DAIRY FARM BUSINESS SUMMARY

MAY 2012 *E.B. 2012-02*

NEW YORK LARGE HERD FARMS, 300 COWS OR LARGER, 2011

You can't manage what you can't measure but if you measure it you can improve it!

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2011 DAIRY FARM BUSINESS SUMMARY
LARGE HERD DAIRY FARMS
300 Cows or Larger

Table of Contents

2011 DAIRY FARM BUSINESS SUMMARY AND ANALYSIS
LARGE HERD DAIRY FARMS[1]

INTRODUCTION

Dairy farmers throughout New York State have been participating in Cornell Cooperative Extension Farm Business Summary and Analysis Programs since the early 1950's. Managers of each participating farm business receive a comprehensive summary and analysis of the farm business.

Larger farms employ different technologies and management systems, and thus, achieve different efficiencies than smaller farms. This makes comparisons of a large farm's performance to the average of farms of all sizes not as meaningful as comparing to the average of similar sized farms. This report contains a summary and analysis of dairy farms with 300 or more cows. In addition, farms are sorted into three categories for many comparisons, 300 to 599 cows, 600 to 899 cows, and 900 and more cows per farm.

Farm managers should determine their business performance and then compare it with that of other similar farms. In this manner, strengths and areas for improvement can be identified. A goal that many managers set is to strive to be in the top 20 percent of farms for many of the production and financial benchmarks. Each manager should select and then revise annually the goals which their business strives to achieve.

Program Objective

The primary objective of the Dairy Farm Business Summary and Analysis Project, DFBS, is to help farm managers improve the business and financial management of their dairy farm through appropriate use of historical farm data and the application of modern farm business analysis techniques. This information can also be used to track changes within the business, establish goals that will enable the business to better meet its objectives, compare the performance of the farm to other dairy producers, and establish a basis for financial projection of planned changes within the business.

Format

This report is comprised of six sections. The first section charts the progress of the large herd farm business over two years. Ninety-four of the large herd farms participated in the summary the last two years. The averages of selected business factors are presented for these farms and the changes that occurred from 2010 to 2011 are calculated.

The second section contains charts for additional analysis of large herd farms. The top 20 percent large farms (by rate of return on assets without appreciation) are compared to the average for all 101 large herd farms that participated in the 2011 DFBS program. Also presented is information concerning dairy enterprise efficiency, and milking parlor efficiency.

The summary and analysis section lists the average data for the 101 large herd farms that participated in the 2011 DFBS program. The format follows that of the individual farm DFBS printout and contains a brief explanation of each table and chart with comparisons to the top 20 percent large farms.

The fourth section presents a condensed summary and selected business factors for farms with 300-599 cows, 600-899 cows, and farms with 900 and more cows.

The fifth section contains the income and expense profiles for the 300-599 cow farms, 600-899 cow farms, and 900 and more cow farms on a per cow and per hundredweight of milk basis.

The sixth section contains business charts for key measures of farm performance.

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[1]The large herd summary is comprised of farms with 300 or more cows. Albany, Cayuga, Chautauqua, Chenango, Clinton, Cortland, Delaware, Erie, Genesee, Jefferson, Lewis, Livingston, Madison, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Otsego, Rensselaer, Saratoga, Schuyler, St. Lawrence, Tompkins, Washington, and Wyoming counties had farms of this size participating in 2011. This report was written by Jason Karszes, Senior Extension Associate, Pro-Dairy and Wayne A. Knoblauch, Professor, Farm Management. Linda Putnam was in charge of data preparation. Cathryn Dymond assisted with data and publication preparation. Data were collected by Cornell Cooperative Extension educators across the state. We also acknowledge the cooperation of Cathy Wickswat, Cargill Animal Nutrition; Farm Credit East Association; and Dehm Associates, for their assistance in data collection.

PROGRESS OF THE FARM BUSINESS

The 2011 business year for the New York State dairy industry showed a strong increase in earnings over 2010 and continued the rebound from 2009, driven by a second year of increasing milk prices. Growing conditions provided the major challenge to the dairy industry, with conditions ranging from flooding to drought, depending on the time of year and location in the state. Costs also increased from the previous year. Milk production per cow and herd size continued to grow. With the combination of changes during the year, 2011 was a highly profitable year for the average farm over 300 cows in New York, leading to significant changes in the financial position of the farm.

For both 2010 and 2011, 94 farms that averaged more than 300 cows in New York participated in the Dairy Farm Business Summary and Analysis Program (DFBS), administered by Cornell Cooperative Extension and Cornell University. The tables on the following two pages show selected factors and receipts and expenses per cow and per hundredweight from the 94 farms that participated in the DFBS project each of the last two years.

Milk Income. Gross milk prices increased 21.4 percent to $21.65 per hundredweight, an increase of $3.81, averaging $1.30 higher than 2007, the last milk price high. Milk marketing expenses decreased 4 cents to $0.85 per hundredweight, driven by no contributions to the CWT program in 2011. These two changes led to an increase of 22.8 percent in net milk price received on the farm, averaging $20.80 per hundredweight. Milk production per cow increased 0.3 percent to 25,162 pounds per cow. Gross milk revenue per cow increased 21.7 percent from the previous year. Average herd size for the participating farms increased by 3.2 percent to 863 cows. With both milk sold per cow and herd size increasing, total milk pounds shipped per farm increased 3.5 percent. With the challenging growing conditions in 2011, hay yield decreased 5.3 percent and corn silage yield decreased 15.7 percent, leading to a decrease in forage inventory and a 39 percent decrease in crop revenue per cow, averaging $116 per cow. With all factors combined, total revenue per cow rose 18.8 percent, increasing $967 per cow to $6,103.

Cost Control. While milk prices showed significant increases, costs also increased. Energy costs, challenging growing conditions, and rising feed prices led to increases in costs to operate the farm and produce milk. Purchased grain and concentrates increased 22.2%, rising $1.11 to $6.11 per hundredweight. Direct fuel purchased by the farm increased 23 cents per hundredweight, or 37 percent from the previous year. With the increased earnings, deferred repairs were addressed, with both machinery and building repair expense categories increasing.

Worker equivalents increased 3.9 percent, which is slightly more than the growth in herd size. Cows per worker stayed the same at 46. The increase in milk sold per cow largely offset the increase in additional labor, with milk sold per worker decreasing only -0.4 percent. Hired labor costs per worker equivalent increased 3.9 percent. With the increase in the average cost per worker equivalent and labor efficiency being essentially unchanged, labor costs per hundredweight increased 4.1 percent to $2.82 per hundredweight.

The combination of these changes led to an increase in farm operating costs of $1.96, or 12.2 percent to $18.00 per hundredweight.

Capital Investment. The average investment in the farm increased 7.7 percent to $9,481 per cow. Additional investment in the farm plus increasing value of land was the key factors leading to the increased investment per cow.

Increase in Earnings. Profits increased dramatically in 2011, continuing the recent trend of large changes in earnings from one year to next. The 21.7 percent increase in milk price, along with continued increase in milk shipped off the farm, offset the increase in costs. Net farm income without appreciation rose to $1,043,192. Net farm income with appreciation increased to $1,265,652.

- Labor and management income per operator/manager increased 77.3 percent, from $192,185 in 2010 to $340,662 in 2011.
- Rate of return to all capital without appreciation increased to 12.2 percent, from 8.2 percent in 2010. Rate of return on equity capital without appreciation rose to 16.2 percent.
- Farm net worth increased by 22.3 percent.
- Debt to asset ratio decreased 13.9 percent to 0.31, reflecting the earnings used to increase investment and reduce outstanding principal.

Overall, 2011 was a year of strong earnings, continuing the rebound from 2009 for the 300 cow and larger farms. While, on average, farms showed significant earnings in 2011, the changes on individual farms varied, with some farms actually showing decreases from 2010, with changes to operating costs, forward contracting of milk, and challenging growing conditions offsetting the increase in milk prices.

The importance of trend analysis is to identify what areas changed, ask why they changed, and look at what you can do differently in the future to influence that change. Comparing your business' performance with average data from these DFBS dairy farms can help you establish goals for your business. It is equally important 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. If you would like help in developing and looking at the trends in your business, contact your local extension office and become involved in a financial management education program.

PROGRESS OF THE FARM BUSINESS

Same 94 Large Herd Dairy Farms, 2010 & 2011

Selected Factors	Average of 94 Farms 2010	Average of 94 Farms 2011	Percent Change
Size of Business			
Average number of cows	836	863	3.2
Average number of heifers	722	751	4.0
Milk sold, lbs.	20,984,783	21,715,171	3.5
Worker equivalent	18.20	18.90	3.9
Total tillable acres	1,641	1,694	3.2
Rates of Production			
Milk sold per cow, lbs.	25,093	25,162	0.3
Butterfat per cow, lbs.[2]	914	924	1.1
Protein per cow, lbs.[2]	771	780	1.2
Hay DM per acre, tons	3.8	3.6	-5.3
Corn silage per acre, tons	19.7	16.6	-15.7
Labor Efficiency & Costs			
Cows per worker	46	46	0.0
Milk sold per worker, lbs.	1,153,010	1,148,951	-0.4
Hired labor cost per cwt.	$2.71	$2.82	4.1
Hired labor cost per worker	$35,994	$37,413	3.9
Hired labor cost as % of milk sales	15.2%	13.0%	-14.5
Cost Control			
Grain & concentrate purchased as % of milk sales	28%	28%	0.0
Grain & concentrate per cwt. milk	$5.00	$6.11	22.2
Dairy feed & crop expense per cwt. milk	$6.30	$7.58	20.3
Labor & machinery costs per cow	$1,464	$1,633	11.5
Total farm operating costs per cwt. sold	$16.04	$18.00	12.2
Interest costs per cwt. milk	$0.53	$0.48	-9.4
Operating cost of producing cwt. of milk	$13.51	$15.44	14.3
Net milk income over purchased feed costs per cow	$3,001	$3,695	23.1
Capital Efficiency(average for the year)			
Farm capital per cow	$8,802	$9,481	7.7
Machinery & equipment per cow	$1,503	$1,593	6.0
Asset turnover ratio	0.60	0.67	11.7
Income Generation			
Gross milk sales per cow	$4,475	$5,447	21.7
Gross milk sales per cwt.	$17.84	$21.65	21.4
Net milk sales per cwt.	$16.94	$20.80	22.8
Dairy cattle sales per cow	$316	$337	6.7
Dairy calf sales per cow	$24	$32	33.3
Profitability			
Net farm income without appreciation	$636,422	$1,043,192	63.9
Net farm income with appreciation	$785,573	$1,265,652	61.1
Labor & mgt. income per operator/manager	$192,185	$340,662	77.3
Rate of return on equity capital w/o appreciation	10.73%	16.2%	51.0
Rate of return on all capital without appreciation	8.2%	12.2%	48.8
Financial Summary (excluding deferred taxes)			
Farm net worth, end year	$4,915,132	$6,013,268	22.3
Debt to asset ratio	0.36	0.31	-13.9
Farm debt per cow	$3,193	$3,028	-5.2

[2]Average of 86 large herd dairy farms that provided this data.

RECEIPTS AND EXPENSES PER COW AND PER HUNDREDWEIGHT

Same 94 Large Herd Dairy Farms, 2010 & 2011

	2010		2011	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average number of cows	836		863	
Cwt. of milk sold		209,848		217,152
ACCRUAL OPERATING RECEIPTS				
Milk	$4,475	$17.84	$5,447	$21.65
Dairy cattle	316	1.26	337	1.34
Dairy calves	24	0.10	32	0.13
Other livestock	11	0.04	13	0.05
Crops	191	0.76	116	0.46
Miscellaneous receipts	118	0.47	157	0.62
Total Receipts	$5,136	$20.47	$6,103	$24.25
ACCRUAL OPERATING EXPENSES				
Hired labor	$ 679	$ 2.71	$ 710	$ 2.82
Dairy grain & concentrate	1,254	5.00	1,538	6.11
Dairy roughage	98	0.39	99	0.39
Nondairy feed	0	0.00	0	0.00
Professional nutritional services	2	0.01	1	0.01
Machine hire, rent & lease	88	0.35	90	0.36
Machine repair & vehicle expense	192	0.76	234	0.93
Fuel, oil & grease	156	0.62	215	0.85
Replacement livestock	9	0.04	18	0.07
Breeding	52	0.21	56	0.22
Veterinary & medicine	161	0.64	172	0.68
Milk marketing	224	0.89	213	0.85
Bedding	94	0.38	98	0.39
Milking supplies	93	0.37	94	0.38
Cattle lease	3	0.01	4	0.01
Custom boarding	82	0.33	81	0.32
bST expense	67	0.27	55	0.22
Livestock professional fees	13	0.05	14	0.06
Other livestock expense	15	0.06	18	0.07
Fertilizer & lime	80	0.32	110	0.44
Seeds & plants	94	0.37	101	0.40
Spray & other crop expense	47	0.19	54	0.21
Crop professional fees	8	0.03	6	0.03
Land, building, fence repair	70	0.28	97	0.38
Taxes	48	0.19	52	0.21
Real estate rent/lease	68	0.27	71	0.28
Insurance	40	0.16	44	0.17
Utilities	102	0.41	104	0.41
Interest paid	133	0.53	121	0.48
Other professional fees	24	0.10	27	0.11
Miscellaneous	27	0.11	33	0.13
Total Operating Expenses	$4,024	$16.04	$4,529	$18.00
Expansion livestock	27	0.11	13	0.05
Extraordinary expense	1	0.00	0	0.00
Machinery depreciation	190	0.76	216	0.86
Real estate depreciation	132	0.53	137	0.54
Total Expenses	$4,374	$17.44	$4,895	$19.45
Net Farm Income Without Appreciation	$ 761	$ 3.03	$1,209	$ 4.80

TOP 20 PERCENT COMPARISON TO AVERAGE AND FACTORS CONCERNING DAIRY ENTERPRISE AND PARLOR EFFICIENCY

In 2011, 32 farms across all herd sizes filled out a supplementary data collection form in order to gain information on additional performance factors for dairy farms. Reported below are the averages and business charts for these factors. Each category is sorted independently, therefore farms that are the highest or lowest in one column may not necessarily be the highest or lowest in the next column. Please note that this is only descriptive data from 32 farms and only represents these 32 farms. See the Glossary beginning on page 51 for definitions of the factors in the table below.

On the following page selected factors for the top 20 percent of large herd farms as sorted by rate of return on all assets without appreciation are compared to the same factors for the average of all 101 farms over 300 cows that participated in the DFBS project in 2011. It is useful to see what factors are different between the average and the top 20% and to ask questions about where your own business fits into these factors.

Twenty farms that were in the top 20 percent in 2011 were also in the summary in 2010. The table on page 7 shows income and expenses for these farms for both 2010 and 2011. Identifying the changes that occurred on these farms provides insight into what happened on the most profitable farms. How your farm changed in comparison should provide valuable management information.

SUPPLEMENTAL FARM BUSINESS CHART

32 New York Dairy Farms, 2011

Milking System Only

Quintile	Pounds of Milk Harvested Per Hour of Milking Labor	Total Cows Milked Per Hour of Milking Labor Per Day	Pounds of Milk Harvested per Machine Per Year
Average of Highest Quintile	2,728	64	1,228,740
	1,884	28	738,789
	1,532	24	531,195
	1,220	20	410,849
Average of Lowest Quintile	890	15	182,575
Overall Average	1,623	29	602,083

Dairy Enterprise Only

Quintile	Worker Equivalents	Cows per Worker Equivalent	Pounds Sold per Worker Equivalent
Average of Highest Quintile	14.13	272	4,760,303
	7.85	143	3,185,472
	5.27	107	2,318,161
	2.53	85	2,025,977
Average of Lowest Quintile	1.31	68	1,623,074
Overall Average	6.03	132	2,731,849

TOP 20 PERCENT VERSUS AVERAGE
101 Large Herd Dairy Farms, 2011

Selected Factors	Average 101 Farms	Average Top 20% Farms	Percent Difference
Size of Business			
Average number of cows	851	824	-3.2
Average number of heifers	738	718	-2.7
Milk sold, lbs.	21,296,512	21,378,568	0.4
Worker equivalent	18.57	17.48	-5.9
Total tillable acres	1,665	1,538	-7.6
Rates of Production			
Milk sold per cow, lbs.	25,032	25,940	3.6
Butterfat per cow, lbs.[3]	917	966	5.0
Protein per cow, lbs. [3]	769	807	4.0
Hay DM per acre, tons	3.5	3.5	0.0
Corn silage per acre, tons	16.7	16.7	0.0
Labor Efficiency & Costs			
Cows per worker	46	47	2.2
Milk sold/worker, lbs.	1,146,669	1,223,380	6.7
Hired labor cost/cwt.	$2.82	$2.67	-5.3
Hired labor cost/hired worker	$37,349	$38,554	3.2
Hired labor cost as % of milk sales	13.0%	12.1%	-6.9
Cost Control			
Grain & concentrate purchased as % of milk sales	28%	26%	-7.1
Grain & concentrate per cwt. milk	$6.09	$5.77	-5.3
Dairy feed & crop expense per cwt. milk	$7.56	$7.19	-4.9
Labor & machinery costs/cow	$1,626	$1,554	-4.4
Total farm operating costs per cwt. sold	$18.02	$16.66	-7.6
Interest costs per cwt. milk	$0.48	$0.35	-27.1
Milk marketing costs per cwt. milk sold	$0.85	$0.87	2.4
Operating cost of producing cwt. of milk	$15.45	$14.04	-9.1
Net milk income over purchased feed costs per cow	$3,687	$4,024	9.1
Capital Efficiency (average for the year)			
Farm capital per cow	$9,430	$8,796	-6.7
Machinery & equipment per cow	$1,565	$1,417	-9.5
Asset turnover ratio	0.67	0.75	11.9
Income Generation			
Gross milk sales per cow	$5,422	$5,747	6.0
Gross milk sales per cwt.	$21.66	$22.16	2.3
Net milk sales per cwt.	$20.81	$21.29	2.3
Dairy cattle sales per cow	$339	$370	9.1
Dairy calf sales per cow	$32	$15	-53.1
Profitability			
Net farm income without appreciation	$1,026,474	$1,475,221	43.7
Net farm income with appreciation	$1,238,195	$1,603,732	29.5
Labor & management income per operator/manager	$341,414	$494,988	45.0
Rate of return on equity capital without appreciation	16.3%	24.7%	51.5
Rate of return on all capital without appreciation	12.2%	19.4%	59.0
Financial Summary (excluding deferred taxes)			
Farm net worth, end of year	$5,909,304	$6,039,879	2.2
Debt to asset ratio	0.31	0.23	-25.8
Farm debt per cow	$3,020	$2,165	-28.3

[3]Average of large herd dairy farms that provided this data.

