DAIRY FARM BUSINESS SUMMARY

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PRO-DAIRY

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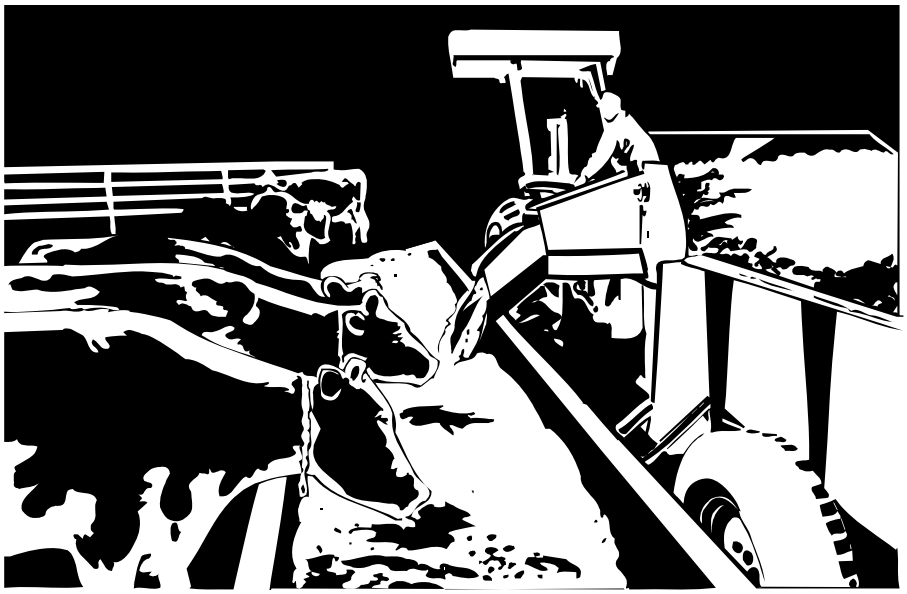
NEW YORK LARGE HERD FARMS, 300 COWS OR LARGER 2009



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2009 DAIRY FARM BUSINESS SUMMARY
LARGE HERD DAIRY FARMS
300 Cows or Larger

Table of Contents

2009 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. Eighty-six 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 2008 to 2009 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 92 large herd farms that participated in the 2009 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 92 large herd farms that participated in the 2009 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, Chautaugua, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Genesee, Jefferson, Lewis, Livingston, Madison, Montgomery, Oneida, Onondaga, Ontario, Orleans, Otsego, Rensselaer, Saratoga, Schuyler, St. Lawrence, Tompkins, Washington, Wyoming, and Yates counties had farms of this size participating in 2009. 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. Data were collected by Cornell Cooperative Extension educators across the state. We also acknowledge the cooperation of Cathy Wickswat, Cargill Animal Nutrition; Western New York and First Pioneer Farm Credit Associations; and Dehm Associates, for their assistance in data collection.

PROGRESS OF THE FARM BUSINESS

The 2009 business year for the New York State dairy industry was dramatically different than 2008, with milk prices falling back to levels last seen in 2006, leading to losses for most dairy producers. Growing conditions generally were average across the state with regional differences in yields, from below to above average. While there were challenges for the 2009 crop year, many farms were able to take advantage of the average forages from 2008 and the relatively cool summer in 2009, increasing average milk production over the previous year. With farms focused on decreasing costs, and with the decreases in key input cost categories of feed and fuel, operating costs lowered significantly from 2008. However, the decrease in costs only partially offset the decrease in milk price and 2009 was a year in which the average dairy farm lost money.

For both 2008 and 2009, 86 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 86 farms that participated in the DFBS project each of the last two years.

Milk Income. Gross milk prices decreased 28 percent to $13.87 per hunderdweight, a decrease of $5.38. Milk marketing expenses increased 2 cents to $0.85 per hundredweight. These two changes led to a decrease of 29.3 percent in net milk price received on the farm, averaging $13.02 per hundredweight. With the average forage quality from 2008, milk production per cow increased 0.5 percent to 24,901 pounds per cow. Gross milk revenue per cow decreased 27.6 percent from the previous year. Average herd size for the participating farms increased by 5.0 percent to 879 cows. With both milk sold per cow and herd size increasing, total milk pounds shipped per farm increased 5.5 percent. With the average growing conditions in 2009, hay yield decreased 2.7 percent and corn silage yield decreased 5.9 percent, leading to a decrease in forage inventory and an 81 percent decrease in crop revenue per cow, averaging $37 per cow. With the low milk prices, the MILC program and government loss assistance were again utilized, with miscellaneous revenue increasing 61 percent. With all factors combined, total revenue per cow fell 26.5 percent, decreasing $1,449 per cow to $4,008.

