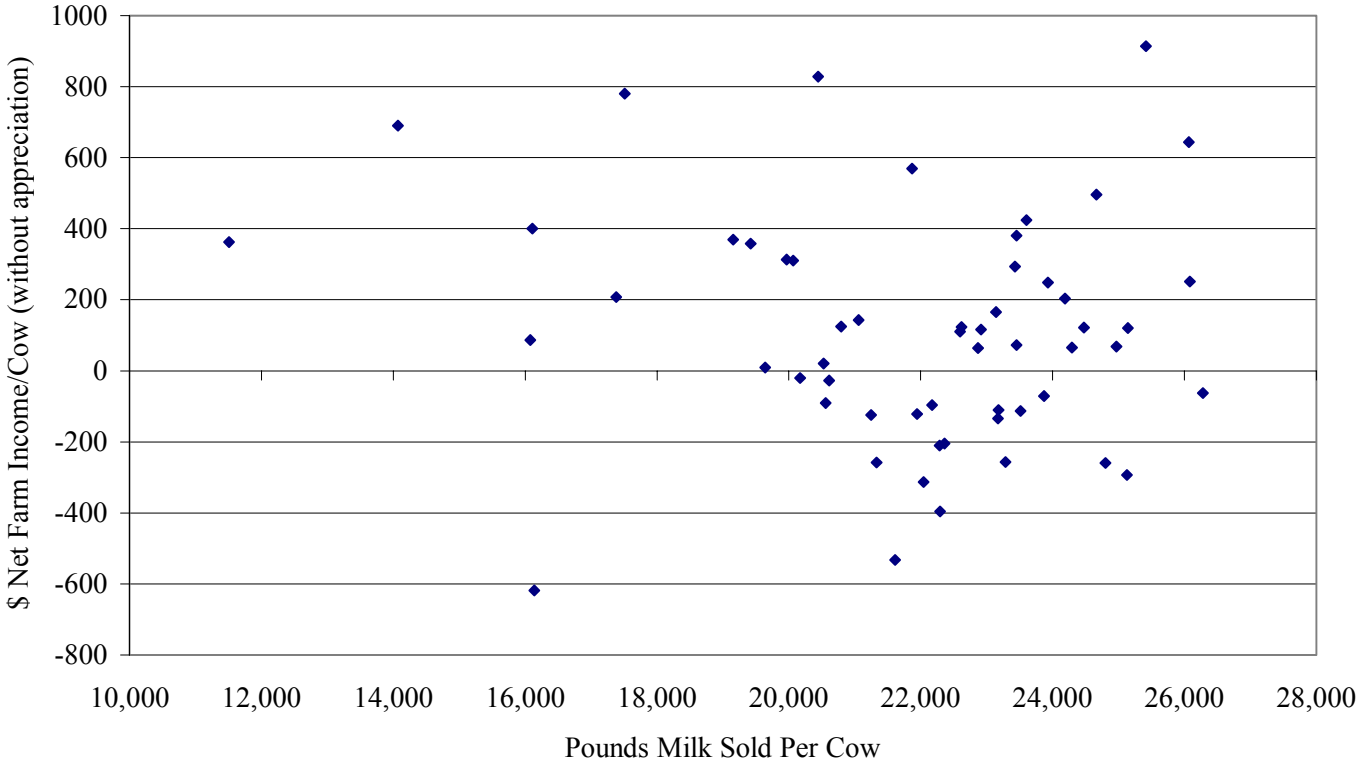
56 Western and Central Plain Region Dairy Farms, 2003

Item	Average Total	Average Per Cow	My Farm Total	My Farm Per Cow
Total accrual receipts	$ 1,941,447		$ _____	
Appreciation: Livestock	4,623		_____	
Machinery	19,077		_____	
Real Estate	54,299		_____	
Other Stock & Certificates	9,228		_____	
Total Including Appreciation	$ 2,028,674		$ _____	
Total accrual expenses	- 1,909,535		- _____	
Net Farm Income (with appreciation)	$ 119,139	$ 214	$ _____	$ _____
Net Farm Income (without appreciation)	$ 31,912	$ 57	$ _____	$ _____

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

56 Western and Central Plain Region Dairy Farms, 2003



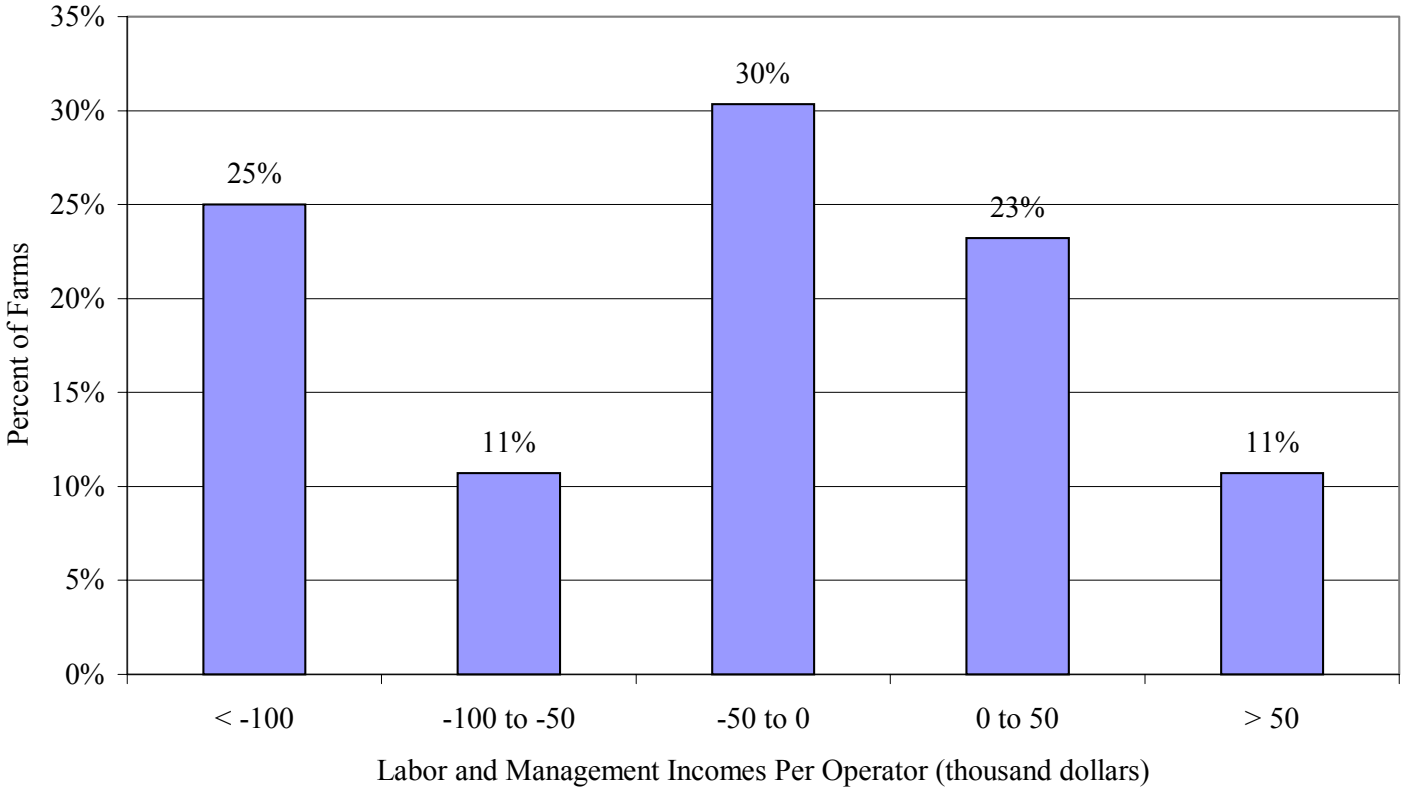
Labor and management income is the return which farm operators receive for their labor and management used in the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and 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
56 Western and Central Plain Region Dairy Farms, 2003

Item	Average	My Farm
Net farm income without appreciation	$ 31,912	$ _____
Family labor unpaid @ $2,200 per month	- 5,355	-_____
Interest on $1,643,337 average equity capital @ 5% real rate	- 82,167	-_____
Labor & Management Income per farm (1.98 Operators/farm)	$ -55,610	$ _____
Labor & Management Income per Operator/Manager	$ -28,086	$ _____

Labor and management income per operator averaged $-28,086 on these 56 farms in 2003. The range in labor and management income per operator was from about $-360,000 to more than $260,000. Returns to labor and management were negative on 66 percent of the farms. Labor and management incomes per operator were between $0 and $50,000 on 23 percent of the farms while 11 percent showed labor and management incomes of $50,000 or more per operator.