RECEIPTS AND EXPENSES PER COW AND PER HUNDREDWEIGHT

Same 20 Top 20% Large Herd Dairy Farms, 2010 & 2011

	2010		2011	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	795		834	
Cwt. of Milk Sold		205,304		216,638
Accrual Operating Receipts				
Milk	$4,664	$18.05	$5,755	$22.15
Dairy cattle	360	1.39	361	1.39
Dairy calves	23	0.09	14	0.06
Other livestock	12	0.05	51	0.20
Crops	144	0.56	147	0.57
Miscellaneous receipts	93	0.36	127	0.49
Total	$5,296	$20.50	$6,456	$24.85
Accrual Operating Expenses				
Hired labor	$ 678	$ 2.62	$ 695	$ 2.68
Dairy grain & concentrate	1,220	4.72	1,528	5.88
Dairy roughage	127	0.49	124	0.48
Nondairy feed	0	0.00	0	0.00
Professional nutritional services	1	0.00	1	0.00
Machine hire, rent & lease	72	0.28	74	0.28
Machine repair & vehicle expense	191	0.74	211	0.81
Fuel, oil & grease	149	0.58	206	0.79
Replacement livestock	0	0.00	0	0.00
Breeding	54	0.21	57	0.22
Veterinary & medicine	146	0.56	154	0.59
Milk marketing	220	0.85	223	0.86
Bedding	88	0.34	93	0.36
Milking supplies	97	0.38	97	0.37
Cattle lease	6	0.02	9	0.04
Custom boarding	63	0.24	71	0.27
bST expense	49	0.19	36	0.14
Livestock professional fees	15	0.06	17	0.07
Other livestock expense	15	0.06	19	0.07
Fertilizer & lime	93	0.36	98	0.38
Seeds & plants	84	0.32	94	0.36
Spray & other crop expense	36	0.14	52	0.20
Crop professional fees	5	0.02	2	0.01
Land, building & fence repair	59	0.23	72	0.28
Taxes	49	0.19	49	0.19
Real estate rent/lease	74	0.29	68	0.26
Insurance	39	0.15	42	0.16
Utilities	99	0.38	104	0.40
Interest paid	99	0.38	91	0.35
Other professional fees	20	0.08	21	0.08
Miscellaneous	24	0.09	42	0.16
Total Operating Expenses	$3,870	$14.98	$4,352	$16.75
Expansion livestock	25	0.10	9	0.04
Extraordinary Expense	0	0.00	0	0.00
Machinery depreciation	154	0.60	201	0.77
Real Estate depreciation	107	0.41	122	0.47
Total Expenses	$4,156	$16.09	$4,684	$18.03
Net Farm Income without appreciation	$1,139	$ 4.41	$1,771	$ 6.82

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
30 New York Dairy Farms, 2011

Animals Entering Herd	Average
Number calving in 2011 for first time	284
Animals purchased, %[4]	9.8
Animals raised by farm, %[5]	90.2
Current Heifer Inventory	
Raised on dairy, %	81.1
Raised by a custom grower, %	18.9

[4]Animals purchased are animals purchased from a different farm and were not the farm's genetics.
[5]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, 284 animals calved for the first time in 2011. The breakdown on the source of these animals was 9.8 percent purchased and 90.2 percent raised on the farm. Of the current heifer inventory, 81.1 percent were raised on the dairy and 18.9 percent were raised by a custom grower. There is increased interest in evaluating the dairy replacement enterprise.

Milk Income and Marketing Expense Breakdown

Starting January 1st, 2000, the northeast switched to multiple component 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, 98 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 line item in this section is the expense associated with utilizing forward contracting or hedging programs to market milk, such as commissions or broker fees. The fifth area is income from forward contracting or hedging programs. The sixth area is the patronage dividends or refunds from the milk cooperatives. Equity purchased in the milk cooperative utilizing a monthly deduction from the milk check or a percent of the patronage dividend is treated as a capital purchase and is not a milk marketing expense. The cumulative total for these six areas is the net price received on farms. For participating farms, the net farm price can be found on page 13 of the DFBS report.

The table on page 9 reports the averages for these different areas. The table on page 10 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[6] MILK INCOME AND MARKETING REPORT
98 Large Herd Dairy Farms, 2011

	Pounds	Percent	Price/Pound	Total	$/Cwt of Milk
BASE FARM PRICE					
Butterfat	782,065	3.67%	$2.15	$1,678,976	$ 7.88
Protein	656,292	3.08%	$2.96	$1,942,997	$ 9.11
Solids	1,233,178	5.78%	$0.34	$420,897	$ 1.97
Total Component Contribution					$ 18.97
PPD	21,317,425			$312,055	$ 1.46
Base Farm Price					$ 20.43
Premiums					
Quality				$58,158	$ 0.27
Volume				$60,271	$ 0.28
Market Premiums				$118,879	$ 0.56
Total Premiums					$ 1.11
BASE FARM PRICE + PREMIUM					$ 21.54
Deductions					
Promo				$31,950	$ 0.15
Hauling + Stop Charges.				$130,900	$ 0.61
Market Fees & Coop Dues				$14,181	$ 0.07
Total Deductions					$ 0.83
BASE FARM PRICE + PREMIUMS – DEDUCTIONS					$ 20.71
Marketing Programs					
Futures Contracts, Forward Contracting, Etc.				$-28,306	$ -0.13
Total Marketing Income					$ -0.13
Patronage Dividends				$47,177	$ 0.22
NET PRICE RECEIVED ON FARM, ALL SOURCES					**$ 20.80**
PPD - Hauling, per cwt., $ per cwt.					$ 0.85
PPD - Hauling + Market Premiums, per cwt., $ per cwt.					$ 1.41
Net Marketing Value (PPD + Total Premiums – Total Deductions), $ per cwt.					$ 1.75

[6]Each calculation of an average is independent of all others. Therefore, math operations on the detail will not result in the totals. However, detail in the "$/Cwt of Milk" column will result in the totals.

MILK PRICE INFORMATION BY QUINTILE[7]
(Each Category Sorted Independently)
98 Large Herd Dairy Farms, 2011

	Lowest Quintile				Highest Quintile
Butterfat, %	3.51	3.60	3.67	3.72	3.98
Protein, %	2.97	3.04	3.07	3.11	3.25
Other Solids, %	5.66	5.74	5.75	5.77	6.12
Butterfat, $ per Cwt.	7.53	7.73	7.88	8.01	8.51
Protein, $ per Cwt.	8.81	9.00	9.09	9.19	9.53
Other solids, $ per Cwt.	1.92	1.97	1.98	1.98	2.01
Total Component Value per Cwt.	**$ 18.43**	**$ 18.74**	**$ 18.94**	**$ 19.13**	**$ 19.88**
PPD, $ per Cwt.	1.23	1.32	1.42	1.55	1.88
Base Farm Price per Cwt.	**$ 19.76**	**$ 20.17**	**$ 20.37**	**$ 20.64**	**$ 21.57**
Quality, $ per Cwt.	0.09	0.19	0.26	0.32	0.49
Volume, $ per Cwt.	0.00	0.03	0.26	0.44	0.67
Market premium, $ per Cwt.	0.02	0.19	0.46	0.78	1.20
Total Premium, $ per Cwt.	**0.53**	**0.86**	**1.08**	**1.31**	**1.58**
Base Farm Price + Premiums per Cwt.	**$ 20.48**	**$ 21.11**	**$ 21.52**	**$ 21.98**	**$ 22.76**
Promotion, $ per Cwt.	0.15	0.15	0.15	0.15	0.15
Hauling, $ per Cwt.	0.30	0.46	0.57	0.75	1.02
Market fees & coop dues per Cwt.	0.00	0.01	0.06	0.07	0.14
Total Marketing Expenses per Cwt.	**$ 0.48**	**$ 0.65**	**$ 0.80**	**$ 0.99**	**$ 1.25**
Base + Premiums – Deductions per Cwt.	**$ 19.80**	**$ 20.41**	**$ 20.74**	**$ 21.00**	**$ 21.75**
Futures contract, forward contracting, $ per Cwt.	-0.57	-0.02	0.00	0.00	0.00
Total Marketing Income, $ per Cwt.	**$-0.57**	**$-0.02**	**$ 0.00**	**$ 0.00**	**$ 0.00**
Patronage Dividends, $ per Cwt.	**$ 0.00**	**$ 0.00**	**$ 0.00**	**$ 0.07**	**$ 1.13**
Net Price Received From All Sources, $ per Cwt.	**$ 19.84**	**$ 20.48**	**$ 20.83**	**$ 21.14**	**$ 21.97**
PPD – Hauling, $ per cwt.	**$ 0.63**	**$ 0.75**	**$ 0.85**	**$ 0.95**	**$ 1.14**
PPD – Hauling + Market Premiums, $ per cwt.	**$ 0.79**	**$ 1.06**	**$ 1.35**	**$ 1.70**	**$ 2.05**
Net Marketing Value (PPD + Total Premiums – Total Deductions), $ per cwt.	**$ 1.19**	**$ 1.45**	**$ 1.75**	**$ 1.95**	**$ 2.26**

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

SUMMARY AND ANALYSIS OF THE FARM BUSINESS

Business Characteristics

Planning the 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
101 Large Herd Dairy Farms, 2011

Type of Farm	Number
Dairy	98
Dairy – cash crop	3

Type of Ownership	Number
Owner	98
Renter	3

Type of Business	Number
Single proprietorship	11
Partnership	16
Limited Liability Corporation	61
Subchapter S Corporation	10
Subchapter C Corporation	3

Business Record System	Number
Account Book	3
Accounting Service	8
On-Farm Computer	90
Other	0

BST Usage (reporting this is optional)	Number
Used consistently	3
Used inconsistently	1
Started Use in 2011	0
Stopped Use in 2011	3
Not Used	4
Average % bst usage of those reporting	48%

Type of Barn	Number
Stanchion/Tie-Stall	0
Freestall	95
Combination	6

Milking System	Number
Pipeline	0
Herringbone Conventional	26
Herringbone Rapid Exit	15
Parallel	45
Parabone	3
Rotary	5
Other	7

Milking Frequency	Number
2x/day	20
3x/day	71
Other	10

Production Records	Number
Testing Service	77
On-Farm System	18
Other	1
None	4

Breed	Percent
Holstein	95
Jersey	3
Other	3

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 2011.

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
101 Large Herd Dairy Farms, 2011

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
Hired Labor	$ 601,929		$ 2,705		$ 2,132		$ 601,356
Feed							
Dairy grain & concentrate	1,391,368		81,928		-13,338		1,296,102
Dairy roughage	87,014		-724		-2,165		85,572
Nondairy	33		0		0		33
Professional nutritional services	1,132		0		0		1,132
Machinery							
Machinery hire, rent/lease	81,552		21		-1,719		79,812
Mach. repair & farm vehicle exp.	201,516		995		-2,310		198,211
Fuel, oil & grease	182,588		1,035		-332		181,222
Livestock							
Replacement livestock	17,152		0		0		17,152
Breeding	48,533		796		-295		47,442
Vet & medicine	146,467		1,223		-263		144,980
Milk marketing	180,248		0		856		181,104
Bedding	83,853		-254		-329		83,778
Milk supplies	80,578		1,271		245		79,552
Cattle lease/rent	2,914		0		0		2,914
Custom boarding	77,125		1,715		-779		74,632
bST expense	44,906		443		-554		43,909
Livestock professional fees	13,275		992		-4		12,280
Other livestock expense	15,475		57		-407		15,010
Crops							
Fertilizer & lime	106,179		12,545		-183		93,452
Seeds & plants	107,167		21,805		-501		84,860
Spray, other crop exp.	46,309		1,100		105		45,314
Crop professional fees	5,198		36		15		5,178
Real Estate							
Land/bldg./fence repair	81,706		222		-584		80,900
Taxes	44,297		-135		133		44,565
Rent & lease	61,971		874		-228		60,869
Other							
Insurance	37,412		432		-92		36,888
Utilities (farm share)	87,783		29		-452		87,301
Interest paid	102,445		82		-955		101,408
Other professional fees	23,208		200		-42		22,966
Miscellaneous	28,442		0		-687		27,755
Total Operating Expenses	$3,989,774		$129,390		$-22,734		$3,837,651
Expansion livestock	$ 13,009		0		0		13,009
Extraordinary expense	$ 105		0		0		105
Machinery depreciation							180,846
Building depreciation							114,846
Total Accrual Expenses							$4,146,456

Change in prepaid expenses (noted above by <<) is a net change in non-inventory expenses that have been paid in advance of their use. If 2011 funds used to prepay 2012 leases exceed the amount of 2011 leases prepaid in 2010, the amount of this excess is subtracted to exclude it from 2011 accrual lease expenses. The excess prepaid lease is charged against the future year's business operation. A decrease in prepaid lease is added to accrual expenses because it represents use of resources during this year that were paid for in past years.

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 2011 but not paid for. A decrease is subtracted because the resource was used before 2011.

Accrual expenses are the costs of inputs actually used in this year's production. They are the total of cash paid, as well as changes in inventory, prepaid expenses, and accounts payable.

CASH AND ACCRUAL FARM RECEIPTS
101 Large Herd Dairy Farms, 2011

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	$4,462,782				$150,420		$4,613,202
Dairy cattle	235,317		$51,190		2,295		288,802
Dairy calves	25,671		1,815		-3		27,482
Other livestock	13,892		-1,950		-99		11,843
Crops	70,448		22,648		6,246		99,342
Government receipts	22,770		655[8]		323		23,748
Custom machine work	14,398				63		14,460
Gas tax refund	398				0		398
Other	91,609				2,044		93,653
Less nonfarm noncash cap.			0[9]				0
Total Receipts	$4,937,284		$74,358		$161,288		$5,172,930

[8] Change in advanced government receipts.
[9] 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 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 annual increase in advanced government receipts is subtracted from cash income because it represents income received in 2011 for the 2012 crop year in excess of funds earned for 2011. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2011 but received in 2010.

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

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

Profitability Analysis

Farm operators[10] 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.

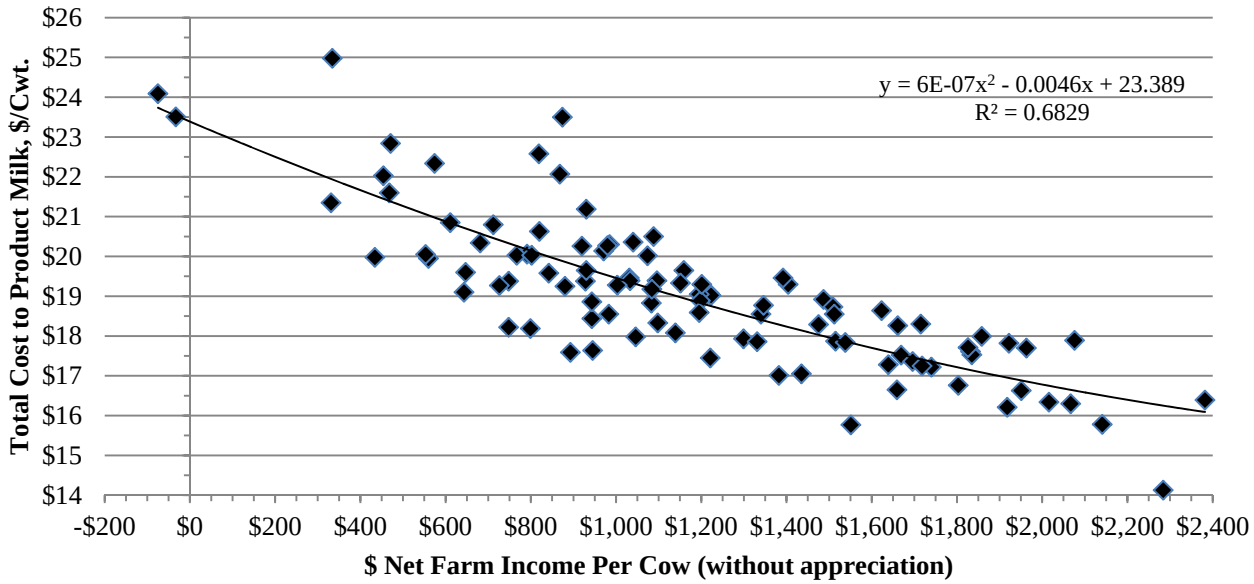
Net farm income is the return to the farm operators and other unpaid family members for their labor, management, and equity capital. It is the farm family's net annual return from working, managing, financing, and owning the farm business. This is not a measure of cash available from the year's business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

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

NET FARM INCOME
101 Large Herd Dairy Farms, 2011

Item	Average 101 farms Total	Average 101 farms Per Cow	Average Top 20%[11] Farms Total	Average Top 20%[11] Farms Per Cow
Total accrual receipts	$ 5,172,930		$ 5,312,997	
Appreciation: Livestock	15,232		5,735	
Machinery	35,555		24,447	
Real Estate	158,369		89,804	
Other Stock/Certificates	2,565		8,523	
Total Including Appreciation	$ 5,384,651		$ 5,441,507	
Total accrual expenses	4,146,456		3,837,775	
Net Farm Income (with appreciation)	$ 1,238,195	$1,455	$ 1,603,732	$1,946
Net Farm Income (without appreciation)	$ 1,026,474	$1,207	$ 1,475,221	$1,790

TOTAL COST TO PRODUCE MILK VS. NET FARM INCOME PER COW
101 Large Herd Dairy Farms, 2011



[10]Operators are the individuals who are integrally involved in the operation and management of the farm business. They are not limited to those who own the farm or are formal members of the partnership or corporation.

[11]Top 20% of large herd farms by rate of return on all assets without appreciation.