Cost Control. Cost management was the focus for the average dairy farm in 2009, with 23 of the cost categories showing a decrease per hundredweight. Purchased grain and concentrates led the way, decreasing 11 percent, or 64 cents, to $5.17 per hundredweight. Direct fuel purchased by the farm decreased 35 cents per hundredweight, or 39.3 percent from the previous year. Labor, machinery repairs, fertilizer, and building repair expenses also had decreases of 10 cents or more per hundredweight.

Worker equivalents increased 3.8 percent, which is less than the growth in herd size. Cows per worker increased 1 to 46. Coupled with the increase in milk sold per cow, milk sold per worker equivalent increased 1.7 percent. Hired labor costs per worker equivalent decreased 2.3 percent. With the small decrease in labor cost per worker and the increase in labor efficiency, hired labor costs per hundredweight decreased 3.8 percent.

With the majority of expenses decreasing, farm operating costs fell $1.88, or 10.6%, to $15.80 per hundredweight.

Capital Investment. The average investment in the farm decreased 1.2 percent to $8,829 per cow. A combination of changes in forage inventories, increased values of land, and decreased values of cattle and machinery, led to the decrease in asset values.

Decrease in Earnings. Profits decreased dramatically in 2009. The 28 percent decrease in milk price was not significantly offset by the increase in herd size, milk production and the decrease in costs. Net farm income without appreciation fell to $-244,574. Net farm income with appreciation decreased to $-222,771.

- Labor and management income per operator/manager decreased 253.7 percent, from $152,850 in 2008 to $-234,984 in 2009.
- Rate of return to all capital without appreciation decreased to -3.5 percent, from 7.4 percent in 2008. Rate of return on equity capital without appreciation fell to -7.5 percent.
- Farm net worth decreased by 8.5 percent.
- Debt to asset ratio increased 15.2 percent to 0.38, reflecting the increased borrowings to fund operations and the decrease in investment levels.

Overall, 2009 was a year of negative earnings, and a dramatically different year than 2008, for the 300 cow and larger farms. While, on average, farms showed significant losses in 2009, the changes on individual farms varied, with some farms actually showing significant change in costs and non-milk revenue that minimized the impact of the decrease in milk price.

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 86 Large Herd Dairy Farms, 2008 & 2009

Selected Factors	Average of 86 Farms 2008	Average of 86 Farms 2009	Percent Change
Size of Business			
Average number of cows	837	879	5.0
Average number of heifers	704	739	5.0
Milk sold, lbs.	20,742,506	21,892,641	5.5
Worker equivalent	18.53	19.24	3.8
Total tillable acres	1,628	1,694	4.1
Rates of Production			
Milk sold per cow, lbs.	24,788	24,901	0.5
Butterfat per cow, lbs.[2]	899	915	1.8
Protein per cow, lbs.[2]	756	764	1.1
Hay DM per acre, tons	3.7	3.6	-2.7
Corn silage per acre, tons	20.3	19.1	-5.9
Labor Efficiency & Costs			
Cows per worker	45	46	2.2
Milk sold per worker, lbs.	1,119,401	1,137,871	3.4
Hired labor cost per cwt.	$2.92	$2.81	-3.8
Hired labor cost per worker	$37,391	$36,514	-2.3
Hired labor cost as % of milk sales	15.2%	20.3%	33.6
Cost Control			
Grain & concentrate purchased as % of milk sales	30%	37%	23.3
Grain & concentrate per cwt. milk	$5.81	$5.17	-11.0
Dairy feed & crop expense per cwt. milk	$7.17	$6.34	-11.6
Labor & machinery costs per cow	$1,589	$1,427	-10.2
Total farm operating costs per cwt. sold	$17.68	$15.80	-10.6
Interest costs per cwt. milk	$0.51	$0.48	-5.9
Operating cost of producing cwt. of milk	$15.14	$13.71	-9.5
Net milk income over purchased feed costs per cow	$3,103	$1,911	-38.4
Capital Efficiency(average for the year)			
Farm capital per cow	$8,935	$8,829	-1.2
Machinery & equipment per cow	$1,448	$1,486	2.6
Asset turnover ratio	0.62	0.46	-25.8
Income Generation			
Gross milk sales per cow	$4,771	$3,453	-27.6
Gross milk sales per cwt.	$19.25	$13.87	-28.0
Net milk sales per cwt.	$18.42	$13.02	-29.3
Dairy cattle sales per cow	$328	$274	-16.5
Dairy calf sales per cow	$28	$39	39.3
Profitability			
Net farm income without appreciation	$567,803	$-244,574	-143.1
Net farm income with appreciation	$652,399	$-222,771	-134.2
Labor & mgt. income per operator/manager	$152,850	$-234,984	-253.7
Rate of return on equity capital w/o appreciation	8.8%	-7.5%	-185.2
Rate of return on all capital without appreciation	7.4%	-3.5%	-147.3
Financial Summary (excluding deferred taxes)			
Farm net worth, end year	$5,224,044	$4,780,587	-8.5
Debt to asset ratio	0.33	0.38	15.2
Farm debt per cow	$2,945	$3,310	12.4

[2]Average of 78 large herd dairy farms that provided this data.