DISTRIBUTION OF LABOR AND MANAGEMENT INCOMES PER OPERATOR
56 Western and Central Plain Region Dairy Farms, 2003



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

RETURN ON EQUITY CAPITAL AND RETURN ON TOTAL CAPITAL
56 Western and Central Plain Region Dairy Farms, 2003

Item	Average	My Farm
Net farm income with appreciation	$ 119,139	$_____
Family labor unpaid @$2,200 per month	- 5,355	- _____
Value of operators' labor & management	- 77,779	- _____
Return on equity capital with appreciation	$ 36,005	$_____
Interest paid	+ 72,152	+ _____
Return on total capital with appreciation	$ 108,157	$_____
Return on equity capital without appreciation	$ -51,222	$_____
Return on total capital without appreciation	$ 20,930	$_____
Rate of return on average equity capital:		
with appreciation	2.2%	_____ %
without appreciation	-3.1%	_____ %
Rate of return on average total capital:		
with appreciation	3.2%	_____ %
without appreciation	0.6%	_____ %
Net Farm Income from Operations Ratio	0.02	_____

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 2003, lease payments were discounted by 5.5 percent to obtain their present value.

Advanced government receipts are included as current liabilities. Government payments received in 2003 that are for participation in the 2004 program are the end year balance and payments received in 2002 for participation in the 2003 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.

2003 FARM BUSINESS & NONFARM MARKET VALUE BALANCE SHEET

56 Western and Central Plain Region Dairy Farms, 2003

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 17,187	$ 19,486	Accounts payable	$ 73,686	$ 115,505
Accounts receivable	103,246	115,789	Operating debt	152,122	132,212
Prepaid expenses	4,415	4,401	Short Term	4,573	10,959
Feed & supplies	294,403	306,028	Advanced govt. receipts	250	0
			Current Portion:		
			Intermediate	141,330	136,254
			Long Term	50,968	47,569
Total Current	$ 419,251	$ 445,704	Total Current	$ 422,929	$ 442,499
Intermediate			Intermediate		
Dairy cows:			Structured debt		
owned	$ 584,121	$ 633,084	1-10 years	$584,516	$ 680,166
leased	1,406	741	Financial lease		
Heifers	324,714	341,997	(cattle/machinery)	19,885	8,219
Bulls & other livestock	4,883	4,158	Farm Credit stock	10,817	10,999
Mach. & equip. owned	561,060	576,189	Total Intermediate	$ 615,218	$ 699,384
Mach. & equip. leased	18,479	7,478			
Farm Credit stock	10,817	10,999			
Other stock/certificate	105,083	128,239			
Total Intermediate	$1,610,563	$1,702,885			
			Long Term		
Long Term			Structured debt		
Land & buildings:			>10 years	$ 607,713	$ 631,347
owned	$1,239,404	$1,287,955	Financial lease		
leased	632	149	(structures)	632	149
Total Long Term	$1,240,036	$1,288,104	Total Long Term	$ 608,345	$ 631,496
			Total Farm Liabilities	$1,646,492	$1,773,379
Total Farm Assets	$3,269,850	$3,436,693	FARM NET WORTH	$1,623,358	$1,663,314

Nonfarm Assets, Liabilities & Net Worth (Average of 26 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	$ 2,750	$ 2,037	Nonfarm Liabilities	$ 21,183	$ 18,435
Cash value life insurance	12,997	16,311			
Nonfarm real estate	17,385	17,385			
Auto (personal share)	7,000	6,731			
Stocks & bonds	21,158	20,960			
Household furnishings	7,606	7,856			
All other nonfarm assets	11,713	6,174			
Total Nonfarm Assets	$ 80,609	$ 77,454	NONFARM NET WORTH	$ 59,426	$ 59,019

Farm & Nonfarm Assets, Liabilities, and Net Worth*	Jan. 1	Dec. 31
Total Assets	$3,350,459	$3,514,147
Total Liabilities	1,667,675	1,791,814
TOTAL FARM & NONFARM NET WORTH	$1,682,784	$1,722,333

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

Balance sheet analysis involves examination of relative asset and debt levels for the business. Percent equity is calculated by dividing end of year net worth by end of year assets and multiplying by 100. The debt to asset ratio is compiled by dividing liabilities by assets. Low debt to asset ratios reflect business solvency and the potential capacity to borrow. The leverage ratio is the dollars of debt per dollar of equity, computed by dividing total farm liabilities by farm net worth. Debt levels per productive unit represent old standards that are still useful if used with measures of cash flow and repayment ability. A current ratio of less than 1.5 or that has been falling warrants additional evaluation. The amount of working capital that is adequate must be related to the size of the farm business.

BALANCE SHEET ANALYSIS

56 Western and Central Plain Region Dairy Farms, 2003

Item			Average	My Farm
Financial Ratios - Farm:				
Percent equity			48%	_____ %
Debt/asset ratio: total			.52	_____
long-term			.49	_____
intermediate/current			.53	_____
Leverage Ratio:			1.07	_____
Current Ratio:			1.01	
Working capital	$3,205	As % of total expenses:	.2%	
Farm Debt Analysis:				
Accounts payable as % of total debt			7%	_____ %
Long-term liabilities as a % of total debt			36%	_____ %
Current & inter. liabilities as a % of total debt			64%	_____ %
Cost of term debt (weighted average)			4.5%	_____ %

Farm Debt Levels:	Per Cow	Per Tillable Acre Owned	Per Cow	Per Tillable Acre Owned
Total farm debt	$ 3,190	$ 3,814	$ _____	$ _____
Long-term debt	1,136	1,358	_____	_____
Intermediate & long term	2,394	2,862	_____	_____
Intermediate & current debt	2,054	2,456	_____	_____

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

56 Western and Central Plain Region Dairy Farms, 2003

Item	Average of Region's Farms			
	Real Estate		Machinery & Equipment	
Value beginning of year		$ 1,239,404		$ 561,060
Purchases	$ 76,976*		$ 81,494	
Gift & inheritance	+ 3,125		+ 0	
Lost capital	- 20,278			
Sales	- 3,147		- 4,346	
Depreciation	- 62,422		- 81,097	
Net investment		= -5,747		= -3,948
Appreciation		+ 54,299		+ 19,077
Value end of year		$ 1,287,955		$ 576,189

*$21,520 land and $55,456 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)
56 Western and Central Plain Region Dairy Farms, 2003

Item	Average		My Farm	
Beginning of year farm net worth		$1,623,358		$ _____
Net farm income without appreciation	$ 31,912		$ _____	
+Nonfarm cash income	+ 2,201		+ _____	
-Personal withdrawals & family expenditures excluding nonfarm borrowings	- 76,886		- _____	
RETAINED EARNINGS		+ $ -42,773		+$ _____
Nonfarm noncash transfers to farm	$ 3,125		$ _____	
+Cash used in business from nonfarm capital	+ 12,132		+ _____	
-Note or mortgage from farm real estate sold (nonfarm)	- 0		- _____	
CONTRIBUTED/WITHDRAWN CAPITAL		+ $ 15,257		+$ _____
Appreciation	$ 87,227		$ _____	
-Lost capital	- 20,278		- _____	
CHANGE IN VALUATION EQUITY		+ $ 66,949		+$ _____
IMBALANCE/ERROR		- -523		- $ _____
End of year net worth*		=$1,663,314		=$ _____

Change in Net Worth		
Without appreciation	$ -47,271	$ _____
With appreciation	$ 39,956	$ _____

*May not add due to rounding.

Cash Flow Statement

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

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

ANNUAL CASH FLOW STATEMENT
56 Western and Central Plain Region Dairy Farms, 2003

	Item			Average	
	Cash Flow from Operating Activities				
	Cash farm receipts	$ 1,839,544			
-	Cash farm expenses	1,666,435			
-	Extraordinary expense	0			
=	Net cash farm income		$ 173,109		
	Personal withdrawals & family expenses including nonfarm debt payments	$ 76,978			
-	Nonfarm income	2,201			
-	Net cash withdrawals from the farm		$ 74,777		
=	Net Provided by Operating Activities			$	98,332
	Cash Flow From Investing Activities				
	Sale of assets: machinery	$ 4,346			
	+ real estate	3,147			
	+ other stock & cert.	3,981			
=	Total asset sales		$ 11,474		
	Capital purchases: expansion livestock	$ 41,162			
	+ machinery	81,494			
	+ real estate	76,976			
	+ other stock & cert.	17,910			
-	Total invested in farm assets		$ 217,542		
=	Net Provided by Investment Activities			$	-206,068
	Cash Flow From Financing Activities				
	Money borrowed (intermediate & long term)	$ 259,317			
+	Money borrowed (short term)	7,685			
+	Increase in operating debt	0			
+	Cash from nonfarm capital used in business	12,132			
+	Money borrowed - nonfarm	91			
=	Cash inflow from financing		$ 279,225		
	Principal payments (intermediate & long term)	$ 148,509			
+	Principal payments (short term)	1,299			
+	Decrease in operating debt	19,910			
-	Cash outflow for financing		$ 169,718		
=	Net Provided by Financing Activities			$	109,507
	Cash Flow From Reserves				
	Beginning farm cash, checking & savings		$ 17,187		
-	Ending farm cash, checking & savings		19,486		
=	Net Provided from Reserves			$	-2,299
	Imbalance (error)			$	-528

ANNUAL CASH FLOW STATEMENT

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

Repayment Analysis

A valuable use of cash flow analysis is to compare the debt payments planned for the last year with the amount actually paid. The measures listed below provide a number of different perspectives on the repayment performance of the business. However, the critical question to many farmers and lenders is whether planned payments can be made in 2004. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2004 debt payments shown below.