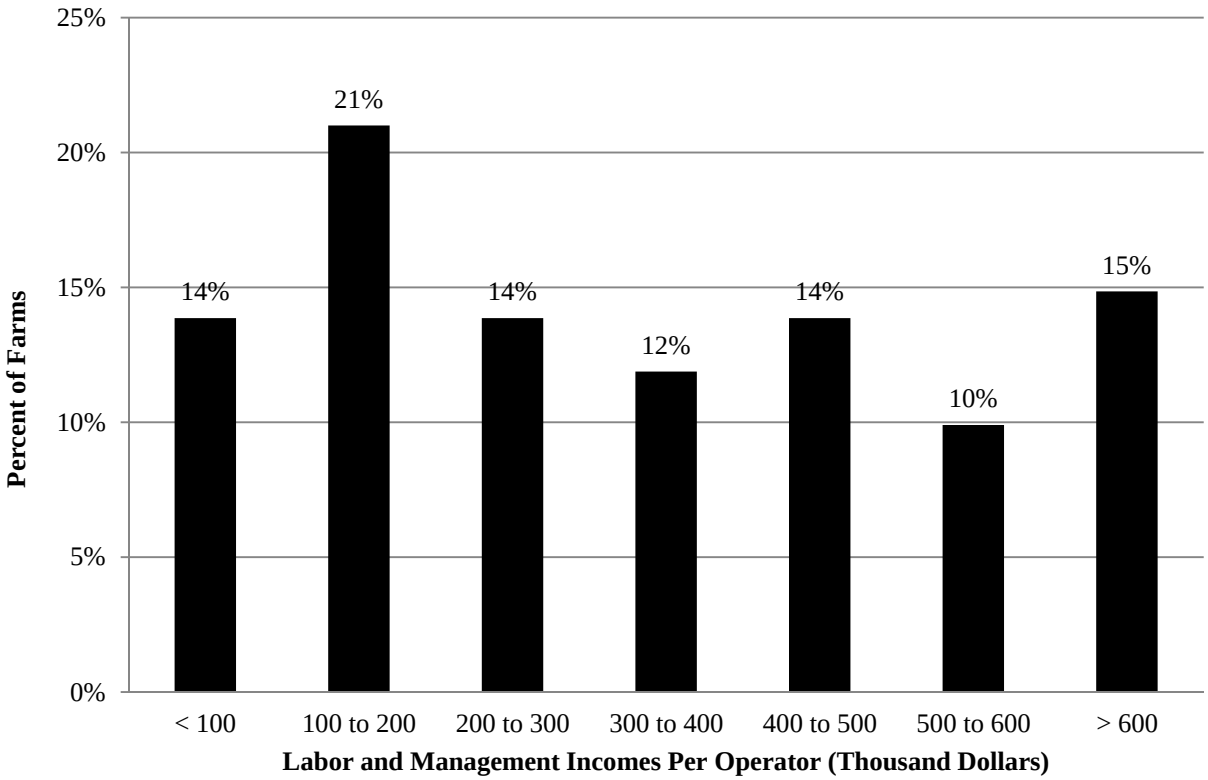
Labor and management income is the return which farm operators receive for their labor and management used in operating the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and management income is calculated by deducting a charge for unpaid family labor and the opportunity cost of using 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
101 Large Herd Dairy Farms, 2011

Item	Average 101 farms	Average Top 20% Farms
Net farm income without appreciation	$ 1,026,474	$ 1,475,221
Family labor unpaid @ $2,550 per month	- 1,490	- 1,287
Interest on $5,404,194 ($5,398,213 for top 20%) average equity capital @ 5% real rate	- 270,460	- 271,112
Labor & Management Income per Farm (2.21 operators/farm; 2.43 operators for top 20%)	$ 754,525	$ 1,202,822
Labor & Management Income per Operator/Manager	$ 341,414	$ 494,988

Labor and management income per operator averaged $341,414 on these 101 farms in 2011. Returns to labor and management were less than $200,000 on 35 percent of the farms. Labor and management income per operator ranged from $200,000 to $500,000 on 40 percent of the farms while 25 percent showed labor and management incomes per operator greater than $500,000.

DISTRIBUTION OF LABOR & MANAGEMENT INCOMES PER OPERATOR
101 Large Herd Dairy Farms, 2011



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

RETURN ON EQUITY CAPITAL AND RETURN ON TOTAL CAPITAL
101 Large Herd Dairy Farms, 2011

Item	Average 101 farms	Average Top 20% Farms
Net farm income with appreciation	$ 1,238,195	$ 1,603,732
Family labor unpaid @ $2,550 per month	- 1,490	- 1,287
Value of operators' labor & management	- 146,487	- 138,756
Return on equity capital with appreciation	$ 1,090,218	$ 1,463,689
Interest paid	+ 101,408	+ 74,046
Return on total capital with appreciation	$ 1,191,625	$ 1,537,734
Return on equity capital without appreciation	$ 878,497	$ 1,335,178
Return on total capital without appreciation	$ 979,905	$ 1,409,224
Rate of return on average equity capital:		
with appreciation	20.2%	27.1%
without appreciation	16.3%	24.7%
Rate of return on average total capital:		
with appreciation	14.9%	21.2%
without appreciation	12.2%	19.4%
Net farm income from operations ratio	0.20	0.28

Farm and Family Financial Status

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

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 2011, leases were discounted by 7 percent.

Advanced government receipts are included as current liabilities. Government payments received in 2011 that are for participation in the 2012 program are the end year balance and payments received in 2010 for participation in the 2011 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.

2011 FARM BUSINESS & NONFARM MARKET VALUE BALANCE SHEET

101 Large Herd Dairy Farms, 2011

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 70,398	$ 75,680	Accounts payable	$ 107,293	$ 84,560
Accounts receivable	283,354	444,641	Operating debt	136,916	185,797
Prepaid expenses	4,976	11,926	Short Term	13,200	10,197
Feed & supplies	861,161	1,006,249	Advanced govt. receipts	655	0
			Current Portion:		
			Intermediate	213,238	229,774
			Long Term	73,894	77,864
Total Current	$ 1,219,889	$ 1,538,497	Total Current	$ 545,196	$ 588,191
Intermediate			Intermediate		
Dairy cows:			Structured debt		
owned	$ 1,153,141	$ 1,186,025	1-10 years	$1,109,042	$ 1,020,463
leased	866	597	Financial lease		
Heifers	671,788	708,442	(cattle/machinery)	1,680	1,711
Bulls/other livestock	18,990	15,738	Farm Credit stock	1,318	1,293
Mach./equipment owned	1,237,931	1,422,574	Total Intermediate	$1,112,040	$ 1,023,468
Mach./equipment leased	814	1,114			
Farm Credit stock	1,318	1,293			
Other stock/certificate	191,276	247,711			
Total Intermediate	$ 3,276,125	$ 3,583,495			
			Long Term		
Long Term			Structured debt		
Land/buildings:			>10 years	$ 990,923	$ 983,785
owned	$ 3,043,716	$ 3,382,756	Financial lease		
leased	167	1,329	(structures)	167	1,329
Total Long Term	$ 3,043,883	$ 3,384,085	Total Long Term	$ 991,090	$ 985,114
			Total Farm Liab.	$2,648,326	$2,596,772
Total Farm Assets	$ 7,539,897	$ 8,506,077	FARM NET WORTH	$4,891,571	$5,909,305

Nonfarm Assets, Liabilities & Net Worth (Average of 24 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	$ 4,893	$ 4,982	Nonfarm Liabilities	$ 1,875	$ 1,704
Cash value life insurance	84,460	92,884			
Nonfarm real estate	299,792	392,917			
Auto (personal share)	4,375	4,125			
Stocks & bonds	68,911	72,771			
Household furnishings	4,563	4,646			
All other nonfarm assets	60,677	69,211			
Total Nonfarm Assets	$527,670	$641,537	NONFARM NET WORTH	$ 525,795	$ 639,833

Farm & Nonfarm Assets, Liabilities, and Net Worth[12]	Jan. 1	Dec. 31
Total Assets	$ 8,067,567	$ 9,147,614
Total Liabilities	2,650,201	2,598,476
TOTAL FARM & NONFARM NET WORTH	$ 5,417,366	$ 6,549,138

[12]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. Debt levels per productive unit represent old standards that are still useful if used with measures of cash flow and repayment ability.

BALANCE SHEET ANALYSIS
101 Large Herd Dairy Farms, 2011

Item		Average 101 farms		Average Top 20% Farms
Financial Ratios - Farm:				
Percent equity		69%		77%
Debt/asset ratio: total		0.31		0.23
long-term		0.29		0.18
intermediate/current		0.31		0.26
Leverage Ratio		0.44		0.30
Current Ratio		2.62		3.24
Working Capital: $950,306	as % of Total Expenses:	23%	$1,077,060	28%
Farm Debt Analysis:				
Accounts payable as % of total debt		3%		2%
Long-term liabilities as a % of total debt		38%		29%
Current & intermediate liabilities as a % of total debt		62%		71%
Cost of term debt (weighted average)		4.2%		3.9%

	Average 101 farms		Average Top 20% Farms	
Farm Debt Levels:	Per Cow	Per Tillable Acre Owned	Per Cow	Per Tillable Acre Owned
Total farm debt	$ 3,020	$3,119	$ 2,165	$ 2,426
Long-term debt	1,146	1,183	618	692
Long-term & intermediate	2,336	2,413	1,596	1,788
Intermediate & current debt	1,874	1,936	1,547	1,734

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
101 Large Herd Dairy Farms, 2011

Item	Average of 101 farms			
		Real Estate		Machinery & Equipment
Value beginning of year		$ 3,043,716		$ 1,237,931
Purchases	$ 419,449 [13]		$ 339,631	
Gift/inheritance	+ 5,941		+ 0	
Lost capital	- 118,878			
Sales	- 10,995		- 9,697	
Depreciation	- 114,846		- 180,846	
Net investment		= 180,671		= 149,088
Appreciation		+ 158,369		+ 35,555
Value end of year		$ 3,382,756		$ 1,422,574

[13] $119,850 land and $299,600 buildings and/or depreciable improvements.

Statement of Owner Equity

The Statement of Owner Equity has two purposes. It allows (1) verification that the accrual income statement and market value balance sheet are interrelated and consistent (in accountants terms, they reconcile) and (2) identification of the causes of change in equity that occurred on the farm during the year. The Statement of Owner Equity allows 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) and (3) increases or decreases in the value (price) of assets owned by the business (called change in valuation equity).

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

STATEMENT OF OWNER EQUITY (RECONCILIATION)
101 Large Herd Dairy Farms, 2011

Item	Average 101 farms		Average Top 20% Farms	
Beginning of year farm net worth		$ 4,899,083		$4,756,546
Net farm income without appreciation	$1,026,474		$ 1,475,221	
+ Nonfarm cash income	+ 4,603		+ 509	
- Personal withdrawals & family expenditures excluding nonfarm borrowings	- 187,780		- $ 173,594	
Retained Earnings		+$ 843,296		+ $1,302,136
Nonfarm noncash transfers to farm	$ 5,941		$ 0	
+ Cash used in business from nonfarm capital	+ 69,963		+ 23,187	
- Note/mortgage from farm real estate sold (nonfarm)	- 0		- 0	
Contributed/Withdrawn Capital	=	+$ 75,904		+ $ 23,187
Appreciation	$ 211,721		$ 128,510	
- Lost capital	- 118,878		- 171,342	
Change in Valuation Equity		+$ 92,842		+ $ -42,832
Imbalance/Error		- 1,821		- -843
End of year farm net worth[14]		=$ 5,909,304		= $6,039,879
Change in net worth with appreciation		$ 1,010,222		$1,283,334
Change in Net Worth				
Without appreciation		$ 798,501		$1,154,824
With appreciation		$ 1,010,222		$1,283,334

[14]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
101 Large Herd Dairy Farms, 2011

Item		Average 101 farms	
Cash Flow from Operating Activities			
Cash farm receipts	$ 4,937,284		
- Cash farm expenses	3,989,774		
- Extraordinary expense	105		
= Net cash farm income		$ 947,405	
Personal withdrawals/family expenses including nonfarm debt payments	$ 187,923		
- Nonfarm income	4,603		
- Net cash withdrawals from the farm		$ 183,321	
= Net Provided by Operating Activities			$ 764,085
Cash Flow From Investing Activities			
Sale of Assets: Machinery	$ 9,697		
+ real estate	10,995		
+ other stock & certificates	828		
= Total asset sales		$ 21,520	
Capital purchases: expansion livestock	$ 13,009		
+ machinery	339,631		
+ real estate	419,449		
+ other stock & certificates	54,699		
- Total invested in farm assets		$ 826,788	
= Net Provided by Investment Activities			$ -805,268
Cash Flow From Financing Activities			
Money borrowed (intermediate & long term)	$ 308,044		
+ Money borrowed (short-term)	7,550		
+ Increase in operating debt	48,881		
+ Cash from nonfarm capital used in business	69,963		
+ Money borrowed - nonfarm	143		
= Cash inflow from financing		$ 434,581	
Principal payments (intermediate & long-term)	$ 375,743		
+ Principal payments (short-term)	10,553		
+ Decrease in operating debt	0		
- Cash outflow for financing		$ 386,296	
= Net Provided by Financing Activities			$ 48,285
Cash Flow From Business			
Beginning farm cash, checking & savings		$ 70,398	
- Ending farm cash, checking & savings		75,680	
= Net Provided from Reserves			$ -5,282
Imbalance (error)			$ 1,820

ANNUAL CASH FLOW STATEMENT
21 Top 20% Large Herd Dairy Farms, 2011

Item		Average Top 20% Farms	
Cash Flow from Operating Activities			
Cash farm receipts	$4,899,244		
- Cash farm expenses	3,724,020		
- Extraordinary expense	0		
= Net cash farm income		$ 1,175,224	
Personal withdrawals/family expenses including nonfarm debt payments	$ 173,594		
- Nonfarm income	509		
- Net cash withdrawals from the farm		$ 173,085	
= Net Provided by Operating Activities			$ 1,002,139
Cash Flow From Investing Activities			
Sale of Assets: Machinery	$ 6,803		
+ real estate	951		
+ other stock & certificate	791		
= Total asset sales		$ 8,546	
Capital purchases: expansion livestock	$ 15,160		
+ machinery	408,164		
+ real estate	497,063		
+ other stock & certificate	67,229		
- Total invested in farm assets		$ 987,616	
= Net Provided by Investment Activities			$ -979,071
Cash Flow From Financing Activities			
Money borrowed (intermediate & long term)	$ 241,212		
+ Money borrowed (short-term)	6,452		
+ Increase in operating debt	74,313		
+ Cash from nonfarm capital used in business	23,187		
+ Money borrowed - nonfarm	0		
= Cash inflow from financing		$ 345,164	
Principal payments (intermediate & long-term)	$ 305,162		
+ Principal payments (short-term)	26,379		
+ Decrease in operating debt	0		
- Cash outflow for financing		$ 331,541	
= Net Provided by Financing Activities			$ 13,623
Cash Flow From Business			
Beginning farm cash, checking & savings		$ 67,961	
- Ending farm cash, checking & savings		105,496	
= Net Provided from Reserves			$ -37,535
Imbalance (error)			$ -843

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 2012. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2012 debt payments shown below.

FARM DEBT PAYMENTS PLANNED
Large Herd Dairy Farms, 2010 & 2011

	Same 94 Dairy Farms			Same 20 Top 20% Farms		
	2011 Payments		Planned	2011 Payments		Planned
Debt Payments	Planned	Made	2012	Planned	Made	2012
Long-term	$ 129,384	$ 160,607	$ 122,708	$ 139,646	$ 88,650	$ 86,810
Intermediate-term	279,337	329,958	279,279	200,427	298,735	198,071
Short-term	6,078	9,783	8,869	13,939	20,640	7,562
Operating (net reduction)	10,051	28,981	9,306	12,000	33,463	20,000
Accounts payable (net reduction)	4,850	30,740	479	0	28,396	0
Total	$ 429,701	$ 560,069	$ 420,641	$ 366,012	$ 469,883	$ 312,443
Per cow	$ 498	$ 649		$ 439	$ 564	
Per cwt. 2011 milk	$ 1.98	$ 2.58		$ 1.69	$ 2.17	
Percent of total 2011 receipts	9%	11%		7%	9%	
Percent of 2011 milk receipts	9%	12%		8%	10%	

The cash flow coverage ratio and debt coverage ratio measure the ability of the farm business to meet its planned debt payments schedule. The ratios show the percentage of payments planned for 2011 (as of December 31, 2010) that could have been made with the amount available for debt service in 2011. Farmers who did not participate in DFBS in 2010 have their 2011 cash flow coverage ratio based on planned debt payments for 2012.

COVERAGE RATIOS
Same 94 Large Herd Dairy Farms, 2010 & 2011

Item	Average	Item	Average
Cash Flow Coverage Ratio		Debt Coverage Ratio	
Cash farm receipts	$ 5,030,582	Net farm income (without appreciation)	$1,043,192
- Cash farm expenses	4,064,297	+ Depreciation	304,362
+ Interest paid (cash)	105,209	+ Interest paid (accrual)	104,204
- Net personal withdrawals from farm[15]	190,459	- Net personal withdrawals from farm[15]	190,459
(A) = Amount Available for Debt Service	$ 881,035	(A') = Repayment Capacity	$1,261,298
(B) = Debt Payments Planned for 2011 (as of December 31, 2010)	$ 429,701	(B) = Debt Payments Planned for 2011 (as of December 31, 2010)	$ 429,701
(A/B) = Cash Flow Coverage Ratio for 2011	2.05	(A'/B) = Debt Coverage Ratio for 2011	2.94

Same 20 Top 20% Dairy Farms, 2010 & 2011

(A) = Amount Available for Debt Service	$ 1,104,957	(A') = Repayment Capacity	$1,641,811
(B) = Debt Payments Planned for 2011	$ 366,012	(B) = Debt Payments Planned for 2011	$ 366,012
(A/B) = Cash Flow Coverage Ratio for 2011	3.02	(A'/B) = Debt Coverage Ratio for 2011	4.49

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

ANNUAL CASH FLOW WORKSHEET

101 Large Herd Dairy Farms, 2011

Item	Average 101 farms Per Cow	Per Cwt.	Total
Number cows and cwt. Milk	851	212,965	
Accrual Operating Receipts			
Milk	$5,422	$21.66	$4,613,202
Dairy cattle	339	1.36	288,802
Dairy calves	32	0.13	27,482
Other livestock	14	0.06	11,843
Crops	117	0.47	99,342
Misc. receipts	155	0.62	132,259
Total Operating Receipts	$6,080	$24.29	$5,172,930
Accrual Operating Expenses			
Hired labor	$ 707	$ 2.82	$ 601,356
Dairy grain & concentrate	1,523	6.09	1,296,102
Dairy roughage	101	0.40	85,573
Nondairy feed	0	0.00	33
Professional nutritional services	1	0.01	1,132
Machinery hire/rent/lease	94	0.37	79,812
Machinery repair & farm vehicle expense	233	0.93	198,211
Fuel, oil & grease	213	0.85	181,222
Replacement livestock	20	0.08	17,152
Breeding	56	0.22	47,442
Veterinary & medicine	170	0.68	144,980
Milk marketing	213	0.85	181,104
Bedding	98	0.39	83,778
Milking supplies	94	0.37	79,552
Cattle lease	3	0.01	2,914
Custom boarding	88	0.35	74,632
bST expense	52	0.21	43,909
Livestock professional fees	14	0.06	12,280
Other livestock expense	18	0.07	15,010
Fertilizer & lime	110	0.44	93,452
Seeds & plants	100	0.40	84,860
Spray/other crop expenses	53	0.21	45,314
Crop professional fees	6	0.02	5,178
Land, building, fence repair	95	0.38	80,900
Taxes	52	0.21	44,565
Real estate rent/lease	72	0.29	60,869
Insurance	43	0.17	36,888
Utilities	103	0.41	87,301
Other professional fees	27	0.11	22,966
Miscellaneous	33	0.13	27,755
Total Less Interest Paid	$4,392	$17.54	$3,736,243
Net Accrual Operating Income (without interest paid)	$1,689	$ 6.75	$1,436,687
- Change in livestock/crop inventory[16]	87	0.35	74,358
- Change in accounts receivable	190	0.76	161,288
- Change in feed/supply inventory[17]	152	0.61	129,390
+ Change in accounts payable[18]	-26	-0.10	-21,779
NET CASH FLOW	$1,234	$ 4.93	$1,049,872
- Net personal withdrawals from farm (see footnote on page 22)	215	0.86	183,178
Available for Farm Debt Payments & Investments	$1,019	$ 4.07	$ 866,694
- Farm debt payments	641	2.56	545,316
Available for Farm Investment	$ 378	$ 1.51	$ 321,379
- Capital purchases: cattle, machinery & improvements	972	3.88	826,788
Additional Capital Needed	$ 594	$ 2.37	$ 505,409

[16]Includes change in advance government receipts.
[17]Includes change in prepaid expenses.
[18]Excludes change in interest account payable.