RECEIPTS AND EXPENSES PER COW AND PER HUNDREDWEIGHT

Same 86 Large Herd Dairy Farms, 2008 & 2009

	2008		2009	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average number of cows	837		879	
Cwt. of milk sold		207,425		218,926
ACCRUAL OPERATING RECEIPTS				
Milk	$4,771	$19.25	$3,453	$13.87
Dairy cattle	328	1.32	274	1.10
Dairy calves	28	0.11	39	0.15
Other livestock	16	0.06	8	0.03
Crops	192	0.78	37	0.15
Miscellaneous receipts	122	0.49	197	0.79
Total Receipts	$5,457	$22.01	$4,008	$16.10
ACCRUAL OPERATING EXPENSES				
Hired labor	$ 725	$ 2.92	$ 700	$ 2.81
Dairy grain & concentrate	1,439	5.81	1,287	5.17
Dairy roughage	78	0.32	61	0.24
Nondairy feed	0	0.00	0	0.00
Professional nutritional services	2	0.01	1	0.00
Machine hire, rent & lease	79	0.32	77	0.31
Machine repair & vehicle expense	207	0.84	173	0.69
Fuel, oil & grease	221	0.89	135	0.54
Replacement livestock	23	0.09	11	0.04
Breeding	64	0.26	51	0.20
Veterinary & medicine	171	0.69	157	0.63
Milk marketing	205	0.83	211	0.85
Bedding	85	0.34	87	0.35
Milking supplies	97	0.39	94	0.38
Cattle lease	3	0.01	2	0.01
Custom boarding	110	0.44	107	0.43
bST expense	60	0.24	63	0.25
Livestock professional fees	12	0.05	11	0.04
Other livestock expense	22	0.09	16	0.07
Fertilizer & lime	115	0.46	90	0.36
Seeds & plants	83	0.33	88	0.35
Spray & other crop expense	49	0.20	47	0.19
Crop professional fees	13	0.05	6	0.02
Land, building, fence repair	86	0.35	54	0.22
Taxes	47	0.19	50	0.20
Real estate rent/lease	63	0.26	62	0.25
Insurance	42	0.17	40	0.16
Utilities	99	0.40	90	0.36
Interest paid	128	0.51	120	0.48
Other professional fees	26	0.10	23	0.09
Miscellaneous	30	0.12	24	0.09
Total Operating Expenses	$4,382	$17.68	$3,935	$15.80
Expansion livestock	55	0.22	34	0.14
Extraordinary expense	2	0.01	1	0.01
Machinery depreciation	203	0.82	187	0.75
Real estate depreciation	136	0.55	129	0.52
Total Expenses	$4,778	$19.28	$4,286	$17.22
Net Farm Income Without Appreciation	$ 679	$ 2.74	$ -278	$ -1.12

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

In 2009, 31farms 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 31 farms and only represents these 31 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 92 farms over 300 cows that participated in the DFBS project in 2009. 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.

The eighteen farms that were in the top 20 percent in 2009 were also in the summary in 2008. The table on page 7 shows income and expenses for these farms for both 2008 and 2009. 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

31 New York Dairy Farms, 2009

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	2,723	47	1,013,748
↓	1,775	27	724,477
↓	1,360	21	531,124
↓	1,193	18	383,939
Average of Lowest Quintile	919	15	249,159
Overall Average	1,594	26	580,489

Dairy Enterprise Only

Quintile	Worker Equivalents	Cows per Worker Equivalent	Pounds Sold per Worker Equivalent
Average of Highest Quintile	14.79	189	3,802,886
↓	6.66	124	3,092,989
↓	4.82	103	2,546,264
↓	3.78	90	2,051,523
Average of Lowest Quintile	1.92	70	1,647,904
Overall Average	6.39	115	2,628,313