FARM DEBT PAYMENTS PLANNED

Same 52 Western and Central Plain Region Dairy Farms, 2002 & 2003

	Average			My Farm		
	2003 Payments		Planned	2003 Payments		Planned
Debt Payments	Planned	Made	2004	Planned	Made	2004
Long term	$ 81,713	$ 78,971	$ 75,206	$ _____	$ _____	$ _____
Intermediate term	139,707	132,817	173,172	_____	_____	_____
Short term	4,224	1,509	5,947	_____	_____	_____
Operating (net reduction)	23,854	60,236	6,850	_____	_____	_____
Accounts payable (net reduction)	12,455	4,476	1,315	_____	_____	_____
Total	$ 261,953	$ 278,009	$262,490	$ _____	$ _____	$ _____
Per cow	$ 509	$ 540		$ _____	$ _____	
Per cwt. 2003 milk	$ 2.24	$ 2.38		$ _____	$ _____	
Percent of total 2003 farm receipts	15%	16%		_____	_____	
Percent of 2003 milk receipts	17%	18%		_____	_____	

The cash flow coverage ratio and debt coverage ratio measure the ability of the farm business to meet its planned debt payment schedule. The ratios show the percentage of payments planned for 2003 (as of December 31, 2002) that could have been made with the amount available for debt service in 2003. Farmers who did not participate in DFBS in 2002 have their 2003 ratios based on planned debt payments for 2004.

COVERAGE RATIOS

Same 52 Western and Central Plain Region Dairy Farms, 2002 & 2003

Item	Average	Item	Average
Cash Flow Coverage Ratio		Debt Coverage Ratio	
Cash farm receipts	$1,687,531	Net farm income (w/o appreciation)	$29,750
- Cash farm expenses	1,511,978	+ Depreciation	140,633
+ Interest paid (cash)	70,656	+ Interest paid (accrual)	70,397
- Net personal withdrawals from farm*	76,679	- Net personal withdrawals from farm*	76,679
(A) = Amount Available for Debt Service	$169,530	(A') = Repayment Capacity	$164,101
(B) = Debt Payments Planned for 2003 (as of December 31, 2002)	$261,953	(B) = Debt Payments Planned for 2003 (as of December 31, 2002)	$261,953
(A/ B)= Cash Flow Coverage Ratio for 2003	0.65	(A'/B)= Debt Coverage Ratio for 2003	0.63

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

ANNUAL CASH FLOW WORKSHEET

Item	56 Western and Central Plain Region Dairy Farms Per Cow	56 Western and Central Plain Region Dairy Farms Per Cwt.	My Farm Per Cow/ Per Cwt.	Expected Change	2004 Projection
Average number of cows	557		_____	_____	_____
Total cwt. of milk sold		127,512	_____	_____	_____
Accrual Operating Receipts					
Milk	$ 3,023	$ 13.20	$ _____	_____	$ _____
Dairy cattle	236	1.03	_____	_____	_____
Dairy calves	55	.24	_____	_____	_____
Other livestock	3	.01	_____	_____	_____
Crops	67	.29	_____	_____	_____
Miscellaneous Receipts	102	.44	_____	_____	_____
Total	$ 3,486	$ 15.21	$ _____	_____	$ _____
Accrual Operating Expenses					
Hired labor	$ 623	$ 2.72	$ _____	_____	$ _____
Dairy grain & concentrate	898	3.92	_____	_____	_____
Dairy roughage	106	.46	_____	_____	_____
Nondairy feed	0	.00	_____	_____	_____
Professional nutritional services	7	.03	_____	_____	_____
Machinery hire, rent & lease	57	.25	_____	_____	_____
Machinery repair & vehicle expense	131	.57	_____	_____	_____
Fuel, oil & grease	67	.29	_____	_____	_____
Replacement livestock	37	.16	_____	_____	_____
Breeding	39	.17	_____	_____	_____
Veterinary & medicine	134	.58	_____	_____	_____
Milk marketing	143	.63	_____	_____	_____
Bedding	64	.28	_____	_____	_____
Milking supplies	64	.28	_____	_____	_____
Cattle lease	3	.01	_____	_____	_____
Custom boarding	98	.43	_____	_____	_____
bST	60	.26	_____	_____	_____
Livestock professional fees	5	.02	_____	_____	_____
Other livestock expense	22	.10	_____	_____	_____
Fertilizer & lime	58	.25	_____	_____	_____
Seeds & plants	43	.19	_____	_____	_____
Spray & other crop expense	35	.15	_____	_____	_____
Crop professional fees	6	.03	_____	_____	_____
Land, building & fence repair	26	.11	_____	_____	_____
Taxes	37	.16	_____	_____	_____
Real estate rent & lease	66	.29	_____	_____	_____
Insurance	33	.15	_____	_____	_____
Utilities	73	.32	_____	_____	_____
Miscellaneous	33	.15	_____	_____	_____
Total Less Interest Paid	$ 2,967	$ 12.96	$ _____	_____	$ _____
Net Accrual Operating Income		Total			
(without interest paid)		$ 288,618	$ _____		$ _____
- Change in livestock & crop invent.*		89,359	_____	_____	_____
- Change in accounts receivable		12,544	_____	_____	_____
- Change in feed & supply inventory**		-16,601	_____	_____	_____
+ Change in accounts payable***		42,211	_____	_____	_____
NET CASH FLOW		$ 245,527	$ _____		$ _____
- Net family withdrawals		$ 74,686	_____	_____	_____
Available for Farm		$ 170,841	$ _____		_____
- Farm debt payments		279,758	_____	_____	_____
Available for Farm Investment		$ -108,917	$ _____		$ _____
- Capital purchases		217,542	_____	_____	_____
Additional Capital Needed		$ 326,459	$ _____	_____	$ _____

*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
56 Western and Central Plain Region Dairy Farms, 2003

Item	Average			My Farm		
Land	Owned	Rented	Total	Owned	Rented	Total
Tillable	465	492	957	_____	_____	_____
Nontillable	27	12	39	_____	_____	_____
Other nontillable	107	9	116	_____	_____	_____
Total	599	513	1,112	_____	_____	_____

Crop Yields	Farms	Acres*	Prod/Acre	Acres	Prod/Acre
Hay crop	50	465	3.60 tn DM	_____	_____ tn DM
Corn silage	48	444	17.42 tn	_____	_____ tn
			5.82 tn DM		_____ tn DM
Other forage	5	49	8.99 tn DM	_____	_____ tn DM
Total forage	50	897	4.46 tn DM	_____	_____ tn DM
Corn grain	23	147	114 bu	_____	_____ bu
Oats	5	45	39 bu	_____	_____ bu
Wheat	16	78	51 bu	_____	_____ bu
Other crops	20	119		_____	
Tillable pasture	13	62		_____	
Idle	13	64		_____	
Total Tillable Acres	54	993		_____	

*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were hay crop 415, corn silage 381, corn grain 60, oats 4, tillable pasture 15, and idle 15.

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

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

CROP/DAIRY RATIOS
56 Western and Central Plain Region Dairy Farms, 2003

Item	Average	My Farm
Total tillable acres per cow	2.01	_____
Total forage acres per cow	1.52	_____
Harvested forage dry matter, tons per cow	7.19*	_____

*Excludes farms that do not harvest forages.