ANNUAL CASH FLOW WORKSHEET

21 Top 20% Large Herd Dairy Farms, 2011

Item	Average Top 20% Farms		
	Per Cow	Per Cwt.	Total
No. cows or cwt. milk	824	213,786	
Accrual Operating Receipts			
Milk	$5,747	$22.16	$4,736,584
Dairy cattle	370	1.43	304,891
Dairy calves	15	0.06	12,671
Other livestock	49	0.19	40,346
Crops	141	0.55	116,521
Misc. receipts	124	0.48	101,984
Total Operating Receipts	$6,447	$24.85	$5,312,997
Accrual Operating Expenses			
Hired labor	$ 693	$ 2.67	$ 570,789
Dairy grain & concentrate	1,498	5.77	1,234,432
Dairy roughage	122	0.47	100,395
Nondairy feed	0	0.00	0
Professional nutritional services	1	0.00	529
Mach. hire/rent/lease	84	0.32	68,907
Mach. repair & farm vehicle expense	209	0.80	171,890
Fuel, oil & grease	204	0.79	168,146
Replacement livestock	4	0.02	3,673
Breeding	56	0.21	45,961
Veterinary & medicine	152	0.59	125,469
Milk marketing	225	0.87	185,822
Bedding	93	0.36	76,889
Milking supplies	96	0.37	78,740
Cattle lease	9	0.03	7,312
Custom boarding	75	0.29	61,693
bST expense	35	0.13	28,603
Livestock professional fees	17	0.07	14,010
Other livestock expense	18	0.07	14,726
Fertilizer & lime	99	0.38	81,421
Seeds & plants	94	0.36	77,751
Spray/other crop expenses	52	0.20	42,787
Crop professional fees	1	0.01	1,227
Land, building, fence repair	74	0.28	60,813
Taxes	50	0.19	40,900
Real estate rent/lease	67	0.26	54,840
Insurance	42	0.16	34,628
Utilities	103	0.40	84,589
Other professional fees	21	0.08	17,584
Miscellaneous	41	0.16	33,962
Total Less Interest Paid	$4,233	$16.32	$3,488,488
Net Accrual Operating Income (without interest paid)	$2,214	$ 8.53	$1,824,509
- Change in livestock/crop inventory[19]	187	0.72	153,871
- Change in accounts receivable	315	1.22	259,881
- Change in feed/supply inventory[20]	163	0.63	134,641
+ Change in accounts payable[21]	-33	-0.13	-26,888
NET CASH FLOW	$1,516	$ 5.84	$1,249,227
- Net personal withdrawals from farm(see footnote page 22)	210	0.81	173,085
Available for Farm Debt Payments & Investments	$1,306	$ 5.03	$1,076,142
- Farm debt payments	564	2.17	464,544
Available for Farm Investment	$ 742	$ 2.86	$ 611,598
- Capital purchases: cattle, machinery & improvements	1,198	4.62	987,616
Additional Capital Needed	$ 456	$ 1.76	$ 376,018

[19]Includes change in advance government receipts.
[20]Includes change in prepaid expenses.
[21]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, how well crops are producing, and what it costs to produce them is important to evaluating alternative cropping and feed purchasing alternatives.

LAND RESOURCES AND CROP PRODUCTION
101 Large Herd Dairy Farms, 2011

Item	Average 101 farms			Average Top 20% Farms		
Land	Owned	Rented	Total	Owned	Rented	Total
Tillable	833	832	1,665	755	783	1,538
Nontillable	27	7	34	18	3	21
Other nontillable	176	9	185	161	0	161
Total	1,036	848	1,884	934	786	1,720
Crop Yields	Farms	Acres[22]	Prod/Acre	Farms	Acres	Prod/Acre
Hay crop	96	713	3.54 tn DM	19	780	3.52 tn DM
Corn silage	94	696	16.71 tn	19	677	16.70 tn
Other forage	15	151	2.72 tn DM	4	225	3.47 tn DM
Total forage	96	1,417	4.57 tn DM	19	1,504	4.51 tn DM
Corn grain	72	284	133 bu	14	206	133 bu
Oats	4	54	40 bu	0	0	0 bu
Wheat	20	124	56 bu	4	95	51 bu
Other crops	32	187		7	50	
Tillable pasture	10	153		0	0	
Idle tillable	25	84		4	36	
Total Tillable Acres	101	1,665		21	1,538	

[22]This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were corn grain 203, oats 2, wheat 25, tillable pasture 15, and idle 21.

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
96 Large Herd Dairy Farms, 2011 [23]

Item	Average 96 Farms	Average Top 20% Farms
Total tillable acres per cow	2.01	2.06
Total forage acres per cow	1.63	1.82
Harvested forage dry matter, tons per cow	7.48	8.22

[23] 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.

CROP RELATED ACCRUAL EXPENSES
Large Herd Dairy Farms Reporting, 2011

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
No. of farms reporting	96[24]	8			8	
Ave. number of acres	1,740	698			639	
Fertilizer/lime	$ 56.69	$ 49.41	$ 9.19	$ 0.33	$ 42.49	$ 15.44
Seed/plants	51.16	78.64	14.13	0.44	24.75	9.61
Spray/other crop exp.	27.2	46.02	8.19	0.27	15.59	5.82
TOTAL	$ 135.05	$ 174.07	$ 31.51	$ 1.04	$ 82.83	$ 30.87
Average Top 20% Farms:						
No. of farms reporting	19[24]					
Ave. number of acres	1,699					
Fertilizer/lime	$ 58.42					
Seeds/plants	49.58					
Spray/other crop exp.	27.12					
TOTAL	$ 135.12					

[24] Excludes farms that do not harvest forages.

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 [25]
96 Large Herd Dairy Farms, 2011

Machinery Expense Item	Average 96 Farms Total Expenses	Average 96 Farms Per Tillable Acre	Average Top 20% Farms Total Expenses	Average Top 20% Farms Per Tillable Acre
Fuel, oil & grease	$187,112	$ 107.51	$175,737	$ 103.41
Machinery repairs & farm vehicle exp.	204,411	117.45	178,073	104.78
Machine hire, rent & lease	82,487	47.40	74,194	43.66
Interest (5%)	68,830	39.55	62,983	37.06
Depreciation	186,794	107.33	173,208	101.92
Total	$729,633	$419.24	$664,196	$390.83

[25] Excludes farms that do not harvest forages.

Dairy Analysis

Analysis of the dairy enterprise can reveal a great deal about the strengths and weaknesses of the dairy farm business. Information on the following pages 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 14 through 16.

Dairy Analysis (continued)

DAIRY HERD INVENTORY
101 Large Herd Dairy Farms, 2011

	Dairy Cows		Heifers					
			Bred		Open		Calves	
Item	No.	Value	No.	Value	No.	Value	No.	Value
Average 101 farms:								
Beginning year (owned)	830	$1,153,141	261	$361,099	248	$210,002	210	$100,688
+ Change w/o appreciation		22,941		23,950		4,299		1,815
+ Appreciation		9,943		1,005		3,621		1,964
End year (owned)	848	$1,186,025	280	$386,053	254	$217,922	215	$104,466
End including leased	860							
Average number	851		738 (all age groups)					
Average Top 20% Farms:								
Beginning year (owned)	791	$1,094,707	233	$315,197	239	$202,142	228	$104,661
+ Change w/o appreciation		43,131		44,731		7,279		-4,991
+ Appreciation		8,024		1,695		1,354		334
End of year (owned)	822	$1,145,862	267	$361,622	245	$210,775	219	$100,004
End including leased	846							
Average number	824		718 (all age groups)					

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

MILK PRODUCTION
101 Large Herd Dairy Farms, 2011

Item	Average 101 farms	Average Top 20% Farms
Total milk sold, lbs.	21,296,512	21,378,568
Milk sold per cow, lbs.	25,032	25,940
Butterfat per cow, lbs.	917 [26]	966
Protein per cow, lbs.	769 [26]	807
Total butterfat and protein per cow, lbs	1,686 [26]	1,773
Other solids per cow, lbs.	1,446 [26]	1,505
Total components per cow, lbs.	3,132 [26]	3,278

[26] This data is an average for the 82 farms that provided the data.

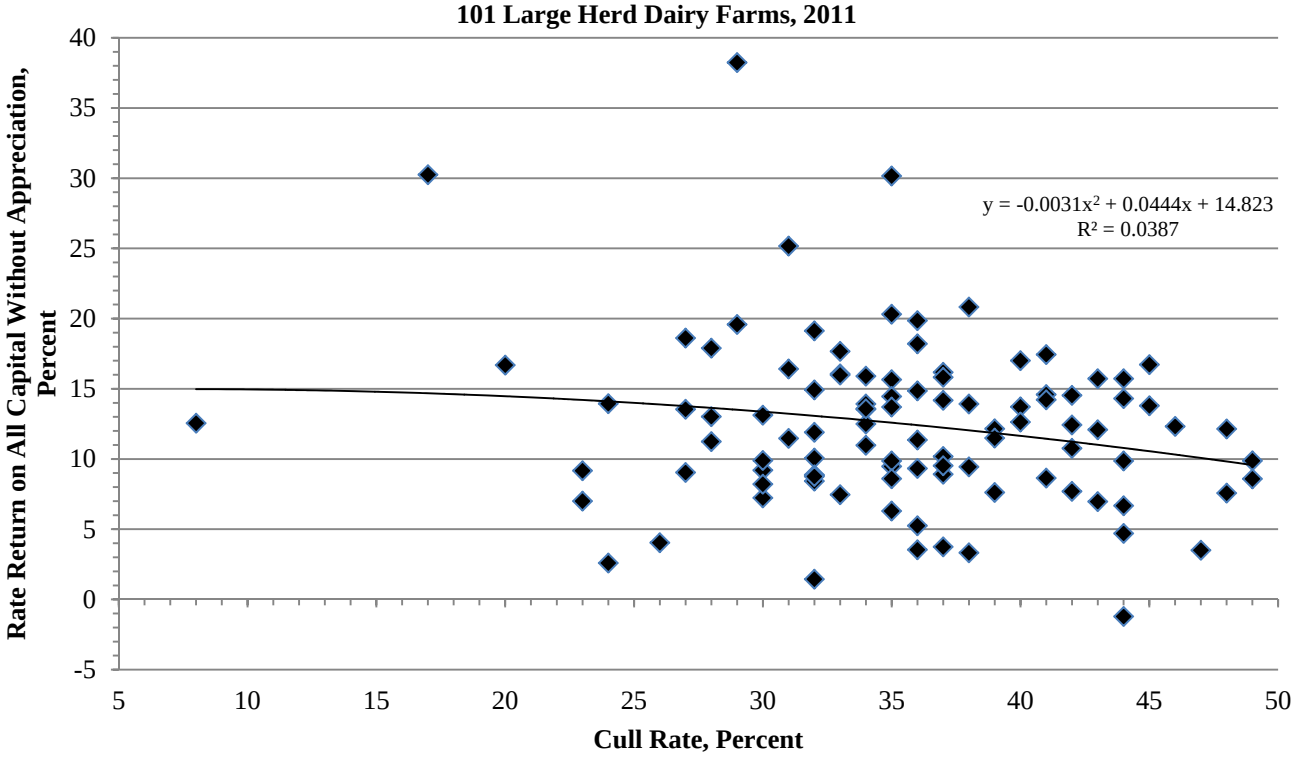
ANIMALS LEAVING THE HERD
101 Large Herd Dairy Farms, 2011

	Average 101 farms		Average Top 20% Farms	
	Number	Percent[27]	Number	Percent[27]
Cows sold for beef	254	29.9	228	27.7
Cows sold for dairy	13	1.5	12	1.5
Cows died	54	6.3	42	5.0
Culling rate[28]	---	36.0	---	33.0

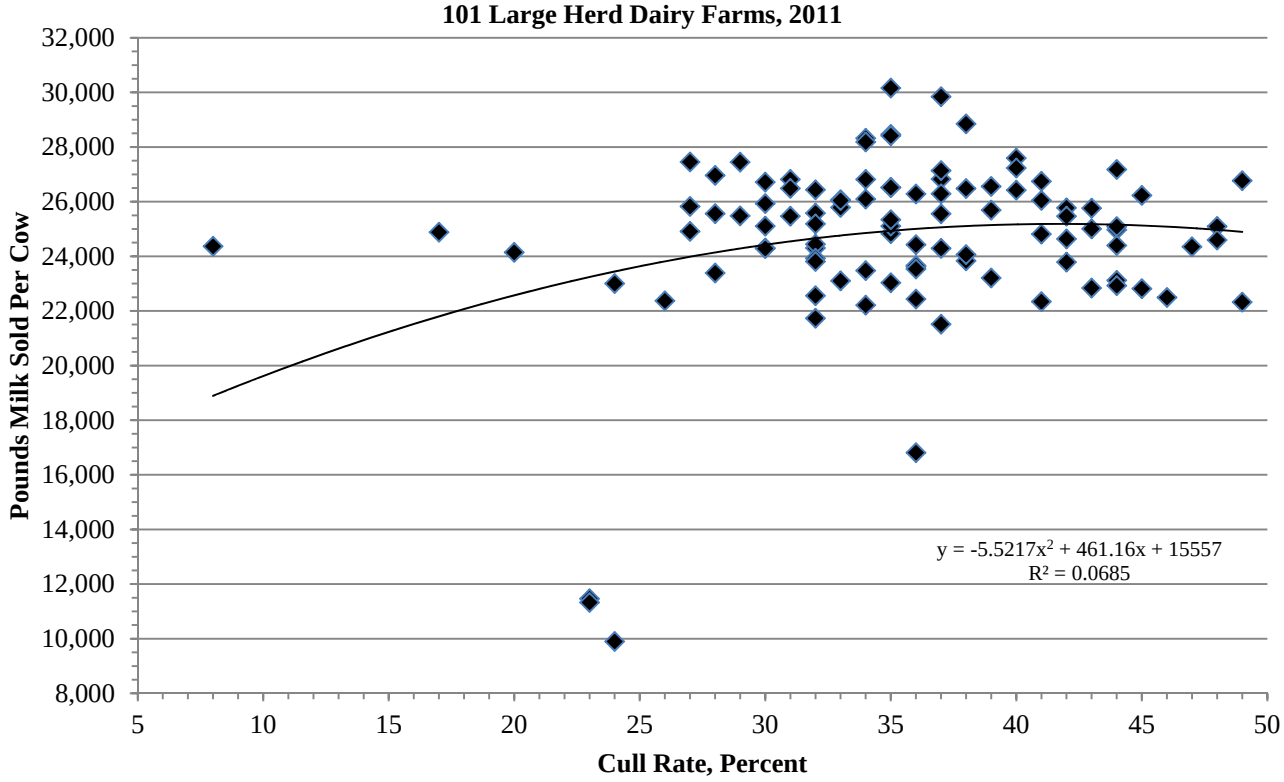
[27] Percent of average number of cows in the herd.
[28] Cows sold for beef plus cows died.

Cull rate measures the turnover of cows within the dairy herd and is comprised of both animals that die on the farm and animals that are sold as beef. Cull rates are impacted by the herd management skills of the farm owners and where the business is in terms of growth cycles and cow life cycles. The following two charts look at the relationship between percent cull rates, milk production and profit levels. There is a curvilinear relationship between cull rate and these two measures for 2011.

RETURN TO ALL CAPITAL WITHOUT APPRECIATION VERSUS CULL RATE
101 Large Herd Dairy Farms, 2011



MILK SOLD PER COW VERSUS CULL RATE
101 Large Herd Dairy Farms, 2011



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 AND COST OF PRODUCING MILK

101 Large Herd Dairy Farms, 2011

	Average 101 farms			Average Top 20% Farms		
Item	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Accrual Costs of Producing Milk						
Operating costs	$ 3,290,932	$ 3,868	$15.45	$ 3,001,281	$ 3,642	$14.04
Purchased inputs costs	$ 3,586,728	$ 4,216	$16.84	$ 3,261,363	$ 3,957	$15.26
Total Costs	$ 4,005,165	$ 4,708	$18.81	$ 3,672,518	$ 4,456	$17.18
Accrual Receipts From Milk	$ 4,613,202	$ 5,422	$21.66	$ 4,736,584	$ 5,747	$22.16
Net Milk Receipts	$ 4,432,098	$ 5,210	$20.81	$ 4,550,762	$ 5,522	$21.29
Net Farm Income without appreciation	$ 1,026,474	$ 1,207	$ 4.82	$ 1,475,221	$ 1,790	$ 6.90
Net Farm Income with appreciation	$ 1,238,195	$ 1,455	$ 5.81	$ 1,603,732	$ 1,946	$ 7.50

The accrual operating expenses most commonly associated with the dairy enterprise are listed in the table below. Evaluating these costs per unit of production enables an evaluation of the dairy enterprise.