TOP 20 PERCENT VERSUS AVERAGE
92 Large Herd Dairy Farms, 2009

Selected Factors	Average 92 Farms	Average Top 20% Farms	Percent Difference
Size of Business			
Average number of cows	878	822	-6.4
Average number of heifers	739	702	-5.0
Milk sold, lbs.	21,868,284	20,005,543	-8.5
Worker equivalent	19.27	17.51	-9.1
Total tillable acres	1,697	1,631	-3.9
Rates of Production			
Milk sold per cow, lbs.	24,904	24,344	-2.3
Butterfat per cow, lbs.[3]	915	881	-3.7
Protein per cow, lbs. [3]	765	738	-3.5
Hay DM per acre, tons	3.6	3.1	-13.9
Corn silage per acre, tons	19.0	18.6	-2.1
Labor Efficiency & Costs			
Cows per worker	46	47	2.2
Milk sold/worker, lbs.	1,134,983	1,142,793	0.7
Hired labor cost/cwt.	$2.83	$2.78	-1.8
Hired labor cost/hired worker	$36,691	$36,467	-0.6
Hired labor cost as % of milk sales	20.3%	20.0%	-1.5
Cost Control			
Grain & concentrate purchased as % of milk sales	37%	35%	-5.4
Grain & concentrate per cwt. milk	$5.17	$4.85	-6.2
Dairy feed & crop expense per cwt. milk	$6.36	$6.04	-5.0
Labor & machinery costs/cow	$1,438	$1,327	-7.7
Total farm operating costs per cwt. sold	$15.88	$14.83	-6.6
Interest costs per cwt. milk	$0.49	$0.45	-8.2
Milk marketing costs per cwt. milk sold	$0.86	$0.89	3.5
Operating cost of producing cwt. of milk	$13.79	$12.08	-12.4
Net milk income over purchased feed costs per cow	$1,911	$1,976	3.4
Capital Efficiency (average for the year)			
Farm capital per cow	$8,796	$8,692	-1.2
Machinery & equipment per cow	$1,489	$1,489	0.0
Asset turnover ratio	0.46	0.47	2.2
Income Generation			
Gross milk sales per cow	$3,460	$3,382	-2.3
Gross milk sales per cwt.	$13.89	$13.89	0.0
Net milk sales per cwt.	$13.03	$13.01	-0.2
Dairy cattle sales per cow	$272	$337	23.9
Dairy calf sales per cow	$38	$44	15.8
Profitability			
Net farm income without appreciation	$-256,107	$154,685	160.4
Net farm income with appreciation	$-222,057	$144,720	165.2
Labor & management income per operator/manager	$-235,964	$-45,567	80.7
Rate of return on equity capital without appreciation	-7.9%	1.0%	112.7
Rate of return on all capital without appreciation	-3.6%	1.9%	152.8
Financial Summary (excluding deferred taxes)			
Farm net worth, end of year	$4,686,189	$4,813,317	2.7
Debt to asset ratio	0.39	0.34	-12.8
Farm debt per cow	$3,389	$2,853	-15.8

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

RECEIPTS AND EXPENSES PER COW AND PER HUNDREDWEIGHT

Same 18 Top 20% Large Herd Dairy Farms, 2008 & 2009

	2008		2009	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Average Number of Cows	761		822	
Cwt. of Milk Sold		185,811		200,055
Accrual Operating Receipts				
Milk	$4,699	$19.24	$3,382	$13.89
Dairy cattle	309	1.26	337	1.38
Dairy calves	35	0.14	44	0.18
Other livestock	20	0.08	12	0.05
Crops	202	0.83	117	0.48
Miscellaneous receipts	141	0.58	223	0.91
Total	$5,405	$22.13	$4,115	$16.90
Accrual Operating Expenses				
Hired labor	$ 721	$ 2.95	$ 676	$ 2.78
Dairy grain & concentrate	1,335	5.47	1,181	4.85
Dairy roughage	89	0.37	67	0.28
Nondairy feed	0	0.00	0	0.00
Professional nutritional services	1	0.00	0	0.00
Machine hire, rent & lease	69	0.28	55	0.22
Machine repair & vehicle expense	213	0.87	167	0.69
Fuel, oil & grease	205	0.84	117	0.48
Replacement livestock	7	0.03	9	0.04
Breeding	58	0.24	43	0.18
Veterinary & medicine	150	0.61	136	0.56
Milk marketing	204	0.83	216	0.89
Bedding	55	0.22	53	0.22
Milking supplies	103	0.42	92	0.38
Cattle lease	5	0.02	5	0.02
Custom boarding	68	0.28	82	0.34
bST expense	55	0.23	55	0.23
Livestock professional fees	13	0.05	9	0.04
Other livestock expense	20	0.08	15	0.06
Fertilizer & lime	140	0.57	80	0.33
Seeds & plants	81	0.33	88	0.36
Spray & other crop expense	41	0.17	51	0.21
Crop professional fees	5	0.02	3	0.01
Land, building & fence repair	68	0.28	43	0.18
Taxes	52	0.21	43	0.18
Real estate rent/lease	64	0.26	57	0.24
Insurance	38	0.16	34	0.14
Utilities	95	0.39	77	0.32
Interest paid	117	0.48	110	0.45
Other professional fees	27	0.11	25	0.10
Miscellaneous	31	0.13	20	0.08
Total Operating Expenses	$4,129	$16.91	$3,611	$14.83
Expansion livestock	74	0.30	63	0.26
Extraordinary Expense	1	0.00	1	0.01
Machinery depreciation	203	0.83	154	0.63
Real Estate depreciation	108	0.44	97	0.40
Total Expenses	$4,515	$18.48	$3,926	$16.13
Net Farm Income without appreciation	$ 889	$ 3.64	$ 188	$ 0.77