Cropping Analysis (continued)

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

CROP RELATED ACCRUAL EXPENSES
Western and Central Plain Region Dairy Farms Reporting, 2003

Item	Total Per Till. 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 Till Acre	Pasture Per Total Acre
No. of farms reporting	56	10			11		0	
Ave. number of acres	957	398			396		0	0
Fert. & lime	$ 29.29	$ 37.80	$ 7.20	$ 0.31	$ 21.04	$ 6.14	$ 0.00	$ 0.00
Seeds & plants	36.62	42.63	8.10	0.39	19.30	5.07	0.00	0.00
Spray & other crop exp.	16.45	42.13	7.36	0.37	9.66	2.30	0.00	0.00
TOTAL	$ 82.36	$ 122.56	$ 22.66	$ 1.07	$ 50.00	$ 13.51	$ 0.00	$ 0.00
My Farm								
Fert. & lime	$ _____	$_____	$_____	$ _____	$ _____	$ _____	$_____	$_____
Seeds & plants	_____	_____	_____	_____	_____	_____	_____	_____
Spray & other crop exp.	_____	_____	_____	_____	_____	_____	_____	_____
TOTAL	$ _____	$_____	$_____	$ _____	$ _____	$ _____	$_____	$_____

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

ACCRUAL MACHINERY EXPENSES
56 Western and Central Plain Region Dairy Farms, 2003

Machinery Expense	Average Total Expenses	Average Per Till. Acre	My Farm Total Expenses	My Farm Per Till. Acre
Fuel, oil & grease	$ 37,104	$ 38.77	$ _____	$ _____
Mach. repair & vehicle exp.	72,715	75.98	_____	_____
Machine hire, rent & lease	31,823	33.25	_____	_____
Interest (5%)	29,080	30.39	_____	_____
Depreciation	81,097	84.74	_____	_____
Total	$ 251,819	$ 263.13	$ _____	$ _____

Dairy Analysis

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

DAIRY HERD INVENTORY

56 Western and Central Plain Region Dairy Farms, 2003

	Dairy Cows		Heifer					
			Bred		Open		Calves	
Item	No.	Value	No.	Value	No.	Value	No.	Value
Beg. year (owned)	506	$ 584,121	160	$ 182,783	137	$ 95,990	106	$ 45,940
+ Change w/o apprec.		45,621		-7,173		13,126		10,129
+ Appreciation		3,342		-863		1,118		945
End year (owned)	545	$ 633,084	157	$ 174,747	150	$ 110,234	124	$ 57,014
End including leased	556							
Average number	557		423	(all age groups)				
My Farm:								
Beg. year (owned)	_____	$_____	_____	$ _____	_____	$_____	_____	$ _____
+ Change w/o apprec.		_____		_____		_____		_____
+ Appreciation		_____		_____		_____		_____
End year (owned)	_____	$_____	_____	$ _____	_____	$_____	_____	$ _____
End including leased	_____							
Average number	_____		_____	(all age groups)				

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

MILK PRODUCTION

56 Western and Central Plain Region Dairy Farms, 2003

Item	Average	My Farm
Total milk sold, lbs.	12,751,169	_____
Milk sold per cow, lbs.	22,912	_____
Average milk plant test, percent butterfat	3.67%	_____

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

56 Western and Central Plain Region Dairy Farms, 2003

	Average		My Farm	
Item	Number	Percent*	Number	Percent*
Cows sold for beef	161	28.9	_____	_____
Cows sold for dairy	1	0.2	_____	_____
Cows died	35	6.3	_____	_____
Culling rate**		35.2		_____

*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

56 Western and Central Plain Region Dairy Farms, 2003

	Average			My Farm		
Item	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Accrual Cost of Producing Milk						
Operating costs	$1,508,344	$ 2,708	$ 11.83	$_____	$_____	$_____
Purchased inputs costs	$1,651,863	$ 2,966	$ 12.95	$_____	$_____	$_____
Total Costs	$1,817,163	$ 3,262	$ 14.25	$_____	$_____	$_____
Accrual Receipts From Milk	$1,683,774	$ 3,023	$ 13.20	$_____	$_____	$_____
Net Milk Receipts	$1,604,024	$ 2,880	$ 12.58	$_____	$_____	$_____
Net Farm Income without Apprec.	$ 31,912	$ 57	$ 0.25	$_____	$_____	$_____
Net Farm Income with Appreciation	$ 119,139	$ 214	$ 0.93	$_____	$_____	$_____

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

56 Western and Central Plain Region Dairy Farms, 2003

	Average		My Farm	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrate	$ 898	$ 3.92	$ _____	$ _____
Purchased dairy roughage	106	.46	_____	_____
Total Purchased Dairy Feed	$ 1,004	$ 4.38	$ _____	$ _____
Purchased grain & conc. as % of milk receipts	30%		_____ %	
Purchased feed & crop exp.	$ 1,153	$ 5.03	$ _____	$ _____
Purchased feed & crop exp. as % of milk receipts	38%		_____ %	
Breeding	$ 39	$ .17	$ _____	$ _____
Veterinary & medicine	134	.58	_____	_____
Milk marketing	143	.63	_____	_____
Bedding	64	.28	_____	_____
Milking supplies	64	.28	_____	_____
Cattle lease	3	.01	_____	_____
Custom boarding	98	.43	_____	_____
bST	60	.26	_____	_____
Livestock professional fees	5	.02	_____	_____
Other livestock expense	22	.10	_____	_____

Capital and Labor Efficiency Analysis

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

CAPITAL EFFICIENCY
56 Western and Central Plain Region Dairy Farms, 2003

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	$277,130	$6,020	$3,504	$7,211
Real estate		2,269		2,718
Machinery & equipment	48,066	1,044	608	

Ratios

Asset turnover	Operating Expense	Interest Expense	Depreciation Expense
.60	.87	.04	.07

My Farm

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

Ratios

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

LABOR FORCE INVENTORY
56 Western and Central Plain Region Dairy Farms, 2003

Labor Force	Months	Age	Years of Educ.	Value of Labor & Mgmt.
Operator number 1	14.0	51	14	$46,909
Operator number 2	6.6	44	14	21,888
Operator number 3	2.3	47	13	7,250
Operator number 4	0.6	32	14	1,732
Family paid	11.3			
Family unpaid	2.4			
Hired	107.9			
Total	145.2	/ 12 =	12.10 Worker Equivalent	
			1.98 Operator/Manager Equivalent	
My Farm: Total	_____	/ 12 =	____ Worker Equivalent	
Operator's	_____	/ 12 =	____ Operator/Manager Equivalent	

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

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

LABOR EFFICIENCY

56 Western and Central Plain Region Dairy Farms, 2003

Labor	Average		My Farm	
Efficiency	Total	Per Worker	Total	Per Worker
Cows, average number	557	46	_____	_____
Milk sold, pounds	12,751,190	1,053,817	_____	_____
Tillable acres	957	79	_____	_____

LABOR AND MACHINERY COSTS

56 Western and Central Plain Region Dairy Farms, 2003

	Average			My Farm		
Labor Costs	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Value of operator(s) labor ($2,200/month)	$ 51,963	$ 93	$ .41	$_____	$ _____	$ _____
Family unpaid ($2,200/month)	5,355	10	.04	_____	_____	_____
Hired	346,819	623	2.72	_____	_____	_____
Total Labor	$ 404,137	$ 726	$ 3.17	$_____	$ _____	$ _____
Machinery Cost	$ 251,819	$ 452	$ 1.97	$_____	$ _____	$ _____
Total Labor & Mach.	$ 655,956	$ 1,178	$ 5.14	$_____	$ _____	$ _____
Hired labor expense per hired worker equivalent			$34,915	$ _____		
Hired labor expense as % of milk sales			20.6%	_____%		

COMPARATIVE ANALYSIS OF THE FARM BUSINESS

Progress of the Farm Business

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

PROGRESS OF THE FARM BUSINESS

Same 52 Western and Central Plain Region Dairy Farms, 2002 & 2003

	Average of 52 Farms*		My Farm		
Selected Factors	2002	2003	2002	2003	Goal
Size of Business					
Average number of cows	481	515	_____	_____	_____
Average number of heifers	369	387	_____	_____	_____
Milk sold, pounds	10,972,725	11,669,730	_____	_____	_____
Worker equivalent	10.73	11.27	_____	_____	_____
Total tillable acres	900	915	_____	_____	_____
Rates of Production					
Milk sold per cow, pounds	22,806	22,671	_____	_____	_____
Hay DM per acre, tons	3.7	3.3	_____	_____	_____
Corn silage per acre, tons	15.5	14.9	_____	_____	_____
Labor Efficiency					
Cows per worker	45	46	_____	_____	_____
Milk sold/worker, pounds	1,022,621	1,035,590	_____	_____	_____
Cost Control					
Grain & conc. purchased as % of milk sales	29%	30%	_____ %	_____ %	_____ %
Dairy feed & crop expense per cwt. milk	$ 4.81	$ 5.12	$ _____	$ _____	$ _____
Labor & mach. costs/cow	$ 1,228	$ 1,231	$ _____	$ _____	$ _____
Operating cost of producing cwt. of milk	$ 11.38	$ 11.71	$ _____	$ _____	$ _____
Capital Efficiency**					
Farm capital per cow	$ 6,470	$ 6,817	$ _____	$ _____	$ _____
Mach. & equipment per cow	$ 1,169	$ 1,333	$ _____	$ _____	$ _____
Asset turnover ratio	.56	.59	_____	_____	_____
Profitability					
Net farm income w/o apprec.	$ 14,769	$ 29,750	$ _____	$ _____	$ _____
Net farm income w/apprec.	$ 75,615	$ 118,035	$ _____	$ _____	$ _____
Labor & mgmt. income per operator/manager	$ -36,845	$ -26,926	$ _____	$ _____	$ _____
Rate of return on equity capital w/appreciation	-0.3%	2.3%	_____ %	_____ %	_____ %
Rate of return on all capital w/appreciation	2.3%	3.4%	_____ %	_____ %	_____ %
Financial Summary					
Farm net worth, end year	$1,544,540	$ 1,582,860	$ _____	$ _____	$ _____
Debt to asset ratio	.51	.56	_____	_____	_____
Farm debt per cow	$ 3,251	$ 3,589	$ _____	$ _____	$ _____