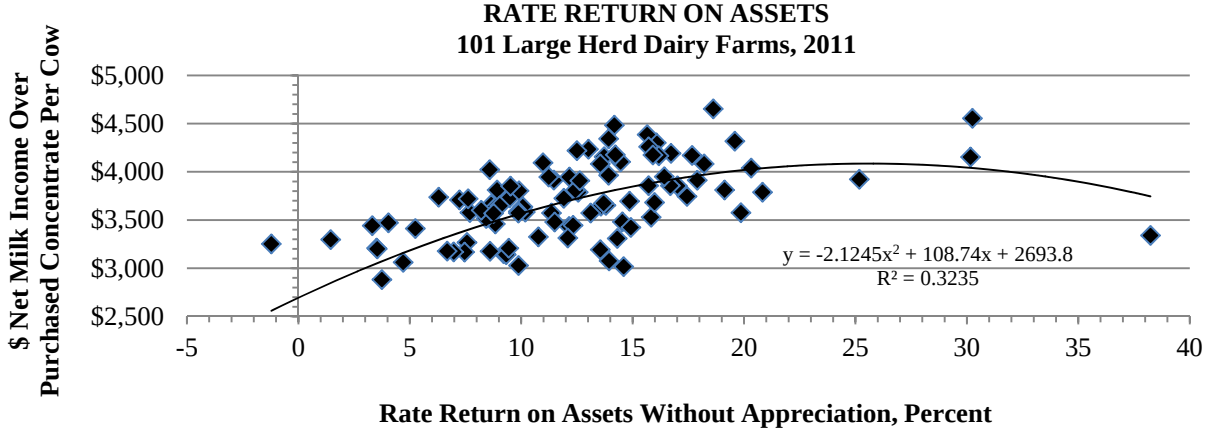
DAIRY RELATED ACCRUAL EXPENSES

101 Large Herd Dairy Farms, 2011

	Average 101 farms		Average Top 20% Farms	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrate	$ 1,523	$6.09	$ 1,498	$ 5.77
Purchased dairy roughage	101	0.40	122	0.47
Total Purchased Dairy Feed	$ 1,624	$6.49	$ 1,620	$ 6.24
Purchased grain & concentrate as % of milk receipts	28%		26%	
Purchased feed & crop expense	$ 1,893	$7.56	$ 1,866	$ 7.19
Purchased feed & crop expense as % of milk receipts	35%		33%	
Breeding	$ 56	$0.22	$ 56	$ 0.21
Veterinary & medicine	170	0.68	152	0.59
Milk marketing	213	0.85	225	0.87
Bedding	98	0.39	93	0.36
Milking supplies	94	0.37	96	0.37
Cattle lease	3	0.01	9	0.03
Custom boarding	88	0.35	75	0.29
bST expense	52	0.21	35	0.13
Livestock professional fees	14	0.06	17	0.07
Other livestock expenses	18	0.07	18	0.07

Net milk income over purchased feed cost per cow is a measure that incorporates the cost of purchased grain and concentrates along with the milk produced per cow and the price received for the component production. It is one of the key measures used to evaluate the effectiveness of the feeding program. Below is the relationship between net milk income over purchased feed cost per cow and return on assets without appreciation.

NET MILK INCOME OVER PURCHASED CONCENTRATE PER COW VERSUS RATE RETURN ON ASSETS
101 Large Herd Dairy Farms, 2011

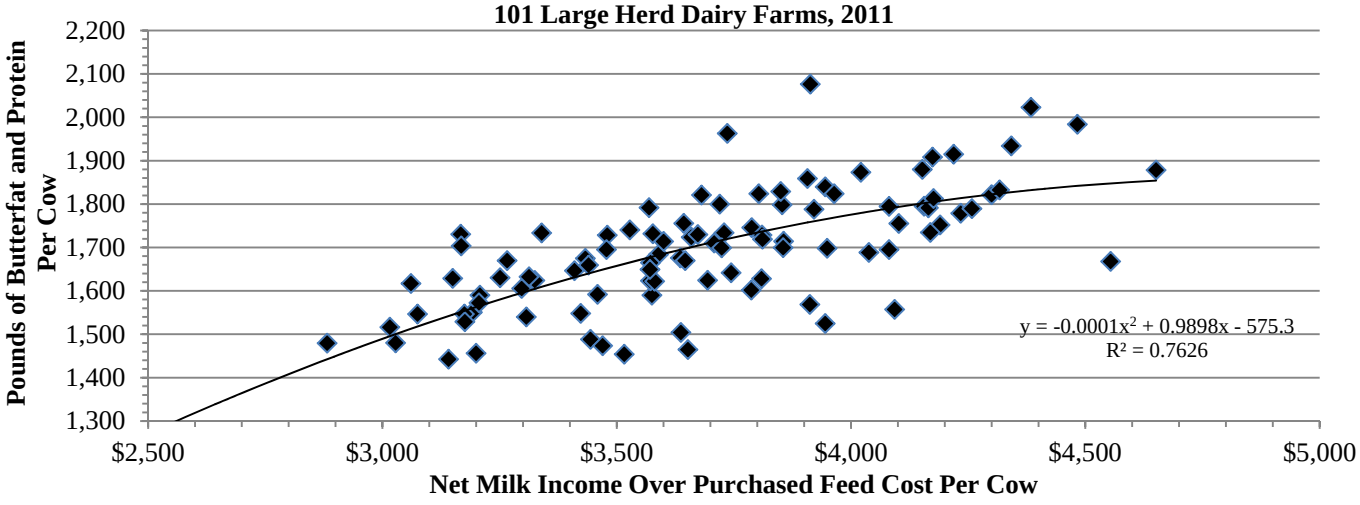


With the change to component milk pricing in 2000, component production has become a focus point for dairy managers. The table and chart below examine the relationship between net milk income over purchased grain and concentrates and cost, price, and milk composition characteristics. The table and charts on page 32 and 33 present costs of producing milk and profitability on the basis of butterfat and protein produced.

COMPONENT PRODUCTION AND COSTS PER HUNDREDWEIGHT BY NET MILK INCOME OVER PURCHASED FEED COST PER COW
101 Large Herd Dairy Farms, 2011

Net Milk Income Over Purchased Feed Cost Per Cow	Milk Production Per Cow	Butterfat pounds Per Cow	Protein Pounds Per Cow	Purchased Feed Costs Per Cwt.	Operating Cost of Producing Milk	Net Milk Price Per Cwt.
$ 5,759	27,297	1,005	$ 847	$ 5.43	$ 14.49	$ 21.10
5,575	26,564	961	811	5.84	14.53	21.01
5,429	25,823	951	823	5.88	14.31	21.03
5,397	25,761	940	788	6.42	14.61	20.96
5,417	26,017	947	797	7.03	16.16	20.84
5,108	24,510	894	748	6.44	14.90	20.85
4,932	24,460	895	746	5.96	15.47	20.20
4,923	23,762	879	736	7.09	16.73	20.73
4,800	23,693	882	716	7.70	17.22	20.26
3,996	18,735	721	589	7.63	16.72	21.54

POUNDS BUTTERFAT AND PROTEIN PER COW VERSUS NET MILK INCOME OVER PURCHASED FEED COST PER COW
101 Large Herd Dairy Farms, 2011



Cost of Producing Milk

The cost of producing milk has been compiled below using the whole farm method. The following steps are used in the calculations.

1. The cost of expansion livestock is added to total accrual operating expenses to offset any related inventory increase included in accrual receipts.

2. Accrual milk sales are deducted form total accrual receipts to get total accrual nonmilk receipts which are used to represent total nonmilk operating costs.

3. Total accrual nonmilk receipts are subtracted from total accrual operating expenses including expansion livestock to calculate the operating costs of producing milk.

4. Machinery depreciation and building depreciation are added to operating costs to determine the purchased inputs cost of producing milk.

5. The opportunity costs of equity capital, operator's labor and operator's management and the value of unpaid family labor are added to all other costs to obtain the total costs of producing milk. This cost includes all the operating, depreciation, and imputed costs of producing milk.

COST OF PRODUCING MILK WHOLE FARM METHOD CALCULATIONS

101 Large Herd Dairy Farms, 2011

Item	Average 101 farms		Average Top 20% Farms	
Total Accrual Operating Expenses	$ 3,837,651		$ 3,562,533	
Expansion Livestock, Accrual	+ 13,009		+ 15,160	
1. Total Accrual Operating Expenses, Including Expansion Livestock		$ 3,850,660		$ 3,577,693
Total Accrual Receipts	$ 5,172,930		$ 5,312,997	
Milk Sales, Accrual	- 4,613,202		- 4,736,584	
2. Total Accrual Nonmilk Receipts		- 559,728		- 576,413
3. Operating Costs of Producing Milk		$ 3,290,932		$ 3,001,281
Cwt. of Milk Sold	÷ 212,965		÷ 213,786	
Operating Costs/Cwt.	= $15.45		= $14.04	
Machinery Depreciation		+ 180,846		+ 161,139
Building Depreciation		+ 114,846		+ 98,943
Extraordinary Expenses		+ 105		+ 0
4. Purchased Inputs Cost of Producing Milk		$ 3,586,728		$ 3,261,363
Cwt. of Milk Sold	÷ 212,965		÷ 213,786	
Purchased Inputs Cost/Cwt.	= $16.84		= $15.26	
Family Labor Unpaid ($2,550/month)		+ 1,490		+ 1,287
Real Interest on Equity Capital		+ 270,460		+ 271,112
Value of Operators' Labor & Management		+ 146,487		+ 138,756
5. Total Costs of Producing Milk		$ 4,005,165		$ 3,672,518
Cwt. Milk Sold	÷ 212,965		÷ 213,786	
Total Costs/Cwt.	= $18.81		= $17.18	

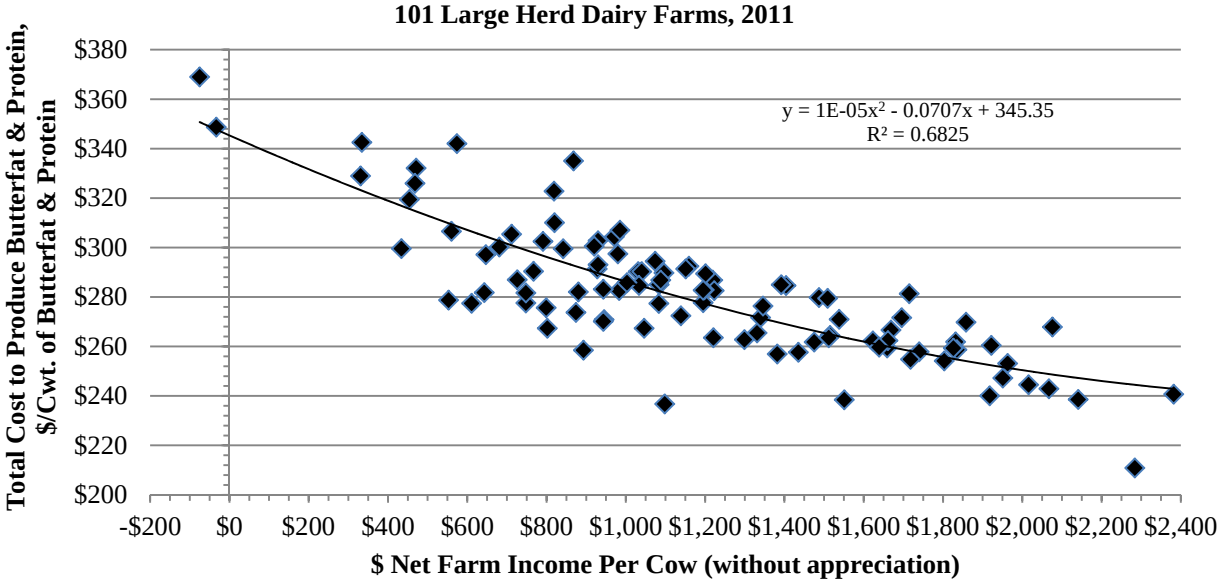
RECEIPTS AND EXPENSES PER HUNDREDWEIGHT OF BUTTERFAT AND PROTEIN[29]

Same 93 Large Herd Dairy Farms, 2010 & 2011

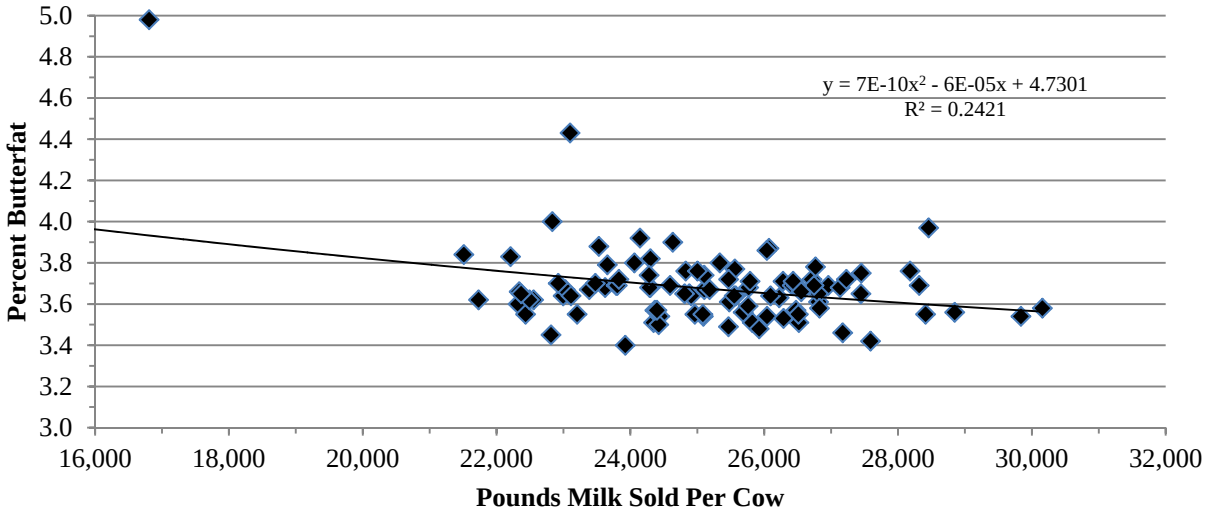
Item	Average Same 93 Large Herd Dairy Farms 2010	Average Same 93 Large Herd Dairy Farms 2011	Average Top 20% Farms 2010	Average Top 20% Farms 2011
Cwt. of butterfat and protein sold	14,105	14,716	13,964	13,832
Accrual Operating Receipts				
Milk	$262.45	$316.15	$265.42	$346.97
Dairy cattle	18.35	19.37	20.49	21.75
Dairy calves	1.47	1.88	1.32	0.87
Other livestock	0.94	0.87	0.67	3.06
Crops	9.85	5.13	8.17	8.87
Miscellaneous receipts	6.72	8.77	5.29	7.67
Total Operating Receipts	$299.78	$352.16	$301.37	$389.18
Accrual Operating Expenses				
Hired labor	$39.73	$41.04	$38.57	$41.91
Dairy grain & concentrate	73.53	89.40	69.42	92.15
Dairy roughage	5.82	5.88	7.23	7.50
Nondairy feed	0.00	0.00	0.00	0.00
Professional nutritional services	0.11	0.08	0.04	0.04
Machine hire, rent & lease	5.17	5.07	4.12	4.45
Machine repair & vehicle expense	11.19	13.45	10.86	12.73
Fuel, oil & grease	9.11	12.35	8.50	12.44
Replacement livestock	0.52	1.09	0.02	0.03
Breeding	3.03	3.18	3.05	3.46
Veterinary & medicine	9.49	9.99	8.30	9.30
Milk marketing	13.18	12.44	12.50	13.44
Bedding	5.52	5.69	4.98	5.62
Milking supplies	5.34	5.38	5.52	5.85
Cattle lease	0.17	0.22	0.34	0.56
Custom boarding	5.11	4.79	3.57	4.28
bST expense	3.87	3.19	2.81	2.17
Livestock professional fees	0.78	0.82	0.84	1.04
Other livestock expense	0.91	1.08	0.86	1.12
Fertilizer & lime	4.52	6.29	5.27	5.90
Seeds & plants	5.31	5.62	4.76	5.69
Spray & other crop expense	2.71	3.06	2.07	3.15
Crop professional fees	0.50	0.39	0.31	0.09
Land, building & fence repair	4.01	5.59	3.34	4.32
Taxes	2.88	3.08	2.80	2.96
Real estate rent/lease	3.83	3.88	4.19	4.10
Insurance	2.35	2.49	2.23	2.56
Utilities	5.84	5.95	5.65	6.26
Interest paid	7.76	6.92	5.65	5.46
Other professional fees	1.39	1.56	1.12	1.29
Miscellaneous	1.58	1.86	1.34	2.52
Total Operating Expenses	$235.24	$261.82	$220.25	$262.39
Expansion livestock	1.51	0.75	1.44	0.55
Extraordinary expense	0.08	0.01	0.00	0.00
Machinery depreciation	10.97	12.27	8.78	12.11
Real Estate depreciation	7.84	7.98	6.08	7.35
Total Expenses	$255.64	$282.83	$236.55	$282.39
Net Farm Income without appreciation	$44.14	$ 69.33	$64.82	$106.79

[29]Average data for farms that provided complete milk component data for 2010 – 2011.

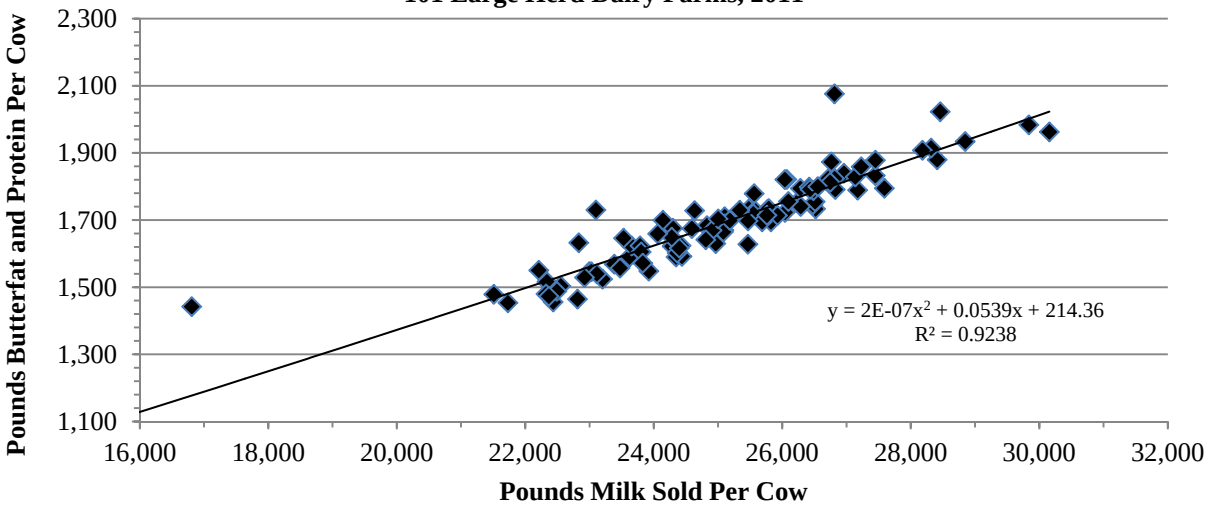
TOTAL COST TO PRODUCE BUTTERFAT & PROTEIN VERSUS NET FARM INCOME PER COW
101 Large Herd Dairy Farms, 2011



POUNDS MILK SOLD PER COW VERSUS PERCENT BUTTERFAT
101 Large Herd Dairy Farms, 2011



POUNDS OF BUTTERFAT AND PROTEIN PER COW VERSUS POUNDS MILK SOLD PER COW
101 Large Herd Dairy Farms, 2011



Capital and Labor Efficiency Analysis

Capital efficiency factors measure how intensively the capital is being used in the farm business. Measures of labor efficiency are key indicators of management's success in generating products per unit of labor input.