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
32 New York Dairy Farms, 2009

Animals Entering Herd	Average
Number calving in 2009 for first time	267
Animals purchased, %[4]	3.9
Animals raised by farm, %[5]	96.1
Current Heifer Inventory	
Raised on dairy, %	86.4
Raised by a custom grower, %	13.5

[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, 267 animals calved for the first time in 2009. The breakdown on the source of these animals was 3.9 percent purchased and 96.1 percent raised on the farm. Of the current heifer inventory, 86.4 percent were raised on the dairy and 13.5 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 components pricing, which changed the format of the milk check and how farmers received payment for their milk. To examine the breakdown of the gross milk income and the marketing expenses, 82 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 commission or broker fees. The fifth area is income from forward contracting or hedging programs. The sixth area is the patronage dividends or refunds from the milk cooperatives. Equity purchased in the milk cooperative utilizing a monthly deduction from the milk check or a percent of the patronage dividend is treated as a capital purchase and is not a milk marketing expense. The cumulative total for these six areas is the net price received on farms. For participating farms, the net farm price can be found on page 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
82 Large Herd Dairy Farms, 2009

	Pounds	Percent	Price/Pound	Total	$/Cwt of Milk
BASE FARM PRICE					
Butterfat	799,053	3.68%	$1.25	$1,000,055	$ 4.60
Protein	667,957	3.07%	$2.21	$1,478,495	$ 6.80
Solids	1,261,459	5.80%	$0.06	$76,423	$ 0.35
Total Component Contribution					$ 11.75
PPD	21,741,223			$175,083	$ 0.81
Base Farm Price					$ 12.56
Premiums					
Quality				$56,183	$ 0.26
Volume				$60,013	$ 0.28
Market Premiums				$131,646	$ 0.60
Total Premiums					$ 1.14
BASE FARM PRICE + PREMIUM					$ 13.70
Deductions					
Promo				$33,458	$ 0.15
Hauling + Stop Charges.				$130,870	$ 0.60
Market Fees & Coop Dues				$29,098	$ 0.13
Total Deductions					$ 0.88
BASE FARM PRICE + PREMIUMS – DEDUCTIONS					$ 12.82
Marketing Programs					
Futures Contracts, Forward Contracting, Etc.				$6,437	$ 0.03
Total Marketing Income					$ 0.03
Patronage Dividends				$35,946	$ 0.17
NET PRICE RECEIVED ON FARM, ALL SOURCES					**$ 13.02**
PPD - Hauling, per cwt., $ per cwt.					$ 0.21
PPD - Hauling + Market Premiums, per cwt., $ per cwt.					$ 0.81
Net Marketing Value (PPD + Total Premiums – Total Deductions), $ per cwt.					$ 1.07

[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)
82 Large Herd Dairy Farms, 2009