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

RECEIPTS AND EXPENSES PER COW AND PER CWT.
Same 52 Western and Central Plain Region Dairy Farms, 2002 & 2003

	2002		2003	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	481		515	
Cwt. Of Milk Sold		109,727		116,697
ACCRUAL OPERATING RECEIPTS				
Milk	$2,949	$12.93	$2,983	$13.17
Dairy cattle	232	1.02	234	1.03
Dairy calves	35	0.15	56	0.25
Other livestock	6	0.03	5	0.02
Crops	49	0.21	74	0.33
Miscellaneous receipts	194	0.85	109	0.47
Total Receipts	$3,466	$15.19	$3,461	$15.27
ACCRUAL OPERATING EXPENSES				
Hired labor	$607	$2.66	$604	$2.67
Dairy grain & concentrate	866	3.80	902	3.98
Dairy roughage	84	0.37	105	0.46
Nondairy feed	0	0.00	0	0.00
Professional nutritional services	NA*	NA*	8	0.03
Machine hire/rent/lease	79	0.34	62	0.27
Mach. repair & vehicle exp.	136	0.60	130	0.57
Fuel, oil & grease	57	0.25	67	0.30
Replacement livestock	30	0.13	39	0.17
Breeding	42	0.18	39	0.17
Veterinary & medicine	134	0.59	130	0.57
Milk marketing	132	0.58	143	0.63
Bedding	58	0.26	61	0.27
Milking supplies	67	0.29	63	0.28
Cattle lease	13	0.06	2	0.01
Custom boarding	59	0.26	60	0.27
bST expense	63	0.27	57	0.25
Livestock professional fees	NA*	NA*	6	0.02
Other livestock expense	32	0.14	23	0.10
Fertilizer & lime	54	0.24	62	0.27
Seeds & plants	43	0.19	42	0.19
Spray/other crop expense	50	0.22	37	0.16
Crop professional fees	NA*	NA*	7	0.03
Land, building, fence repair	40	0.17	28	0.12
Taxes	37	0.16	35	0.16
Real estate rent/lease	65	0.28	72	0.32
Insurance	34	0.15	35	0.15
Utilities	74	0.33	74	0.33
Interest paid	159	0.70	137	0.60
Other professional fees	NA*	NA*	11	0.05
Miscellaneous	36	0.16	17	0.08
Total Operating Expenses	$3,052	$13.38	$3,055	$13.48
Expansion Livestock	59	0.26	75	0.33
Extraordinary Expense	NA*	NA*	0	0.00
Machinery Depreciation	175	0.77	155	0.68
Real Estate Depreciation	148	0.65	118	0.52
Total Expenses	$3,434	$15.06	$3,403	$15.02
Net Farm Income Without Appreciation	$31	$0.13	$58	$0.25

*NA = not available in 2002 data. Expense was included in other categories.

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
56 Western and Central Plain Region Dairy Farms, 2003

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
(14)*	(12)	(12)	(12)	(11)	(11)	(14)	(14)
28.05	1,370	33,152,220	25,126	5.1	22	59	1,290,427
13.10	592	13,255,670	23,458	4.2	19	49	1,110,796
8.59	394	8,074,696	22,360	3.6	18	43	978,495
5.89	243	5,320,967	20,765	2.9	16	37	793,368
3.43	109	2,097,742	16,999	2.2	13	27	532,128

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)
$519	20%	$317	$886	$792	$3.92
758	27	412	1,061	963	4.50
865	29	481	1,192	1,085	4.82
940	32	581	1,335	1,150	5.32
1,066	37	740	1,740	1,407	6.32

Value and Cost of Production			Profitability			
Milk Receipts Per Cow	Oper. Cost Milk Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income w/Apprec.	Net Farm Inc. w/o Apprec.	Labor & Mgt. Inc. Per Oper.	Change in Net Worth w/Apprec.
(12)	(12)	(12)	(4)	(4)	(4)	(8)
$3,263	$9.03	$12.89	$423,274	$262,650	$73,401	$327,148
3,062	10.55	13.66	141,055	70,151	6,813	60,329
2,923	11.54	14.37	68,639	26,324	-21,174	16,739
2,752	12.13	15.31	29,314	-34,764	-76,486	-27,867
2,312	13.24	18.22	-94,242	-185,782	-217,816	-202,668

*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. Two areas that were examined this year were the source of dairy replacements and the breakdown of the milk income and marketing expenses. Following is a summary of this information.

SOURCE OF DAIRY REPLACEMENTS
48 New York Dairy Farms, 2003

Animals Entering Herd	Average
Number calving in 2003 for first time	185
Animals purchased, %[1]	6%
Animals raised by farm, %[2]	94%
Current Heifer Inventory	
Raised on dairy, %	79%
Raised by a custom grower, %	21%

[1] Animals purchased are animals purchased from a different farm and were not the farm's genetics.
[2] 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, 185 animals calved for the first time in 2003. The breakdown on these animals for source was 6 percent purchased and 94 percent raised by the farm. Of the current heifer inventory, 79 percent were raised on the dairy and 21 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, 45 Western and Central Plain 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 cwt. basis. The second area looks at the Producer Price Differential. The third area looks at the premiums a farm receives. Any premiums not specifically noted as quality or volume related are included in market premiums. The fourth area looks at the expenses associated with marketing milk. A new line item in this section is the expenses associated with utilizing forward contracting or hedging programs to market milk, such as commission or broker fees. The fifth area is income from the compact program or from forward contracting or hedging programs. The sixth area is the patronage dividends or refunds from the milk cooperatives. Equity purchased in the milk cooperative utilizing a monthly deduction from the milk check or a percent of the patronage dividend is treated as a capital purchase and is not a milk marketing expense. The cumulative total for these six areas is the net price received on farms. Your net farm price can be found on page 12 of your farm's DFBS report.

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

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

AVERAGE MILK INCOME AND MARKETING REPORT
45 Western and Central Plain Region Dairy Farms, 2003

	Pounds	Percent	Price/Pound	Total	$/Cwt of Milk
BASE FARM PRICE					
Butterfat	446,831.40	3.62%	$1.234	$551,341.00	$4.47
Protein	366,021.00	2.96%	$2.350	$860,002.00	$6.96
Solids	673,498.40	5.45%	$0.013	$8,983.00	$0.07
Total Component Contribution					$11.50
PPD	12,347,943.00			$80,106.11	$0.65
Base Farm Price					$12.15
Premiums					
Quality				$20,041.98	$0.16
Volume				$44,240.16	$0.36
Market Premiums				$30,302.38	$0.25
Total Premiums					$0.76
BASE FARM PRICE + PREMIUM					$12.91
Deductions					
Promotion				$19,956.02	$0.16
Hauling + Stop Charges.				$50,316.29	$0.41
Market Fees & Coop Dues				$6,677.87	$0.05
Total Deductions					$0.62
BASE FARM PRICE + PREMIUMS - DEDUCTIONS					$12.29
Marketing Programs					
Futures Contracts, Forward Contracting, Etc.				$9,957.56	$0.08
Total Marketing Income					$0.08
Patronage Dividends				$23,054.87	$0.19
NET PRICE RECEIVED ON FARM, ALL SOURCES					**$12.56**
PPD - Hauling, per cwt.					$0.24
PPD - Hauling + Market Premiums, per cwt.					$0.49

MILK PRICE INFORMATION BY QUINTILE
(Each Category Sorted Independently)
45 Western and Central Plain Region Dairy Farms, 2003