CAPITAL EFFICIENCY
101 Large Herd Dairy Farms, 2011

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Average 101 farms:				
Farm capital	$ 432,040	$ 9,430	$ 4,819	$ 9,636
Real estate		3,778		3,860
Machinery & equipment	71,686	1,565	800	
Ratios				
Asset turnover ratio	Operating Expense	Interest Expense	Depreciation Expense	
0.67	0.72	0.02	0.06	
Average Top 20% Farms:				
Farm capital	$ 414,946	$ 8,796	$ 4,715	$ 9,603
Real estate		3,306		3,610
Machinery & equipment	66,848	1,417	760	
Ratios				
Asset turnover ratio	Operating Expense	Interest Expense	Depreciation Expense	
0.75	0.66	0.01	0.05	

LABOR FORCE INVENTORY AND ANALYSIS
101 Large Herd Dairy Farms, 2011

Labor Force	Months	Age	Years of Education	Value of Labor & Mgmt.
Operator number 1	12.45	54	14	$ 65,249
Operator number 2	9.80	47	14	49,692
Operator number 3	4.72	38	16	22,813
Operator number 4	2.11	50	15	8,734
Family paid	2.98			
Family unpaid	0.58			
Hired	190.23			
Total	222.87 / 12 = 18.57 Worker Equivalent			
	2.21Operator/Manager Equivalent			
Average Top 20% Farms:				
Total	209.70 / 12 = 17.48 Worker Equivalent			
Operator's	2.43 Operator/Manager Equivalent			

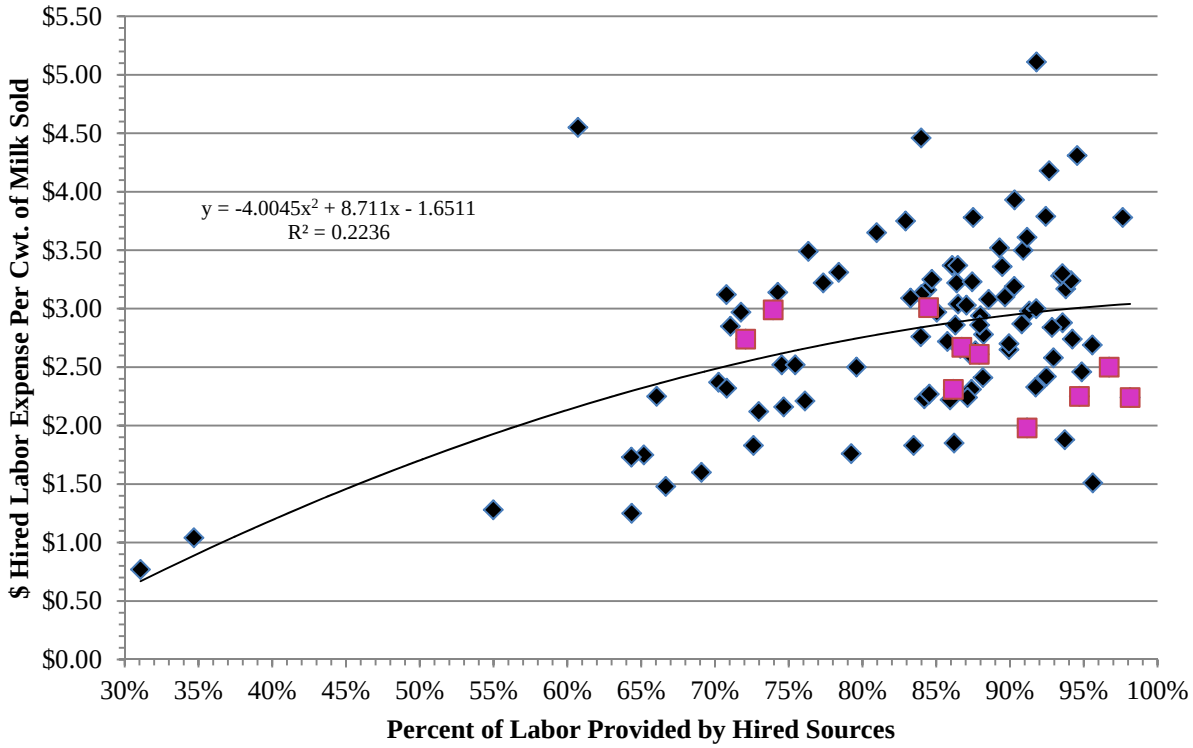
Labor	Average 101 farms		Average Top 20% Farms	
Efficiency	Total	Per Worker	Total	Per Worker
Cows, average number	851	46	824	47
Milk sold, pounds	21,296,512	1,146,669	21,378,568	1,223,380
Tillable acres	1,665	90	1,538	88

	Average 101 farms			Average Top 20% Farms		
Labor Costs	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Value of operator(s) labor ($2,550/month)	$ 74,154	$ 87	$0.35	$ 80,427	$ 98	$ 0.38
Family unpaid ($2,550/month)	1,479	2	0.01	1,275	2	0.01
Hired	601,356	707	2.82	570,789	693	2.67
Total Labor	$ 676,989	$ 796	$3.18	$ 652,491	$ 792	$ 3.05
Machinery Cost	706,651	831	3.32	628,475	763	2.94
Total Labor & Machinery	$1,383,640	$ 1,626	$6.50	$ 1,280,965	$ 1,554	$ 5.99
Hired labor expense per hired worker equiv.		$ 37,349			$ 38,554	
Hired labor expense as % of milk sales		13.0%			12.1%	

Labor Cost Evaluation

Labor costs have been the first or second largest expense on large dairy farms in New York the last five years. A key factor to track on these farms is hired labor expense per cwt. milk sold. The chart below shows the relationship between hired labor expenses per cwt. and percent of labor provided by hired labor sources and can be used to see how your farms' expense compares to other farms. To calculate percent of labor provided by hired sources use the worksheet below.

HIRED LABOR EXPENSE PER CWT OF MILK SOLD VERSUS PERCENT OF LABOR PROVIDED BY HIRED SOURCES
101 Large Herd Dairy Farms, 2011



Worksheet for Determining Percent of Labor From Hired Sources

Divide total hired and family paid months of labor by the total months of labor provided from all sources. These values can be found on page 14 of your farm's Dairy Farm Business Summary report.

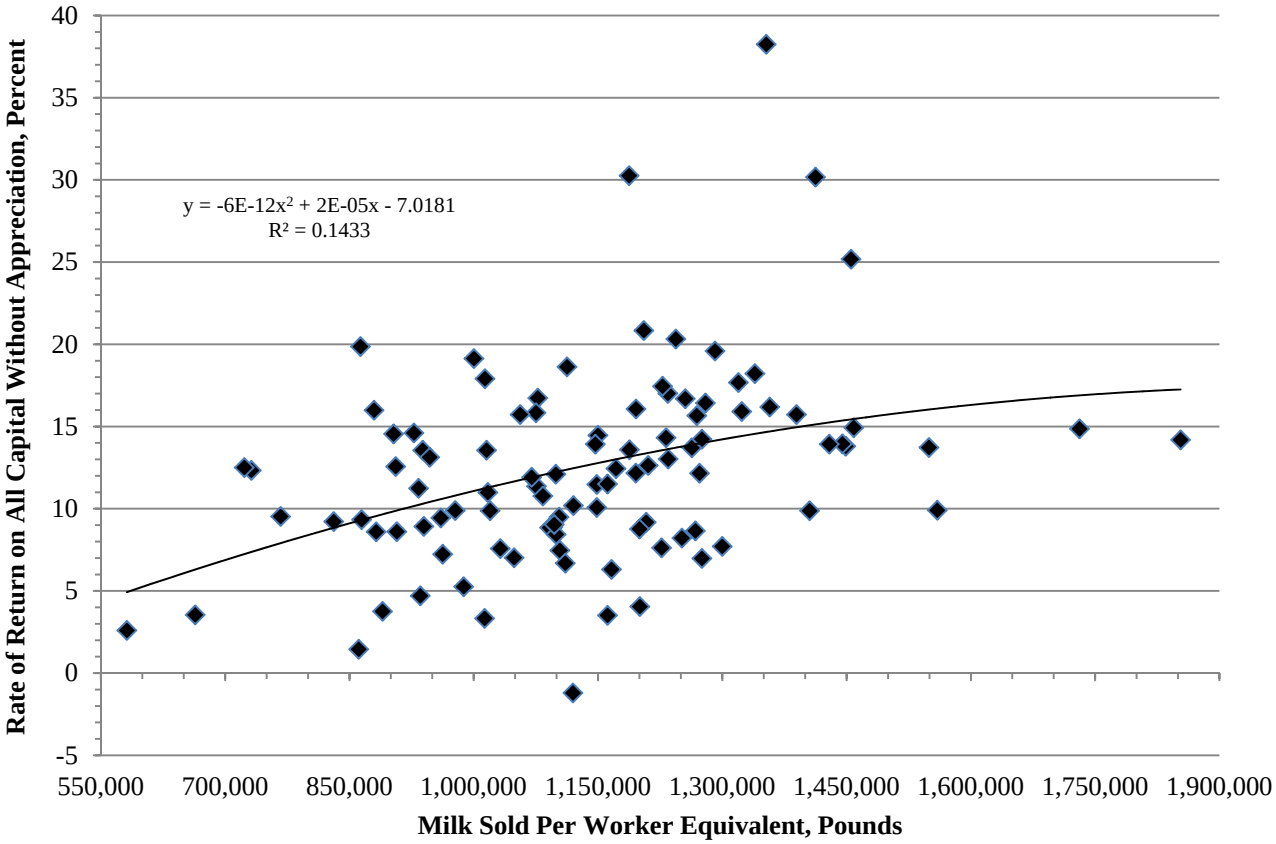
Months of hired labor		_____		
Months of family paid labor	+	_____		
Total hired labor	=		_____	
Total Labor Months	÷		_____	
Percent of labor from hired sources	x 100 =			_____%

The table below is the business chart for labor costs on a per worker and per hour basis and shows the range of costs for these farms. Hired labor expenses are all expenses that are associated with labor, and are not just payroll. The chart below shows the relationship between labor efficiency and return on all capital without appreciation. Labor efficiency improvements are one method that is used to allow the business to reward their employees while maintaining their labor costs per hundredweight of milk produced. A second area is improved cost control of day to day activities, which is one reason why some farms can generate higher than average profits while having some of the higher labor costs per hundredweight of milk sold.

HIRED LABOR EXPENSE BUSINESS CHARTS
101 Large Herd Dairy Farms, 2011

Decile	Hired Labor Expense per Cwt	Hired Labor Expense as % of Milk Sales	Hired Labor Expense per Hired Worker Equivalent	Hired Labor Expense per Hour
Average of Lowest Decile	$ 1.48	7%	$ 27,971	$10.13
	2.08	10	30,509	11.05
	2.31	11	32,376	11.73
	2.54	12	33,755	12.23
	2.71	12	35,240	12.77
	2.90	13	36,980	13.40
	3.06	14	38,712	14.03
	3.22	15	40,564	14.70
	3.49	16	43,571	15.79
Average of Highest Decile	4.08	19	48,888	17.71

RATE OF RETURN ON ALL CAPITAL WITHOUT APPRECIATION VERSUS MILK SOLD PER WORKER EQUIVALENT
101 Large Herd Dairy Farms, 2011



CONDENSED SUMMARY & SELECTED BUSINESS FACTORS

CONDENSED FARM BUSINESS SUMMARY FOR THREE LARGE HERD GROUPS

101 Large Herd Dairy Farms, 2011

Item	38 Farms with 300-599 Cows		30 Farms with 600-899 Cows		33 Farms with ≥900 Cows	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.	Per Cow	Per Cwt.
ACCRUAL EXPENSES						
Hired labor	$ 623	$ 2.62	$ 680	$ 2.75	$ 742	$ 2.89
Dairy grain & concentrate	1,421	5.98	1,529	6.18	1,558	6.07
Dairy roughage	97	0.41	137	0.55	87	0.34
Nondairy feed	0	0.00	0	0.00	0	0.00
Professional nutritional services	1	0.00	2	0.01	1	0.01
Machine hire, rent & lease	156	0.66	90	0.36	67	0.26
Machine repairs & farm vehicle expense	243	1.02	212	0.86	237	0.92
Fuel, oil & grease	216	0.91	210	0.85	212	0.83
Replacement livestock	41	0.17	14	0.06	16	0.06
Breeding	54	0.23	53	0.22	56	0.22
Veterinary & medicine	152	0.64	169	0.68	178	0.69
Milk marketing	192	0.81	197	0.80	229	0.89
Bedding	87	0.37	109	0.44	98	0.38
Milking supplies	81	0.34	91	0.37	97	0.38
Cattle lease & rent	0	0.00	1	0.00	6	0.02
Custom boarding	99	0.41	95	0.38	82	0.32
bST expense	22	0.09	42	0.17	69	0.27
Livestock professional fees	15	0.06	13	0.05	16	0.06
Other livestock expense	20	0.09	13	0.05	20	0.08
Fertilizer & lime	116	0.49	106	0.43	105	0.41
Seeds & plants	92	0.39	86	0.35	104	0.41
Spray & other crop expense	53	0.22	50	0.20	53	0.21
Crop professional fees	7	0.03	7	0.03	5	0.02
Land, building & fence repair	84	0.35	75	0.30	109	0.43
Taxes & rent	122	0.51	125	0.50	116	0.45
Utilities	106	0.45	99	0.40	104	0.41
Interest paid	126	0.53	126	0.51	114	0.44
Other professional fees	24	0.10	24	0.10	28	0.11
Misc. (including insurance)	74	0.31	74	0.30	77	0.30
Total Operating Expenses	$4,324	$18.19	$4,429	$17.91	$4,587	$17.88
Expansion livestock	17	0.07	21	0.08	10	0.04
Extraordinary expense	1	0.00	0	0.00	0	0.00
Machinery depreciation	199	0.84	212	0.86	208	0.81
Building depreciation	127	0.53	125	0.51	140	0.55
Total Accrual Expenses	$4,668	$19.63	$4,787	$19.36	$4,945	$19.28
ACCRUAL RECEIPTS						
Milk sales	$5,142	$21.63	$5,369	$21.70	$5,556	$21.65
Dairy cattle	339	1.43	350	1.42	325	1.27
Dairy calves	42	0.18	32	0.13	28	0.11
Other livestock	7	0.03	45	0.18	2	0.01
Crops	132	0.56	78	0.31	88	0.34
Miscellaneous receipts	136	0.57	102	0.41	176	0.69
Total Accrual Receipts	$5,798	$24.39	$5,976	$24.16	$6,173	$24.06
PROFITABILITY ANALYSIS (Total)						
Net farm income (without appreciation)	$503,465		$875,917		$1,722,737	
Net farm income (with appreciation)	$613,620		$1,099,857		$2,040,717	
Labor & management income	$364,077		$657,753		$1,259,380	
Number of operators	2.04		1.93		2.65	
Labor & management income/operator	$178,469		$340,805		$475,238	
Rates of return on: Equity capital w/o apprec.	14.5%		17.6%		16.3%	
Equity capital w/ apprec.	18.5%		22.8%		19.7%	
All capital w/o apprec.	11.1%		12.6%		12.4%	
All capital w/ apprec.	13.8%		15.9%		14.7%	

SELECTED BUSINESS FACTORS FOR THREE LARGE HERD GROUPS

101 Large Herd Dairy Farms, 2011

Item	38 Farms with 300-599 Cows	30 Farms with 600-899 Cows	33 Farms with ≥ 900 Cows
Cropping Program Analysis			
Total Tillable acres	960	1,384	2,587
Tillable acres rented[30]	519	717	1,145
Hay crop acres[30]	429	572	1,021
Corn silage acres[30]	322	534	1,111
Hay crop, tons DM/acre	3.4	3.7	3.5
Corn silage, tons/acre	16.3	16.7	16.7
Forage DM per cow, tons	7.9	7.7	7.3
Tillable acres/cow	2.2	2.0	1.8
Fertilizer & lime expense/tillable acre	$52.35	$63.06	$55.26
Machinery cost/tillable acre	$408	$413	$435
Dairy Analysis			
Number of cows	446	737	1,403
Number of heifers	372	657	1,208
Milk sold, lbs.	10,593,969	18,219,377	35,994,498
Butterfat & protein, lbs./cow	1,634	1,680	1,722
Milk sold/cow, lbs.	23,777	24,738	25,656
Operating cost of prod. milk/cwt.	$15.50	$15.53	$15.51
Total cost of prod. milk/cwt.	$19.16	$18.74	$18.76
Price/cwt. milk sold	$21.63	$21.70	$21.65
Purchased dairy feed/cow	$1,518	$1,666	$1,645
Purchased dairy feed/cwt. milk	$6.38	$6.74	$6.41
Purchased grain & concentrate as % of milk receipts	28%	29%	28%
Purchased feed & crop expense/cwt. milk	$7.51	$7.74	$7.45
Net milk income over purchased feed costs per cow	$3,530	$3,643	$3,769
Capital Efficiency			
Farm capital/worker	$403,217	$413,026	$456,019
Farm capital/cow	$9,168	$9,141	$9,608
Real estate/cow	$3,615	$3,545	$3,991
Machinery investment/cow	$1,652	$1,532	$1,526
Asset turnover ratio	0.66	0.69	0.67
Labor Efficiency			
Worker equivalent	10.13	16.30	29.56
Operator/manager equivalent	2.04	1.93	2.65
Milk sold/worker, lbs.	1,045,372	1,117,753	1,217,744
Cows/worker	44	45	47
Labor cost/cow	$784	$766	$807
Financial Measures			
Percent equity	69%	67%	71%
Debt/asset ratio - long term	0.36	0.36	0.25
Debt/asset ratio - intermediate & current	0.28	0.32	0.32
Change in net worth with appreciation	$497,516	$913,672	$1,676,753
Total farm debt per cow	$2,992	$3,239	$2,913
Debt payments made per cow	$616	$703	$632
Debt payments as % of milk sales	12%	13%	11%
Amount available for debt service	$425,037	$735,113	$1,468,814
Debt coverage ratio for 2011	2.67	2.58	3.19

[30]Average of all farms, not only those reporting data.