	Lowest Quintile	←		→	Highest Quintile
Butterfat, %	3.46	3.60	3.68	3.73	4.08
Protein, %	2.97	3.04	3.07	3.11	3.23
Other Solids, %	5.59	5.69	5.71	5.74	6.24
Butterfat, $ per Cwt.	4.35	4.52	4.63	4.70	5.08
Protein, $ per Cwt.	6.52	6.71	6.81	6.90	7.18
Other solids, $ per Cwt.	0.32	0.35	0.35	0.36	0.39
Total Component Value per Cwt.	**$ 11.42**	**$ 11.60**	**$ 11.73**	**$ 11.89**	**$ 12.50**
PPD, $ per Cwt.	0.54	0.68	0.80	0.92	1.29
Base Farm Price per Cwt.	**$ 12.13**	**$ 12.41**	**$ 12.54**	**$ 12.74**	**$ 13.53**
Quality, $ per Cwt.	0.07	0.19	0.24	0.32	0.45
Volume, $ per Cwt.	0.00	0.04	0.27	0.44	0.66
Market premium, $ per Cwt.	0.01	0.23	0.48	0.82	1.22
Total Premium, $ per Cwt.	**0.58**	**0.84**	**1.08**	**1.31**	**1.57**
Base Farm Price + Premiums per Cwt.	**$ 12.94**	**$ 13.38**	**$ 13.72**	**$ 13.99**	**$ 14.70**
Promotion, $ per Cwt.	0.15	0.15	0.15	0.15	0.15
Hauling, $ per Cwt.	0.30	0.43	0.56	0.73	1.07
Market fees & coop dues per Cwt.	0.04	0.10	0.13	0.16	0.21
Total Marketing Expenses per Cwt.	**$ 0.55**	**$ 0.72**	**$ 0.85**	**$ 1.05**	**$ 1.33**
Base + Premiums – Deductions per Cwt.	**$ 12.19**	**$ 12.59**	**$ 12.83**	**$ 13.02**	**$ 13.61**
Futures contract, forward contracting, $ per Cwt.	0.00	0.00	0.00	0.00	0.13
Total Marketing Income, $ per Cwt.	**$ 0.00**	**$ 0.00**	**$ 0.00**	**$ 0.00**	**$ 0.13**
Patronage Dividends, $ per Cwt.	**$ 0.00**	**$ 0.00**	**$ 0.00**	**$ 0.03**	**$ 0.81**
Net Price Received From All Sources, $ per Cwt.	**$ 12.38**	**12.74**	**$ 12.94**	**$ 13.15**	**$ 13.97**
PPD – Hauling, $ per cwt.	**$ 0.00**	**$ 0.12**	**$ 0.20**	**$ 0.31**	**$ 0.54**
PPD – Hauling + Market Premiums, $ per cwt.	**$ 0.13**	**$ 0.49**	**$ 0.78**	**$ 1.05**	**$ 1.45**
Net Marketing Value (PPD + Total Premiums – Total Deductions), $ per cwt.	**$ 0.50**	**$ 0.83**	**$ 1.03**	**$ 1.22**	**$ 1.55**

[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
92 Large Herd Dairy Farms, 2009

Type of Farm	Number
Dairy	92
Dairy – cash crop	0

Type of Ownership	Number
Owner	89
Renter	3

Type of Business	Number
Single proprietorship	12
Partnership	19
Limited Liability Corporation	46
Subchapter S Corporation	12
Subchapter C Corporation	3

Business Record System	Number
Account Book	3
Accounting Service	10
On-Farm Computer	78
Other	1

BST Usage (reporting this is optional)	Number
Used consistently	10
Used inconsistently	0
Started Use in 2009	0
Stopped Use in 2009	0
Not Used	3
Average % bst usage of those reporting	26%

Type of Barn	Number
Stanchion/Tie-Stall	0
Freestall	89
Combination	3

Milking System	Number
Pipeline	0
Herringbone Conventional	26
Herringbone Rapid Exit	14
Parallel	40
Parabone	3
Rotary	5
Other	4

Milking Frequency	Number
2x/day	14
3x/day	71
Other	7

Production Records	Number
Testing Service	74
On-Farm System	17
Other	0
None	1

Breed	Percent
Holstein	95
Jersey	3
Other	2

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 2009.

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
92 Large Herd Dairy Farms, 2009

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
Hired Labor	$ 617,103		$ -1,850		$ -896		$ 618,057
Feed							
Dairy grain & concentrate	996,240		-94,241		39,799		1,130,279
Dairy roughage	50,664		-1,071		1,048		52,783
Nondairy	105		1		0		104
Professional nutritional services	579		0		5		585
Machinery							
Machinery hire, rent/lease	68,231		-17		1,896		70,144
Mach. repair & farm vehicle exp.	151,128		493		2,739		153,373
Fuel, oil & grease	116,618		-1,439		1,990		120,047
Livestock							
Replacement livestock	8,643		-36		0		8,678
Breeding	41,723		-1,869		212		43,804
Vet & medicine	133,294		-2,320		2,107		137,720
Milk marketing	187,058		0		808		187,867
Bedding	74,272		-1,723		358		76,353
Milk supplies	80,497		-1,971		925		83,393
Cattle lease/rent	1,875		0		0		1,875
Custom boarding	87,932		43		1,696		89,585
bST expense	54,579		-14		505		55,098
Livestock professional fees	8,949		-809		149		9,907
Other livestock expense	14,453		-88		164		14,704
Crops							
Fertilizer & lime	71,262		-4,494		8,575		84,330
Seeds & plants	55,754		-20,350		1,551		77,656
Spray, other crop exp.	37,406		-1,843		1,048		40,297
Crop professional fees	4,647		-331		91		5,069
Real Estate							
Land/bldg./fence repair	47,265		-1,467		1,641		50,374
Taxes	41,610		-1,262		-56		42,816
Rent & lease	54,979		-264		299		55,542
Other							
Insurance	32,749		-1,445		262		34,456
Utilities (farm share)	78,208		-69		353		78,631
Interest paid	107,851		0		-770		107,082
Other professional fees	19,981		-729		68		20,778
Miscellaneous	20,011		-277		1,436		21,725
Total Operating Expenses	$3,265,666		$-139,440		$68,004		$3,473,110
Expansion livestock	$ 29,129		-20		-117		29,031
Extraordinary expense	$ 1,349		0		0		1,790
Machinery depreciation							162,690
Building depreciation							113,256
Total Accrual Expenses							$3,779,877