	Lowest Quintile	←		→	Highest Quintile
Butterfat, %	3.47	3.58	3.65	3.70	3.98
Protein, %	2.85	2.93	2.96	3.01	3.18
Other Solids, %	4.93	5.67	5.70	5.72	5.79
Butterfat, $ per Cwt.	4.12	4.32	4.42	4.51	5.67
Protein, $ per Cwt.	6.04	6.90	6.99	7.09	7.78
Other solids, $ per Cwt.	0.05	0.07	0.07	0.08	0.09
Total Component Value per Cwt.	**$11.12**	**$11.32**	**$11.50**	**$11.66**	**$12.60**
PPD, $ per Cwt.	0.46	0.56	0.59	0.64	1.03
Base Farm Price per Cwt.	**$11.68**	**$11.90**	**$12.09**	**$12.34**	**$13.47**
Quality, $ per Cwt.	0.02	0.07	0.15	0.23	0.30
Volume, $ per Cwt.	0.00	0.08	0.20	0.29	0.61
Market premium, $ per Cwt.	0.00	0.08	0.12	0.19	0.62
Total Premium, $ per Cwt.	**0.17**	**0.40**	**0.55**	**0.73**	**1.10**
Base Farm Price + Premiums per Cwt.	**$12.17**	**$12.44**	**$12.68**	**$13.04**	**$14.10**
Promotion, $ per Cwt.	0.14	0.15	0.15	0.15	0.20
Hauling, $ per Cwt.	0.34	0.38	0.44	0.49	0.65
Market fees & coop dues per Cwt.	0.01	0.03	0.06	0.07	0.11
Total Marketing Expenses per Cwt.	**$0.54**	**$0.60**	**$0.66**	**$0.71**	**$0.87**
Base + Premiums – Deductions per Cwt.	**$11.52**	**$11.80**	**$12.02**	**$12.37**	**$13.34**
Futures contract, forward contracting, $ per Cwt.	-0.01	0.00	0.00	0.00	0.26
Total Marketing Income, $ per Cwt.	**$0.01**	**$0.00**	**$0.00**	**$0.00**	**$0.26**
Patronage Dividends, $ per Cwt.	**$0.00**	**$0.00**	**$0.07**	**$0.52**	**$0.85**
Net Price Received From All Sources, $ per Cwt.	**$11.90**	**$12.27**	**$12.46**	**$12.69**	**$13.42**
PPD - Hauling, $ per cwt.	**-0.03**	**0.11**	**0.17**	**0.22**	**0.51**
PPD - Hauling + Market Premiums, $ per cwt.	**0.07**	**0.22**	**0.29**	**0.41**	**0.99**

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 219 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
219 New York Dairy Farms, 2002

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)
22.1	1,096	26,070,804	25,939	5.5	23	63	1,348,521
13.1	577	13,521,669	24,156	4.0	18	49	1,116,565
9.9	397	8,759,377	23,267	3.4	17	45	974,408
7.5	293	6,374,929	22,426	3.1	16	41	884,130
5.7	195	3,992,743	21,679	2.9	15	38	785,112
4.3	142	2,942,120	20,935	2.7	14	34	692,994
3.5	110	2,070,554	19,685	2.4	13	31	605,540
2.9	83	1,514,427	18,018	2.1	12	28	516,862
2.3	66	1,140,734	16,056	1.8	10	24	424,069
1.6	42	674,145	12,330	1.2	7	18	295,997

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)
$422	19%	$279	$866	$571	$3.41
576	24	390	1,026	759	3.97
646	26	442	1,139	843	4.26
721	28	487	1,215	914	4.53
767	30	523	1,265	972	4.73
829	31	563	1,332	1,027	4.99
894	33	610	1,423	1,099	5.20
939	34	661	1,548	1,165	5.43
1,012	36	727	1,686	1,242	5.82
1,140	42	945	2,124	1,372	6.97

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

FARM BUSINESS CHART FOR
FARM MANAGEMENT COOPERATORS
219 New York Dairy Farms, 2002

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)
$3,383	$15.11	$1,117	$7.37	$2,074	$12.10
3,103	13.58	1,590	8.65	2,558	12.95
2,995	13.26	1,842	9.35	2,772	13.58
2,900	13.04	1,990	9.97	2,907	14.06
2,797	12.92	2,119	10.48	3,022	14.62
2,696	12.80	2,301	10.86	3,156	15.15
2,565	12.65	2,444	11.36	3,301	15.79
2,366	12.48	2,580	11.91	3,431	16.73
2,099	12.31	2,813	12.55	3,677	17.85
1,594	11.89	3,116	14.93	4,013	21.72

Profitability

Net Farm Income Without Appreciation			Net Farm Income With Appreciation		Labor & Management Income	
Total	Per Cow	Operations Ratio	Total	Per Cow	Per Farm	Per Operator
(4)	(12)	(4)	(4)	(12)	(4)	(4)
$311,300	$800	0.23	$490,988	$1,018	$169,943	$102,486
111,164	544	0.17	190,585	695	46,398	31,785
74,548	422	0.13	120,125	540	19,765	12,137
48,934	321	0.10	76,473	429	6,293	4,230
31,650	250	0.08	51,347	340	-6,706	-4,145
18,485	152	0.05	31,621	213	-17,073	-12,209
6,953	57	0.02	17,028	139	-31,884	-22,091
-3,847	-18	-0.01	5,335	51	-59,274	-40,962
-31,661	-193	-0.06	-21,619	-152	-105,558	-70,856
-173,275	-522	-0.20	-118,492	-453	-272,400	-204,262

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

Financial Analysis Chart

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

FINANCIAL ANALYSIS CHART
219 New York Dairy Farms, 2002

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)
$136	$862	6.53	3.22	5%	$272	41%	12.51
266	665	1.71	1.65	9	1,046	26	3.42
345	575	1.29	1.23	13	1,626	20	2.35
393	502	1.05	1.02	15	2,072	15	1.88
447	446	0.92	0.83	17	2,447	11	1.57
513	378	0.80	0.73	19	2,789	7	1.30
570	318	0.70	0.59	21	3,164	3	1.08
649	245	0.59	0.33	24	3,583	-2	0.85
749	138	0.38	0.02	29	3,990	-9	0.66
901	-220	-0.64	-1.36	36	5,658	-19	0.34

Solvency				Operational Ratios		
		Debt/Asset Ratio				
Leverage Ratio**	Percent Equity	Current & Intermediate	Long Term	Operating Expense Ratio	Interest Expense Ratio	Depreciation Expense Ratio
(7)	(7)	(7)	(7)	(14)	(14)	(14)
0.03	97%	0.04	0.00	0.65	0.00	0.02
0.15	87	0.15	0.00	0.71	0.01	0.04
0.28	78	0.24	0.03	0.75	0.02	0.05
0.38	73	0.32	0.16	0.78	0.03	0.07
0.52	66	0.37	0.25	0.81	0.03	0.08
0.69	60	0.42	0.33	0.83	0.04	0.09
0.89	53	0.49	0.41	0.85	0.05	0.10
1.17	46	0.57	0.54	0.88	0.06	0.11
1.53	40	0.65	0.70	0.92	0.07	0.13
9.33	25	0.90	1.02	1.05	0.10	0.18

Efficiency (Capital)					Profitability	
					Percent Rate of Return with Appreciation on:	
Asset Turnover (ratio)	Real Estate Investment Per Cow	Machinery Investment Per Cow	Total Farm Assets Per Cow	Change in Net Worth With Appreciation	Equity	Investment***
(14)	(14)	(14)	(14)	(8)	(4)	(4)
.73	$1,144	$618	$4,832	$264,759	64%	11%
.62	1,935	888	5,717	96,454	8	7
.57	2,234	1,038	6,164	46,852	5	5
.52	2,486	1,194	6,539	21,703	2	3
.48	2,725	1,320	6,871	5,483	0	2
.45	3,008	1,458	7,454	-5,080	-2	1
.41	3,359	1,651	8,058	-20,508	-4	-1
.35	3,850	1,899	8,653	-43,685	-7	-3
.31	4,483	2,220	9,564	-80,709	-13	-5
.23	7,197	3,171	12,724	-255,995	-37	-10

*Page number of the participant's DFBS where the factor is located.
**Dollars of debt per dollar of equity, computed by dividing total liabilities by total equity.
***Return on all farm capital (no deduction for interest paid) divided by total farm assets

Comparison by Type of Barn and Herd Size

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

The table on page 31 includes the average values for the resulting five groups of dairy farms. The average size of farms in the five groups ranges from 45 cows on the small conventional farms to 646 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. The small freestall farms showed average profits somewhat higher than the large conventional farm businesses.

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

Herd Size Comparisons

A detailed comparison of profitability, financial situation and business analysis factors across herd sizes is contained on pages 48-54 of the 2002 State Summary*. As herd size increases, the net farm income profitability generally increases (page 48)*. Net farm income without appreciation averaged $14,699 per farm for the less than 50 cow farms and $92,702 per farm for those with more than 600 cows. However, net farm income per cow decreases as herd size increases. No relationship to herd size exists with the other more comprehensive measures of profitability.