INCOME AND EXPENSE PROFILES BY HERD SIZE

Use two of the following six tables to make an income and expense profile for your dairy farm business. The first two tables represent farms with 300 to 599 cows. The second two tables are of farms with 600 - 899 cows. The third set of tables is of farms with 900 or more cows. The figures in the quintile columns represent the average of the top 20 percent to the bottom 20 percent for each receipt and expenditure category. Each row is computed independently. The farms that comprise the top 20 percent in milk sales do not necessarily make up the top 20 percent of any other category. On each row circle the income and cost measures closest to the one for your farm. Then draw a vertical line connecting your circles on each table. The strongest profile will be a relatively straight line on the left side of the table.

RECEIPTS AND EXPENSES PER COW

38 Large Herd Dairy Farms with 300 – 599 Cows, 2011

	QUINTILE				
Item	1	2	3	4	5
Accrual Operating Receipts					
Milk	$5,925	$5,564	$5,331	$4,974	$4,127
Dairy cattle	534	412	353	272	153
Dairy calves	114	58	33	21	-2
Other livestock	47	0	0	0	-9
Crops	458	217	67	3	-78
Miscellaneous receipts	368	143	108	70	41
Total Operating Receipts	$6,603	$6,279	$5,981	$5,642	$4,677
Accrual Operating Expenses					
Hired labor	$ 301	$ 503	$ 659	$ 769	$ 921
Dairy grain & concentrate	973	1,298	1,461	1,652	1,814
Dairy roughage	0	9	36	82	483
Nondairy feed	0	0	0	0	1
Professional nutritional services	0	0	0	0	4
Machinery hire/rent/lease	10	59	140	230	352
Mach. repair & farm vehicle exp.	123	189	235	288	390
Fuel, oil & grease	144	194	211	235	299
Replacement livestock	0	0	0	0	246
Breeding	17	39	52	73	100
Veterinary & medicine	80	135	157	182	217
Milk marketing	102	154	184	229	327
Bedding	25	62	88	111	178
Milking supplies	40	61	82	100	142
Cattle lease	0	0	0	0	2
Custom boarding	0	0	2	103	453
bST expense	0	0	1	40	92
Livestock professional fees	0	4	14	20	40
Other livestock expense	0	5	17	31	50
Fertilizer & lime	23	78	103	138	234
Seeds & plants	18	74	94	119	149
Spray/other crop expenses	1	30	44	75	109
Crop professional fees	0	0	3	13	23
Land, building, fence repair	22	50	72	97	190
Taxes	24	41	57	75	96
Real estate rent/lease	7	32	50	74	159
Insurance	24	33	41	52	73
Utilities	60	87	105	123	158
Interest	26	77	123	177	251
Other professional fees	5	13	24	35	49
Miscellaneous	6	18	28	38	76
Total Operating Expenses	$3,287	$4,116	$4,414	$4,769	$5,259
Expansion livestock	0	0	0	0	99
Extraordinary expense	0	0	0	0	3
Machinery depreciation	102	140	183	241	352
Building depreciation	45	80	111	163	251
Net Farm Income w/o Appreciation	$ 1,770	$ 1,416	$ 1,064	$ 932	$ 566

RECEIPTS AND EXPENSES PER CWT. OF MILK SOLD

38 Large Herd Dairy Farms with 300 – 599 Cows, 2011

Item	QUINTILE 1	2	3	4	5
Accrual Operating Receipts					
Milk	$22.86	$22.04	$21.67	$21.28	$20.68
Dairy cattle	2.46	1.73	1.46	1.15	0.67
Dairy calves	0.53	0.24	0.15	0.09	-0.01
Other livestock	0.19	0.00	0.00	0.00	-0.07
Crops	2.03	0.94	0.30	0.01	-0.31
Miscellaneous receipts	1.50	0.61	0.46	0.29	0.18
Total Operating Receipts	$26.73	$25.17	$24.29	$23.55	$22.97
Accrual Operating Expenses					
Hired labor	$ 1.35	$ 2.14	$ 2.78	$ 3.16	$ 3.93
Dairy grain & concentrate	4.68	5.61	6.07	6.50	7.20
Dairy roughage	0.00	0.04	0.15	0.37	2.24
Nondairy feed	0.00	0.00	0.00	0.00	0.01
Professional nutritional services	0.00	0.00	0.00	0.00	0.01
Machinery hire/rent/lease	0.04	0.26	0.66	0.95	1.43
Mach. repair & farm vehicle exp.	0.56	0.81	0.99	1.22	1.57
Fuel, oil & grease	0.64	0.77	0.88	1.01	1.27
Replacement livestock	0.00	0.00	0.00	0.00	1.03
Breeding	0.08	0.17	0.22	0.31	0.39
Veterinary & medicine	0.37	0.56	0.64	0.74	0.90
Milk marketing	0.47	0.66	0.79	0.95	1.34
Bedding	0.12	0.26	0.37	0.45	0.70
Milking supplies	0.17	0.26	0.34	0.44	0.65
Cattle lease	0.00	0.00	0.00	0.00	0.01
Custom boarding	0.00	0.00	0.01	0.42	1.79
bST expense	0.00	0.00	0.00	0.16	0.36
Livestock professional fees	0.00	0.02	0.06	0.08	0.16
Other livestock expense	0.00	0.02	0.08	0.13	0.24
Fertilizer & lime	0.09	0.34	0.43	0.61	1.06
Seeds & plants	0.08	0.30	0.38	0.49	0.64
Spray/other crop expenses	0.01	0.12	0.18	0.30	0.45
Crop professional fees	0.00	0.00	0.01	0.05	0.10
Land, building, fence repair	0.10	0.21	0.30	0.41	0.81
Taxes	0.10	0.17	0.23	0.31	0.47
Real estate rent/lease	0.03	0.13	0.21	0.33	0.66
Insurance	0.10	0.15	0.18	0.22	0.31
Utilities	0.29	0.36	0.43	0.51	0.66
Interest	0.11	0.32	0.55	0.79	1.09
Other professional fees	0.02	0.06	0.10	0.14	0.20
Miscellaneous	0.03	0.08	0.12	0.16	0.30
Total Operating Expenses	$15.35	$17.24	$18.39	$19.58	$21.47
Expansion livestock	0.00	0.00	0.00	0.00	0.41
Extraordinary expense	0.00	0.00	0.00	0.00	0.01
Machinery depreciation	0.41	0.61	0.78	1.08	1.56
Building depreciation	0.18	0.32	0.50	0.71	1.14
Net Farm Income w/o Appreciation	$ 7.09	$ 5.54	$4.54	$3.86	$2.79

RECEIPTS AND EXPENSES PER COW

30 Large Herd Dairy Farms with 600 – 899 Cows, 2011

Item	QUINTILE 1	2	3	4	5
Accrual Operating Receipts					
Milk	$6,123	$5,616	$5,387	$5,233	$4,405
Dairy cattle	523	361	332	286	250
Dairy calves	87	43	30	18	-15
Other livestock	272	1	0	0	-1
Crops	365	154	59	-6	-169
Miscellaneous receipts	185	126	90	67	43
Total Operating Receipts	$6,856	$6,273	$6,014	$5,706	$5,015
Accrual Operating Expenses					
Hired labor	$ 520	$ 610	$ 658	$ 745	$ 875
Dairy grain & concentrate	1,013	1,464	1,552	1,684	1,919
Dairy roughage	4	21	36	78	502
Nondairy feed	0	0	0	0	0
Professional nutritional services	0	0	0	0	8
Machinery hire/rent/lease	10	35	63	113	234
Mach. repair & farm vehicle exp.	117	161	196	248	335
Fuel, oil & grease	118	173	209	250	309
Replacement livestock	0	0	0	1	69
Breeding	20	42	52	69	84
Veterinary & medicine	97	146	162	194	240
Milk marketing	109	145	182	239	319
Bedding	35	90	111	136	179
Milking supplies	44	66	85	102	166
Cattle lease	0	0	0	0	4
Custom boarding	0	0	1	52	401
bST expense	0	0	15	66	123
Livestock professional fees	0	6	13	18	28
Other livestock expense	0	0	5	16	45
Fertilizer & lime	30	77	108	132	199
Seeds & plants	23	75	88	103	145
Spray/other crop expenses	4	32	48	60	108
Crop professional fees	0	0	0	6	29
Land, building, fence repair	23	46	72	98	134
Taxes	15	36	48	61	86
Real estate rent/lease	14	31	51	103	184
Insurance	26	35	40	45	64
Utilities	55	80	99	118	143
Interest	38	83	127	165	216
Other professional fees	5	13	19	28	52
Miscellaneous	6	21	30	40	62
Total Operating Expenses	$3,424	$4,207	$4,452	$4,681	$5,342
Expansion livestock	0	0	0	7	107
Extraordinary expense	0	0	0	0	0
Machinery depreciation	67	165	231	264	346
Building depreciation	51	92	114	165	206
Net Farm Income w/o Appreciation	$ 2,026	$ 1,404	$ 1,112	$ 837	$ 566

RECEIPTS AND EXPENSES PER CWT. OF MILK SOLD

30 Large Herd Dairy Farms with 600 – 899 Cows, 2011

Item	QUINTILE 1	2	3	4	5
Accrual Operating Receipts					
Milk	$23.16	$22.22	$21.82	$21.25	$20.64
Dairy cattle	2.17	1.43	1.35	1.23	1.03
Dairy calves	0.45	0.17	0.11	0.07	-0.07
Other livestock	1.24	0.00	0.00	0.00	0.00
Crops	1.51	0.63	0.28	-0.03	-0.64
Miscellaneous receipts	0.75	0.51	0.39	0.27	0.18
Total Operating Receipts	$27.54	$25.00	$24.05	$23.17	$22.37
Accrual Operating Expenses					
Hired labor	$ 2.13	$ 2.37	$ 2.79	$ 3.17	$ 3.57
Dairy grain & concentrate	4.54	5.90	6.28	6.77	7.68
Dairy roughage	0.02	0.08	0.15	0.35	1.90
Nondairy feed	0.00	0.00	0.00	0.00	0.00
Professional nutritional services	0.00	0.00	0.00	0.00	0.03
Machinery hire/rent/lease	0.05	0.15	0.24	0.49	0.98
Mach. repair & farm vehicle exp.	0.49	0.64	0.85	1.02	1.34
Fuel, oil & grease	0.50	0.69	0.84	1.01	1.27
Replacement livestock	0.00	0.00	0.00	0.00	0.28
Breeding	0.08	0.16	0.22	0.28	0.33
Veterinary & medicine	0.42	0.58	0.64	0.77	0.98
Milk marketing	0.46	0.63	0.74	0.98	1.23
Bedding	0.14	0.34	0.45	0.57	0.76
Milking supplies	0.18	0.26	0.35	0.44	0.65
Cattle lease	0.00	0.00	0.00	0.00	0.02
Custom boarding	0.00	0.00	0.00	0.22	1.58
bST expense	0.00	0.00	0.06	0.27	0.44
Livestock professional fees	0.00	0.03	0.05	0.07	0.13
Other livestock expense	0.00	0.00	0.02	0.07	0.18
Fertilizer & lime	0.12	0.31	0.43	0.54	0.96
Seeds & plants	0.10	0.30	0.36	0.43	0.56
Spray/other crop expenses	0.02	0.12	0.18	0.25	0.46
Crop professional fees	0.00	0.00	0.00	0.03	0.13
Land, building, fence repair	0.11	0.19	0.29	0.38	0.52
Taxes	0.06	0.14	0.19	0.25	0.40
Real estate rent/lease	0.05	0.12	0.21	0.44	0.86
Insurance	0.10	0.15	0.16	0.19	0.28
Utilities	0.24	0.33	0.39	0.48	0.56
Interest	0.16	0.35	0.51	0.68	0.89
Other professional fees	0.02	0.06	0.08	0.12	0.20
Miscellaneous	0.03	0.08	0.12	0.17	0.26
Total Operating Expenses	$15.02	$16.68	$18.48	$19.33	$20.87
Expansion livestock	0.00	0.00	0.00	0.03	0.55
Extraordinary expense	0.00	0.00	0.00	0.00	0.00
Machinery depreciation	0.30	0.67	0.94	1.07	1.46
Building depreciation	0.20	0.37	0.48	0.67	0.92
Net Farm Income w/o Appreciation	$ 7.87	$5.43	$4.74	$3.70	$2.39

RECEIPTS AND EXPENSES PER COW

33 Large Herd Dairy Farms with 900 or More Cows, 2011

Item	QUINTILE 1	2	3	4	5
Accrual Operating Receipts					
Milk	$6,233	$5,836	$5,583	$5,362	$4,953
Dairy cattle	463	396	341	293	158
Dairy calves	64	41	29	19	-10
Other livestock	42	2	0	0	-17
Crops	461	154	51	7	-78
Miscellaneous receipts	465	211	154	99	47
Total Operating Receipts	$6,902	$6,539	$6,284	$5,989	$5,509
Accrual Operating Expenses					
Hired labor	$ 541	$ 674	$ 749	$ 834	$ 980
Dairy grain & concentrate	1,210	1,500	1,607	1,691	1,835
Dairy roughage	1	26	61	102	258
Nondairy feed	0	0	0	0	0
Professional nutritional services	0	0	0	0	8
Machinery hire/rent/lease	4	23	47	113	193
Mach. repair & farm vehicle exp.	157	218	248	274	352
Fuel, oil & grease	161	181	215	250	298
Replacement livestock	0	0	0	7	87
Breeding	26	40	59	73	101
Veterinary & medicine	118	162	183	202	243
Milk marketing	124	186	233	278	385
Bedding	23	70	107	134	181
Milking supplies	47	80	101	123	162
Cattle lease	0	0	0	1	28
Custom boarding	0	1	53	127	252
bST expense	0	18	87	107	134
Livestock professional fees	2	11	15	20	42
Other livestock expense	0	0	9	31	68
Fertilizer & lime	35	66	95	137	233
Seeds & plants	65	89	107	125	169
Spray/other crop expenses	23	41	58	70	110
Crop professional fees	0	0	0	7	24
Land, building, fence repair	25	50	80	119	257
Taxes	24	44	54	66	95
Real estate rent/lease	24	44	68	96	121
Insurance	25	38	47	54	73
Utilities	55	95	108	132	166
Interest	31	74	116	155	259
Other professional fees	9	16	28	41	64
Miscellaneous	8	19	31	44	75
Total Operating Expenses	$3,892	$4,438	$4,757	$4,973	$5,328
Expansion livestock	0	0	0	4	41
Extraordinary expense	0	0	0	0	0
Machinery depreciation	129	184	215	245	331
Building depreciation	74	98	120	178	249
Net Farm Income w/o Appreciation	$ 1,892	$ 1,609	$ 1,258	$ 924	$ 486

RECEIPTS AND EXPENSES PER CWT. OF MILK SOLD

33 Large Herd Dairy Farms with 900 or More Cows, 2011

Item	QUINTILE 1	2	3	4	5
Accrual Operating Receipts					
Milk	$23.02	$22.08	$21.64	$21.26	$20.57
Dairy cattle	1.83	1.50	1.33	1.11	0.65
Dairy calves	0.25	0.16	0.11	0.08	-0.04
Other livestock	0.17	0.01	0.00	0.00	-0.08
Crops	1.78	0.60	0.19	0.03	-0.30
Miscellaneous receipts	1.92	0.82	0.59	0.38	0.18
Total Operating Receipts	$26.10	$25.05	$24.19	$23.55	$22.52
Accrual Operating Expenses					
Hired labor	$ 2.17	$ 2.63	$ 2.87	$ 3.17	$ 3.89
Dairy grain & concentrate	4.80	5.76	6.15	6.65	7.21
Dairy roughage	0.00	0.10	0.24	0.41	1.02
Nondairy feed	0.00	0.00	0.00	0.00	0.00
Professional nutritional services	0.00	0.00	0.00	0.00	0.03
Machinery hire/rent/lease	0.02	0.08	0.18	0.44	0.76
Mach. repair & farm vehicle exp.	0.61	0.85	0.96	1.06	1.38
Fuel, oil & grease	0.62	0.71	0.85	0.97	1.16
Replacement livestock	0.00	0.00	0.00	0.03	0.35
Breeding	0.10	0.15	0.23	0.28	0.41
Veterinary & medicine	0.46	0.62	0.70	0.80	1.00
Milk marketing	0.48	0.72	0.93	1.11	1.44
Bedding	0.09	0.28	0.42	0.52	0.69
Milking supplies	0.19	0.31	0.39	0.46	0.66
Cattle lease	0.00	0.00	0.00	0.01	0.11
Custom boarding	0.00	0.00	0.20	0.49	1.02
bST expense	0.00	0.07	0.33	0.41	0.50
Livestock professional fees	0.01	0.04	0.06	0.08	0.16
Other livestock expense	0.00	0.00	0.04	0.12	0.26
Fertilizer & lime	0.14	0.25	0.37	0.53	0.97
Seeds & plants	0.26	0.34	0.41	0.49	0.67
Spray/other crop expenses	0.09	0.16	0.23	0.27	0.42
Crop professional fees	0.00	0.00	0.00	0.03	0.09
Land, building, fence repair	0.10	0.19	0.32	0.47	0.97
Taxes	0.09	0.17	0.21	0.26	0.37
Real estate rent/lease	0.09	0.17	0.26	0.37	0.48
Insurance	0.10	0.14	0.19	0.21	0.29
Utilities	0.22	0.37	0.42	0.52	0.64
Interest	0.12	0.29	0.44	0.63	1.04
Other professional fees	0.03	0.06	0.11	0.16	0.24
Miscellaneous	0.03	0.08	0.12	0.17	0.29
Total Operating Expenses	$15.62	$16.86	$18.07	$19.25	$21.54
Expansion livestock	0.00	0.00	0.00	0.02	0.16
Extraordinary expense	0.00	0.00	0.00	0.00	0.00
Machinery depreciation	0.52	0.70	0.82	0.97	1.29
Building depreciation	0.29	0.39	0.48	0.68	0.95
Net Farm Income w/o Appreciation	$ 7.19	$ 6.11	$ 4.97	$ 3.61	$ 1.93

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 ten figures in each column represent the average of each 10 percent or decile of farms included in this summary. 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 10 percent for any other factor. Use this information to identify business areas where more challenging goals are needed.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS

101 Large Herd Dairy Farms, 2011

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	Number 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)[31]	(12)	(12)	(12)	(11)	(11)	(14)	(14)
41.7	2,077	53,441,940	28,470	5.7	22	69	1,544,144
28.0	1,273	32,915,250	26,918	4.7	20	54	1,349,090
22.6	1,008	25,737,533	26,410	4.2	19	51	1,265,313
18.8	867	22,354,274	25,900	4.0	18	49	1,214,136
17.0	763	19,559,997	25,420	3.7	17	47	1,167,897
15.6	669	16,222,323	24,930	3.4	16	45	1,111,242
13.3	581	13,713,765	24,351	3.2	15	43	1,070,549
11.4	508	11,747,027	23,708	2.9	15	41	1,003,922
9.2	407	9,833,075	22,900	2.6	14	39	928,264
6.6	346	7,428,975	18,350	2.1	12	33	784,584

Cost Control

Grain Bought Per Cow	% Grain is of Milk Receipts	Net Milk Income Over Purchased Feed Cost Per Cow	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(12)	(12)	(CALC)	(14)	(14)	(12)	(12)
$ 895	20%	$4,357	$479	$1,087	$1,213	$5.61
1,204	24	4,135	679	1,392	1,567	6.54
1,358	26	3,976	719	1,497	1,716	6.96
1,446	27	3,840	775	1,545	1,776	7.21
1,523	28	3,707	837	1,616	1,851	7.48
1,578	29	3,614	875	1,688	1,941	7.74
1,639	30	3,522	922	1,748	2,014	7.89
1,700	31	3,355	974	1,837	2,065	8.29
1,767	33	3,189	1,060	1,909	2,169	8.70
1,928	35	2,642	1,167	2,102	2,453	9.93

[31]( ) = page number of the participant's DFBS where factor is located.
CALC=Need to calculate for each farm; refer to the Glossary for definition.