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 2009 funds used to prepay 2010 leases exceed the amount of 2009 leases prepaid in 2008, the amount of this excess is subtracted to exclude it from 2009 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 2009 but not paid for. A decrease is subtracted because the resource was used before 2009.

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
92 Large Herd Dairy Farms, 2009

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	$3,081,545				$-43,677		$3,038,169
Dairy cattle	148,404		$90,591		-198		238,798
Dairy calves	17,746		15,585		-26		33,305
Other livestock	6,134		1,117		-143		7,108
Crops	39,323		-9,723		-781		28,819
Government receipts	104,668		0[8]		-4		104,664
Custom machine work	10,878				2,102		12,979
Gas tax refund	292				0		292
Other	59,161				477		59,637
Less nonfarm noncash cap.			0[9]				0
Total Receipts	$3,468,151		$97,570		$ -41,951		$3,523,770

[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 2009 for the 2010 crop year in excess of funds earned for 2009. Likewise, a decrease is added to cash government receipts because it represents funds earned for 2009 but received in 2008.

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.

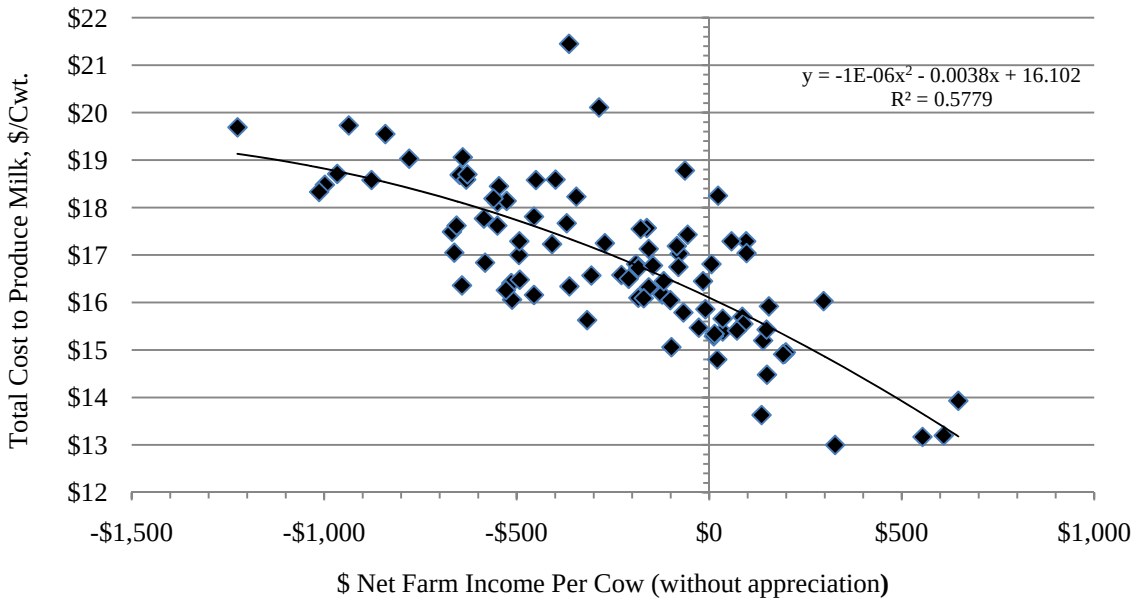
Net farm income is the return to the farm operators and other unpaid family members for their labor, management, and equity capital. It is the farm family's net annual return from working, managing, financing, and owning the farm business. This is not a measure of cash available from the year's business 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
92 Large Herd Dairy Farms, 2009

Item	Average 92 Farms Total	Average 92 Farms Per Cow	Average Top 20%[11] Farms Total	Average Top 20%[11] Farms Per Cow
Total accrual receipts	$ 3,523,770		$ 3,381,492	
Appreciation: Livestock	-127,033		-89,392	
Machinery	32,365		15,279	
Real Estate	128,266		57,617	
Other Stock/Certificates	453		6,531	
Total Including Appreciation	$ 3,557,820		$ 3,371,527	
Total accrual expenses	3,779,877		3,226,807	
Net Farm Income (with appreciation)	$ -222,057	$-253	$ 144,720	$176
Net Farm Income (w/o appreciation)	$ -256,107	$-292	$ 154,685	$188

TOTAL COST TO PRODUCE MILK VS. NET FARM INCOME PER COW
92 Large Herd Dairy Farms, 2009



[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.