Assets, liabilities and financial measures are presented on pages 55-58*. Not all herd size categories saw an increase in net worth during 2002. The largest herd size category experienced an increase in net worth of over $36,000. However, percent equity went down as assets increased. The largest herds had 51 percent equity; while the smaller herds averaged 77 percent.

Crop yields showed little relationship to herd size, but fertilizer and lime expenses, and machinery cost per tillable acre generally increased as herd size increased (pages 59-60)*. The farms with 600 and more cows per farm averaged 39 percent more milk sold per cow than the smallest farms. All of the groups with 150 or more cows averaged above 20,000 pounds of milk sold per cow while the farms smaller than 150 cows averaged 17,956 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 350,469 pounds at the lowest herd size category up to 1,183,404 pounds at the largest size category.

*Wayne A. Knoblauch, Linda D. Putnam, and Jason Karszes, Dairy Farm Management Business Summary, New York, 2002, Department of Applied Economics and Management, Cornell University, R.B. 2003-03, November 2003.

SELECTED BUSINESS FACTORS BY TYPE OF BARN AND HERD SIZE

199 New York Dairy Farms, 2002

	Conventional		Freestall		
Item Farms with:	<= 60 Cows	>60 Cows	<=150 Cows	151-300 Cows	≥300 Cows
Number of farms	26	36	33	33	71
Cropping Program Analysis					
Total Tillable acres	167	313	335	591	1,229
Tillable acres rented*	65	129	174	340	639
Hay crop acres*	113	196	180	294	553
Corn silage acres*	22	58	86	191	508
Hay crop, tons DM/acre	2.0	2.2	2.3	2.8	3.6
Corn silage, tons/acre	12.1	13.5	12.5	13.2	16.4
Oats, bushels/acre	30	46	0	62	61
Forage DM per cow, tons	7.1	7.8	7.4	7.9	7.4
Tillable acres/cow	3.7	3.4	3.1	2.8	1.9
Fertilizer & lime expense/tillable acre	$13.11	$23.47	$29.61	$31.98	$28.31
Total machinery costs	$25,126	$57,250	$61,740	$133,161	$316,549
Machinery cost/tillable acre	$150	$183	$184	$225	$258
Dairy Analysis					
Number of cows	45	91	107	213	646
Number of heifers	33	72	77	165	492
Milk sold, lbs.	773,417	1,678,840	1,994,618	4,735,073	14,987,890
Milk sold/cow, lbs.	17,290	18,483	18,568	22,215	23,187
Operating cost of producing milk/cwt.	$9.10	$10.37	$11.20	$10.71	$11.12
Total cost of producing milk/cwt.	$16.94	$16.18	$16.44	$14.33	$13.90
Price/cwt. milk sold	$12.74	$12.97	$13.41	$12.86	$12.96
Purchased dairy feed/cow	$695	$738	$846	$891	$953
Purchased dairy feed/cwt. milk	$4.04	$4.00	$4.54	$4.01	$4.11
Purchased grain & concentrate as % of milk receipts	29%	30%	33%	30%	29%
Purchased feed & crop expense/cwt milk	$4.74	$4.90	$5.52	$4.82	$4.76
Capital Efficiency					
Farm capital/worker	$209,207	$241,759	$260,109	$262,119	$300,559
Farm capital/cow	$9,438	$8,581	$8,192	$7,199	$6,453
Farm capital/tillable acre owned	$4,164	$4,244	$5,479	$6,109	$7,066
Real estate/cow	$4,774	$3,733	$3,676	$2,752	$2,383
Machinery investment/cow	$1,976	$1,861	$1,731	$1,487	$1,123
Asset turnover ratio	0.30	0.37	0.39	0.50	0.57
Labor Efficiency					
Worker equivalent	2.03	3.23	3.37	5.85	13.87
Operator/manager equivalent	1.21	1.54	1.76	1.90	2.22
Milk sold/worker, lbs.	380,994	519,765	591,875	809,414	1,080,598
Cows/worker	22	28	32	36	47
Labor cost/cow	$1,070	$806	$803	$742	$699
Labor cost/tillable acre	$288	$234	$256	$267	$368
Profitability & Balance Sheet Analysis					
Net farm income (without appreciation)	$18,037	$15,781	$17,197	$43,002	$66,940
Labor & management income/operator	$ -7,069	$-13,452	$-10,491	$-5,038	$-21,125
Rate return on all capital with appreciation	-2.5%	-0.1%	-1.0%	1.9%	4.1%
Farm debt/cow	$2,285	$2,071	$2,653	$2,514	$3,088
Percent equity	75%	75%	67%	65%	52%

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

FARM BUSINESS CHART FOR SMALL CONVENTIONAL STALL DAIRY FARMS

26 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 2002

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)
3.04	60	1,142,159	23,203	4.7	26	37	680,158
3.00	58	1,087,089	22,069	2.9	18	33	581,547
2.62	52	1,073,250	21,489	2.7	16	31	485,566
2.29	50	989,795	21,276	2.3	15	27	471,412
2.14	50	882,582	20,638	2.1	13	24	447,114
2.00	44	815,830	18,454	2.1	12	22	395,644
1.90	42	739,533	16,253	2.1	11	21	340,726
1.61	39	637,428	14,351	1.9	10	20	322,892
1.50	35	478,007	11,279	1.4	9	18	259,980
1.14	31	288,036	8,545	1.2	7	14	170,537

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)
$262	18%	$198	$940	$322	$3.38
418	22	355	1,231	505	3.76
513	24	455	1,343	645	4.11
575	27	498	1,533	760	4.24
618	29	575	1,770	848	4.35
678	31	658	1,858	922	4.71
775	33	698	1,953	991	5.01
841	35	752	2,044	1,041	5.47
904	38	806	2,204	1,103	6.10
1,101	51	972	2,500	1,314	8.00

Value and Cost of Producing Milk			Profitability			
			Net Farm Income Without Appreciation			
Milk Receipts Per Cow	Operating Cost Production Per Cwt.	Total Cost Production Per Cwt.	Total	Per Cow	Labor & Mgmt. Income Per Operator	Change in Net Worth w/Appreciation
(12)	(12)	(12)	(4)	(12)	(4)	(8)
$3,138	$6.12	$12.92	$52,474	$1,104	$21,592	$37,609
2,929	7.19	14.35	36,571	949	12,767	15,821
2,741	7.75	15.35	32,817	727	9,360	13,893
2,657	8.17	16.20	28,311	653	5,649	9,894
2,514	8.98	17.11	25,407	512	-779	6,721
2,346	9.37	17.98	18,457	398	-4,263	2,820
2,111	10.06	18.49	13,858	313	-9,329	-1,150
1,857	10.64	20.22	9,777	267	-14,064	-7,427
1,406	11.82	24.35	3,500	80	-18,711	-13,982
1,005	15.48	28.09	-14,797	-310	-62,193	-30,281

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

FARM BUSINESS CHART FOR LARGE CONVENTIONAL STALL DAIRY FARMS

36 Conventional Stall Dairy Farms with More Than 60 Cows, New York, 2002

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	173	3,517,857	23,588	3.2	19	46	847,783
4.24	120	2,235,710	21,737	3.0	17	41	781,006
3.96	108	1,970,575	20,952	2.9	16	37	703,740
3.58	97	1,744,848	20,281	2.7	16	34	641,261
3.17	85	1,666,685	19,307	2.4	15	31	574,060
3.00	79	1,571,486	18,274	2.2	14	29	533,307
2.75	76	1,393,495	17,018	2.1	13	27	501,028
2.54	72	1,242,817	16,127	1.8	11	26	427,258
2.18	68	1,127,840	15,439	1.5	9	24	370,621
1.50	65	1,005,499	14,099	1.1	6	17	324,348

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)
$408	18%	$260	$930	$585	$3.34
529	23	410	1,085	735	3.80
591	24	492	1,213	771	3.98
633	27	521	1,282	805	4.46
705	29	546	1,382	895	4.97
730	33	578	1,466	938	5.40
793	35	638	1,603	1,016	5.70
882	37	758	1,698	1,065	6.10
938	39	826	1,773	1,139	6.36
1,159	48	1,416	2,286	1,359	7.36

Value and Cost of Producing Milk			Profitability			
Milk Receipts Per Cow	Operating Cost Production Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Apprec.
			Total	Per Cow		
(12)	(12)	(12)	(4)	(12)	(4)	(8)
$3,129	$7.38	$12.39	$85,219	$741	$39,332	$70,316
2,777	8.29	13.70	51,636	576	17,140	42,958
2,663	8.84	14.41	40,123	516	8,266	36,489
2,577	9.25	15.37	33,608	425	2,703	21,118
2,477	10.00	16.07	23,611	303	-6,106	4,016
2,361	10.80	16.74	16,329	168	-11,219	-681
2,239	11.59	17.37	8,282	103	-16,396	-11,901
2,088	12.39	18.27	3,128	39	-24,910	-23,157
1,998	13.20	19.24	-15,230	-199	-59,343	-38,173
1,809	16.14	22.41	-52,038	-536	-102,122	-81,761