Cost Control (con't)

Hired Labor Expense			Expenses Per Cwt.		
Per Cwt.	Per Hired Worker Equiv.	As % of Milk Sales	Milk Marketing	Veterinary & Medicine	Other Livestock
(14)	(14)	(14)	(15)	(15)	(15)
$1.48	$27,971	7%	$0.39	$0.35	$0.00
2.08	30,509	10	0.55	0.48	0.00
2.31	32,376	11	0.63	0.55	0.00
2.54	33,755	12	0.69	0.60	0.00
2.71	35,240	12	0.76	0.64	0.03
2.90	36,980	13	0.85	0.67	0.06
3.06	38,712	14	0.95	0.72	0.09
3.22	40,564	15	1.06	0.78	0.12
3.49	43,571	16	1.15	0.88	0.17
4.08	48,888	19	1.51	1.05	0.28

Machinery & Crop Expense		Cost of Producing Milk			
		Operating Cost		Total Cost	
Per Tillable Acre	Per Ton Dry Matter	Per Cow	Per Cwt.	Per Cow	Per Cwt.
(CALC)	(CALC)	(12)	(12)	(12)	(12)
$369	$99	$2,629	$12.46	$3,486	$16.17
454	119	3,342	13.77	4,278	17.45
488	127	3,572	14.24	4,441	17.86
521	137	3,663	14.81	4,541	18.32
556	147	3,776	15.41	4,645	18.83
586	155	3,915	15.85	4,759	19.25
619	166	4,084	16.41	4,869	19.55
671	177	4,291	17.14	5,048	20.09
739	193	4,441	17.66	5,264	20.66
1,107	269	4,794	18.52	5,610	22.95

bST Expense Per Cow	bST Expense Per Cwt.	Culling Rate	Expense Ratios		
			Operating	Depreciation	Interest
(12)	(12)	(12)	(14)	(14)	(14)
$ 0	$0.00	24%	0.61	0.02	0.00
0	0.00	29	0.66	0.04	0.01
0	0.00	32	0.68	0.04	0.01
0	0.00	33	0.69	0.05	0.02
6	0.02	35	0.72	0.05	0.02
30	0.13	36	0.74	0.06	0.02
64	0.25	37	0.76	0.06	0.03
92	0.34	40	0.78	0.07	0.03
108	0.41	43	0.80	0.08	0.04
133	0.50	46	0.85	0.10	0.05

Income Generation

Milk Receipts Per Cwt.	Net Milk Receipts Per Cwt.	Milk Receipts Per Cow	Dairy Cattle Sales Per Cow	Dairy Calf Sales Per Cow
(12)	(12)	(12)	(12)	(12)
$23.47	$22.37	$6,261	$579	$112
22.51	21.63	5,943	434	69
22.20	21.31	5,709	405	48
21.93	21.05	5,573	366	40
21.75	20.90	5,478	348	31
21.60	20.76	5,366	329	28
21.37	20.60	5,258	301	22
21.16	20.39	5,099	268	15
20.85	20.14	4,873	231	6
20.40	19.60	4,051	132	-22

Debt Management

Farm Debt Per Cow		Cost of	Planned Debt Payments	
Total	Intermediate & Long Term	Borrowed Capital	Per Cow	Per Cwt.
(7)	(7)	(7)	(10)	(10)
$ 560	$ 270	1.8%	$ 53	$0.27
1,507	1,013	3.5	228	1.00
1,990	1,434	4.0	299	1.00
2,560	1,871	4.0	382	1.40
2,949	2,214	4.0	447	2.00
3,262	2,519	4.0	510	2.00
3,704	3,017	4.0	594	2.40
4,176	3,404	4.3	669	3.00
4,653	3,860	5.0	774	3.00
5,765	4,547	6.8	915	4.20

Cash Flow Analysis

Amount Available for Family Living, Debt Service & Investment		Personal Withdrawals & Family Expenditures		Cash Flow Coverage
Per Cow	Per Cwt.	Per Cow	Per Cwt.	Ratio
(16)	(16)	(CALC)	(CALC)	(10)
$1,940	$7.79	$570	$2.27	6.39
1,681	6.89	367	1.58	4.68
1,554	6.26	295	1.20	3.04
1,421	5.86	255	1.06	2.55
1,270	5.28	215	0.87	2.24
1,163	4.75	172	0.72	1.81
1,005	4.24	149	0.61	1.56
921	3.73	118	0.49	1.30
815	3.26	87	0.36	1.00
583	2.45	50	0.19	0.57

Capital Efficiency

Farm Capital Per Cow	Real Estate Investment Per Cow	Machinery Investment Per Cow	Total Labor Cost Per Worker Equivalent	Asset Turnover Ratio
(14)	(14)	(14)	(CALC)	(14)
$ 5,602	$1,539	$ 594	$28,477	1.14
7,552	2,667	971	30,497	0.85
8,083	2,919	1,228	32,021	0.77
8,525	3,127	1,406	33,187	0.73
9,111	3,336	1,607	34,500	0.68
9,655	3,644	1,724	35,835	0.65
10,151	4,271	1,855	37,302	0.62
10,877	4,711	1,959	38,863	0.60
11,799	5,275	2,183	41,594	0.55
13,213	6,621	2,687	46,075	0.46

Solvency					Liquidity	
		Debt to Asset Ratios			Working Capital	
Percent Equity	Leverage Ratio	Total	Current/ Intermediate	Long Term	as % of Total Expenses	Current Ratio
(7)	(7)	(7)	(7)	(7)	(7)	(7)
95%	-2.19	0.06	0.04	0.00	54%	83.18%
87	0.15	0.13	0.14	0.02	43	6.84
80	0.25	0.20	0.21	0.09	32	4.30
75	0.34	0.26	0.25	0.16	26	3.35
67	0.48	0.33	0.28	0.28	23	2.91
63	0.58	0.37	0.32	0.39	18	2.33
60	0.66	0.40	0.37	0.45	13	1.88
57	0.76	0.44	0.42	0.53	11	1.60
51	0.96	0.50	0.50	0.62	7	1.36
39	1.34	0.62	0.70	1.81	-3	0.88

Profitability

Labor and Mgmt. Income Per Operator	Rate Return to Equity Capital		Rate Return to All Capital	
	Without Appreciation	With Appreciation	Without Appreciation	With Appreciation
(4)	(4)	(4)	(4)	(4)
$ 1,073,633	32.98%	43.57%	24.22%	28.50%
661,083	24.36	29.66	16.93	20.15
500,170	22.00	25.49	15.43	17.19
444,712	19.89	23.46	14.10	16.23
332,933	17.45	21.09	13.02	14.98
255,803	15.64	19.46	11.37	14.00
198,407	13.61	17.78	9.66	12.82
163,805	11.68	15.06	8.79	11.64
113,703	9.26	11.94	7.41	9.84
7,725	2.77	6.56	3.39	6.24

Profitability, Continued

Net Farm Income Without Appreciation		Net Farm Income From Operations	Net Income Efficiency
Per Cow	Per Cwt.	Ratio	Ratio
(12)	(12)	(4)	(CALC)
$ 2,020	$ 7.92	32%	25%
1,750	6.75	28	17
1,564	5.88	24	14
1,358	5.31	22	12
1,168	4.95	20	11
1,047	4.37	18	9
947	3.94	17	8
848	3.55	15	7
707	3.12	13	6
370	1.65	07	4

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 proper 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 designate a **T**ime when each goal will be achieved.

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

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

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

a. Begin with a mission statement which describes why the business exists based on the preferences and values of the owners.

b. Identify 4-6 objectives.

c. Identify SMART goals.

Worksheet for Setting Goals

I. Mission and Objectives

_____

_____

_____

_____

_____

_____

_____

_____

Worksheet for Setting Goals (Continued)

II. Goals

What	How	When	Who is Responsible
____________	____________	____________	____________
____________	____________	____________	____________
____________	____________	____________	____________
____________	____________	____________	____________
____________	____________	____________	____________
____________	____________	____________	____________
____________	____________	____________	____________
____________	____________	____________	____________
____________	____________	____________	____________
____________	____________	____________	____________
____________	____________	____________	____________
____________	____________	____________	____________

Summarize Your Business Performance

The Farm Business Charts on pages 45-48 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

Some of the following definitions include formulas for calculating the factor being described. Page references to the individual Dairy Farm Business Summary are provided in parentheses for ease of calculation for your farm.

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 13).

Accrual Receipts - (defined on page 13).

Annual Cash Flow Statement - (defined on page 20).

Appreciation - (defined on page 14).

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.

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 22).

Cash Paid - (defined on page 11).

Cash Receipts - (defined on page 13).

Change in Accounts Payable - (defined on page 11).

Change in Accounts Receivable - (defined on page 11).

Change in Inventory - (defined on page 11).

Cost of Borrowed Capital - 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. This information is found on pages 10 & 11 of the data entry form.

Cows per Worker Equivalent for the Dairy Enterprise - Determined by dividing the average number of milking and dry cows by the number of worker equivalents in the dairy enterprise.

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

Current Portion - (defined on page 16).

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 Enterprise Only – Dairy enterprise only represents the estimate of labor hours, hired and family, that was utilized to operate the dairy. This estimate includes all labor to milk, feed, scrape, and take care of the milking and dry cows. Labor to take care of dairy replacements, produce crops, and spread manure was excluded. Labor efficiency numbers calculated for the dairy enterprise only help evaluate the labor efficiency of the dairy and the overall business.

Debt Coverage Ratio – (defined on page 22).

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

Debt to Asset Ratios - (defined on page 18).

Depreciation Expense Ratio - The percentage of Total Accrual Receipts that is charged to depreciation expense. Machinery Depreciation (DFBS p. 3) plus Building Depreciation (p. 3) divided by Total Accrual Receipts (p. 3) times 100.

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 22.

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

Financial Lease - A long-term non-cancellable contract giving the leassee 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 (DFBS p. 2) by number of hired plus family paid worker equivalents (p. 14).

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 (DFBS p. 2) by accrual milk sales (p. 3).

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 - The percentage of Total Accrual Receipts that is used for interest expense. Total Accrual Interest (DFBS p. 3) divided by Total Accrual Receipts (p. 3) times 100.

Labor and Management Income - (defined on page 15).

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

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

Machinery & Crop Expenses per Tillable Acre - A measure of the cost to produce crops on a tillable acre basis. Add total crop expenses (DFBS p. 2) and total machinery expenses (p. 11), then divide by number of tillable acres, owned & rented (p. 11).

Machinery & Crop Expense per Ton Dry Matter - A measure of the cost per ton of DM to produce a crop. It is not a measure of total costs to produce feed. Add total crop expenses (DFBS p. 2) and total machinery expenses (p. 11), then divide by total forage, production, tons DM (p. 11).

Milk Sold per Worker Equivalent for the Dairy Enterprise – Determined by dividing the total amount of milk produced in the year by the number of worker equivalents in the dairy enterprise

Milking System Only – The milking center of dairy farms is a major investment and utilizes a significant portion of the farm labor. Producers provided estimates concerning the number of labor hours per day spent employed in the milking center and the number of milking units utilized. The labor represents time spent to set up, milk cows, and clean the milking center during a 24-hour period. Time spent to move cows to and from the milking center is not included.

Net Farm Income - (defined on page 14).

Net Farm Income from Operations Ratio - The percentage of each gross dollar that is generated that is net farm income. Net Farm Income without Appreciation (DFBS p. 4) divided by Total Accrual Receipts (p. 3) times 100.

Net Farm Income without Appreciation per Cwt. - The amount of net farm income, without appreciation, per cwt., that the farm generated. Divide net farm income without appreciation (DFBS p. 4) by number of cwt. of milk sold, which is total milk sold (p. 12) divided by 100.

Net Farm Income without Appreciation per Cow - The amount of net farm income, without appreciation, per cow that the farm generated. Divide net farm income without appreciation (DFBS p. 4) by average number of cows for the year (p. 12).

Net Income Efficiency Ratio - A measure of how efficiently the business is in generating net income, taking into account the differences in number of operators, debt levels, and amount of unpaid family labor being used on a farm. Net farm income without appreciation minus unpaid family labor charge (DFBS p. 4), plus Accrual Interest Paid (p. 3), divided by number of operators (p. 4), divided by Total Accrual Receipts (p. 3) times 100.

Net Milk Income over Purchased Feed Costs per Cow – A measure of the overall performance of the feeding program for the dairy. Gross milk sales per cow minus milk marketing expenses per cow minus purchased grain and concentrates per cow.

Net Milk Receipts per Cwt. - The mail box price received by farmers before any farmer authorized assignments or deductions. Accrual Receipts from milk, per cwt. (DFBS p. 12) minus accrual milk marketing expense per cwt. (p. 12).

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 29).

Operating Expense Ratio - The percentage of Total Accrual Receipts that is used for operating expenses, excluding interest & depreciation. Total Accrual Expenses (DFBS p. 3) minus Machinery Depreciation (p. 3), minus Building Depreciation (p. 3), minus Accrual Interest Expense (p. 3), divided by Total Accrual Receipts (p. 3) times 100.

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; bedding, milk house and parlor supplies, livestock board, registration fees and transfers.

Percent Herd on bST – Percent of maximum number of cow days per year that could be supplemented following label restrictions that were treated with bST.

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.

Personal Withdrawals & Family Expenditures per Cwt. - The amount of money on a per cwt. basis that the family uses for family living and personal expenses. This is the total amount, per cwt., used by the family, including farm and nonfarm income. Personal withdrawals/family expense, including nonfarm debt payments (DFBS p. 9) divided by pounds milk sold (p. 12) divided by 100.

Personal Withdrawals & Family Expenditures per Cow - The amount of money on a per cow basis that the family used for family living and personal expenses. This is the total amount, per cow, used by the family, including farm and nonfarm income. Personal withdrawals/family expense, including nonfarm debt payments (DFBS p. 9) divided by average number of cows (p. 12).

Pounds of Milk Harvested per Hour of Milking Labor – Calculated by dividing the total pounds milk produced by the total number of labor hours used to operate the milking center for one year. The total number of labor hours is estimated by multiplying the number of hours to operate the milking center for one day, which was provided by the participating dairies, by 365. Operating the milking center includes setting up, milking, and washing down the milking center, but doesn't include time spent to bring cows to and from the milking center.

Pounds of Milk Harvested per Machine Per Year – Calculated by dividing the total pounds of milk produced for the year by the number of milking machines in the milking center.

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 29).

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 16).

Return on Total Capital - (defined on page 16).

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

Total Costs of Producing Milk - (defined on page 29).

Total Cows Milked Per Hour of Milking Labor Per Day – Determined by dividing the average number of milking and dry cows by the labor hours required to operate the milking center for a one day period.

Total Labor Costs per Worker Equivalent, All Labor - The average cost per worker equivalent when considering all labor (hired, paid family, family non-paid, and operators) used on the farm and total costs for this labor. Total Labor Cost (p. 14) divided by number of worker equivalents (p. 14).

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.

Worker Equivalents for the Dairy Enterprise – Determined by the farmer estimating how many of hours of labor are spent in the milking center and dairy complex performing all routine tasks. Labor spent in the field or in the dairy replacement enterprise is excluded. The daily labor estimate is multiplied by 365 days and then divided by 2,760 hours to get the number of worker equivalents.

INDEX

OTHER A.E.M. EXTENSION BULLETINS

EB No	Title	Fee (if applicable)	Author(s)
2012-01	Dairy Farm Business Summary, New York Organic Dairy Farms, 2010	($16.00)	Knoblauch, W., Overton, R., Putnam, L. and C. Dymond
2011-10	Examining the Costs of Producing Processing Snap Beans and Green Peas in New York State		Ho, S., Rickard, B., Kikkert, J., Klotzbach, K., Reiners, S. and M. Smith
2011-09	Dairy Farm Business Summary, New York Dairy Farm Renters, 2010	($16.00)	Knoblauch, W., Putnam, D. and C. Dymon
2011-08	New York Economic Outlook, 2012		Extension Staff
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2011-06	Dairy Farm Business Summary, Intensive Grazing Farms, New York, 2010		Conneman, G., Karszes, J., Grace, J., Murray, P., Carlberg, V., Benson, A., Staehr, A., Glazier, N., Overton, R., Dymond, C. and L. Putnam
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