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

FARM BUSINESS CHART FOR SMALL FREESTALL DAIRY FARMS

33 Freestall Barn Dairy Farms with 150 or Less Cows, New York, 2002

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)
5.84	146	3,247,938	24,088	4.7	23	51	987,946
4.43	140	2,746,918	22,478	3.1	18	44	814,394
4.30	132	2,531,513	21,405	3.0	17	40	726,531
3.98	124	2,406,473	20,350	2.8	15	37	660,292
3.64	117	2,332,116	19,274	2.5	14	33	636,687
3.22	113	1,968,724	18,914	2.3	12	32	616,193
2.87	104	1,744,476	17,707	2.1	11	31	580,368
2.55	90	1,480,398	16,918	1.9	9	29	529,081
2.23	76	1,292,997	14,490	1.6	7	27	462,491
1.81	63	948,590	11,657	1.2	6	22	318,663

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)
$489	23%	$313	$922	$634	$4.14
598	27	424	1,073	783	4.56
643	31	456	1,190	866	4.82
707	32	506	1,250	890	5.12
748	34	539	1,351	950	5.43
880	34	612	1,446	1,146	5.71
946	35	649	1,532	1,187	5.87
999	36	689	1,582	1,216	6.18
1,053	39	754	1,634	1,300	6.65
1,158	43	884	1,933	1,404	8.46

Value and Cost of Producing Milk			Profitability			
			Net Farm Income Without Appreciation			
Milk Receipts Per Cow	Operating Cost Production Per Cwt.	Total Cost Production Per Cwt.	Total	Per Cow	Labor & Mgmt. Income Per Operator	Change in Net Worth w/Apprec.
(12)	(12)	(12)	(4)	(12)	(4)	(8)
$3,177	$8.06	$13.11	$74,708	$661	$27,415	$91,885
3,008	9.37	14.54	61,971	579	17,512	43,413
2,851	10.16	15.28	44,860	490	7,567	34,996
2,716	10.55	15.74	37,812	417	-285	16,132
2,608	10.76	16.32	26,079	269	-9,009	9,827
2,546	11.12	16.70	17,397	128	-11,862	-1,832
2,350	11.55	17.11	8,858	77	-15,899	-12,242
2,222	12.32	17.71	-39	3	-21,804	-26,363
1,952	13.47	18.62	-15,986	-168	-37,410	-51,461
1,610	16.96	23.60	-45,859	-400	-64,630	-86,442

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

FARM BUSINESS CHART FOR MEDIUM FREESTALL DAIRY FARMS

33 Freestall Barn Dairy Farms with 151-300 Cows, New York, 2002

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)
9.98	289	7,058,624	26,651	4.5	19	57	1,314,584
7.42	277	6,279,950	24,766	3.9	18	50	1,029,075
6.90	263	5,952,419	23,844	3.4	17	44	950,123
6.33	247	5,598,207	22,947	3.1	16	41	916,467
6.06	233	4,938,964	22,396	3.0	15	40	894,970
5.58	202	4,272,306	21,995	2.9	14	40	862,227
5.31	183	3,903,536	21,706	2.8	13	37	821,902
4.95	174	3,778,193	21,115	2.7	13	34	729,011
4.20	159	3,551,740	20,053	2.3	10	28	644,662
3.41	154	3,231,415	18,427	1.5	7	23	516,172

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)
$554	21%	$401	$923	$740	$3.58
730	25	489	1,099	909	4.10
775	27	557	1,229	977	4.45
796	28	607	1,275	1,028	4.68
836	30	615	1,317	1,051	5.02
895	32	644	1,357	1,095	5.12
933	33	699	1,411	1,139	5.25
965	34	729	1,570	1,241	5.35
1,040	35	785	1,754	1,279	5.57
1,147	40	1,001	2,259	1,399	5.82

Value and Cost of Producing Milk			Profitability			
Milk Receipts Per Cow	Operating Cost Production Per Cwt.	Total Cost Production Per Cwt.	Net Farm Income Without Appreciation		Labor & Mgmt. Income Per Operator	Change in Net Worth w/Apprec.
			Total	Per Cow		
(12)	(12)	(12)	(4)	(12)	(4)	(8)
$3,345	$8.01	$12.01	$218,869	$839	$65,424	$182,070
3,067	8.96	12.69	112,653	548	49,976	128,417
2,997	9.46	13.38	90,477	390	25,149	96,164
2,969	10.04	13.79	76,725	352	12,318	56,567
2,882	10.80	14.25	65,859	321	7,276	24,649
2,840	11.28	14.43	56,493	289	1,459	-7,554
2,794	11.72	14.84	42,958	177	-4,608	-20,188
2,740	12.12	15.63	4,759	13	-24,459	-44,948
2,648	12.43	17.28	-44,102	-225	-88,725	-68,537
2,395	15.23	19.01	-103,914	-601	-157,942	-129,423

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

FARM BUSINESS CHART FOR LARGE FREESTALL DAIRY FARMS

71 Freestall Barn Dairy Farms with 300 or More Cows, New York, 2002

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)
26.85	1,438	33,375,635	26,730	7.5	28	70	1,497,781
22.38	1,039	24,914,975	25,227	4.7	19	55	1,286,184
16.82	812	19,921,803	24,290	4.2	18	51	1,206,106
14.22	651	15,521,194	23,803	3.9	17	48	1,139,441
13.04	568	13,206,915	23,449	3.6	17	47	1,079,190
11.40	499	11,707,064	23,093	3.2	15	44	1,004,950
10.45	433	9,447,569	22,657	3.1	15	42	963,397
9.25	390	8,515,842	22,111	2.9	14	39	905,762
8.25	356	7,883,906	21,338	2.6	13	37	825,804
7.03	323	6,584,485	17,496	1.7	11	32	697,945

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)
$626	22%	$306	$835	$823	$3.59
732	25	391	996	935	4.19
769	27	428	1,068	974	4.40
821	28	459	1,147	1,014	4.60
882	29	503	1,212	1,074	4.73
911	30	533	1,244	1,118	4.89
930	31	561	1,289	1,148	5.03
970	33	597	1,337	1,211	5.21
1,045	34	642	1,439	1,263	5.38
1,136	38	713	1,571	1,384	5.99

Value and Cost of Producing Milk			Profitability			
			Net Farm Income Without Appreciation			
Milk Receipts Per Cow	Operating Cost Production Per Cwt.	Total Cost Production Per Cwt.	Total	Per Cow	Labor & Mgmt. Income Per Operator	Change in Net Worth w/Apprec.
(12)	(12)	(12)	(4)	(12)	(4)	(8)
$3,544	$8.96	$11.79	$471,354	$661	$181,847	$472,425
3,281	9.93	12.70	263,076	430	68,716	143,397
3,146	10.20	13.01	168,151	296	35,940	105,539
3,065	10.59	13.39	114,248	236	12,274	67,967
3,004	10.89	13.73	91,535	167	-2,400	22,661
2,955	11.26	14.00	36,778	68	-26,105	-20,290
2,872	11.65	14.55	1,926	4	-42,435	-56,598
2,825	12.08	15.05	-19,585	-31	-61,693	-132,736
2,728	12.57	15.53	-100,756	-168	-101,989	-199,083
2,390	13.66	17.51	-304,292	-555	-338,297	-394,224

*Page number of the participant's DFBS 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 23 and 27-29 can be used to help identify strengths and weaknesses of your farm business. Identify three major strengths and three areas of your farm business that need improvement.

Strengths:	Needs improvement:

GLOSSARY AND LOCATION OF COMMON TERMS

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

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

Accrual Expenses - (defined on page 3)

Accrual Receipts - (defined on page 4)

Annual Cash Flow Statement - (defined on page 11)

Appreciation - (defined on page 5)

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

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

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

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

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

Cash Flow Coverage Ratio - (defined on page 13)

Cash Paid - (defined on page 2)

Cash Receipts - (defined on page 4)

Change in Accounts Payable - (defined on page 3)

Change in Accounts Receivable - (defined on page 4)

Change in Inventory - (defined on page 2)

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

Culling Rate - (defined on page 17)

Current Portion - (defined on page 7)

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

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

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

Debt Coverage Ratio – (defined on page 13)

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

Debt to Asset Ratios - (defined on page 9)

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

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

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

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

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

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

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

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

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

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

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

Labor and Management Income - (defined on page 6)

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

Labor Efficiency - Production capacity and output per worker.

Leverage Ratio - (defined on page 9)

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

Net Farm Income - (defined on page 5)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Return on Equity Capital - (defined on page 7)

Return on Total Capital - (defined on page 7)

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

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

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

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

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