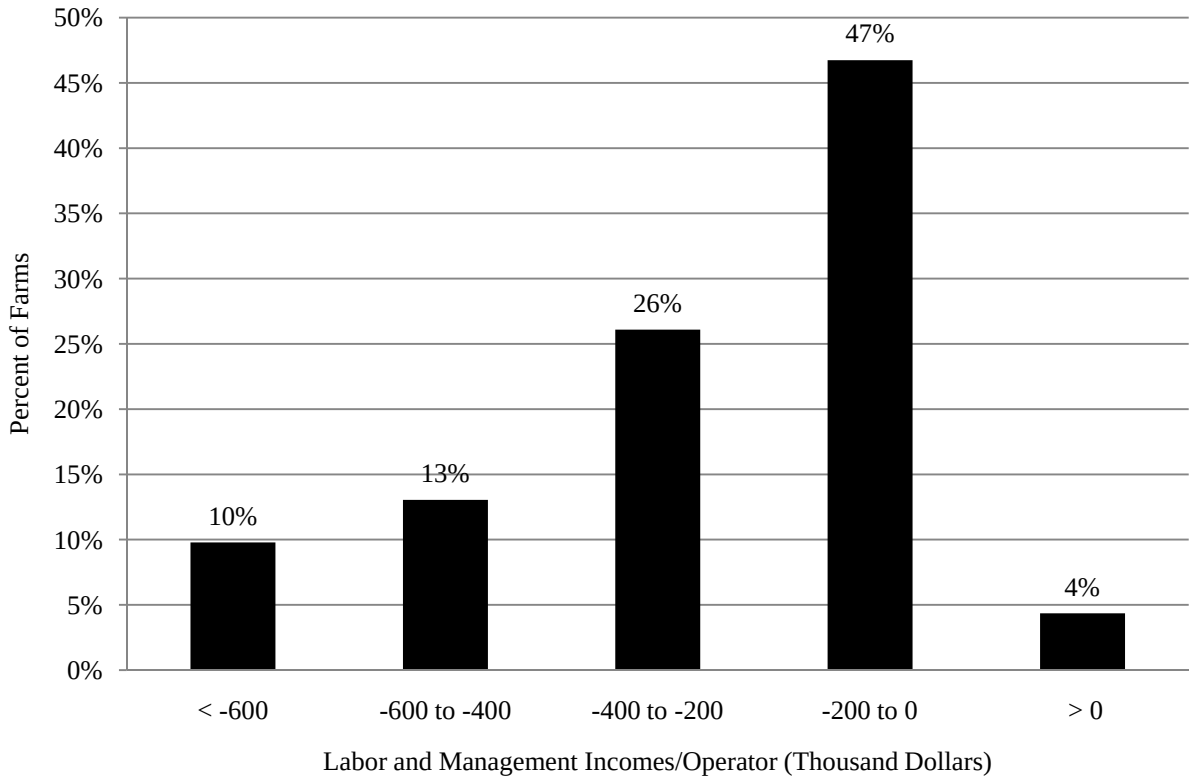
Labor and management income is the return which farm operators receive for their labor and management used in operating the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. 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
92 Large Herd Dairy Farms, 2009

Item	Average 92 Farms	Average Top 20% Farms
Net farm income without appreciation	$ -256,107	$ 154,685
Family labor unpaid @ $2,500 per month	- 1,239	- 806
Interest on $4,905,146 ($4,872,901 for top 20%) average equity capital @ 5% real rate	- 245,257	- 243,645
Labor & Management Income per Farm (2.13 operators/farm; 1.97 operators for top 20%)	$ -502,603	$ -89,766
Labor & Management Income per Operator/Manager	$ -235,964	$ -45,567

Labor and management income per operator averaged $-235,964 on these 92 farms in 2009. Returns to labor and management were less than $-400,000 on 23 percent of the farms. Labor and management income per operator ranged from $-400,000 to $-200,000 on 26 percent of the farms while 51 percent showed labor and management incomes per operator greater than $-200,000.

DISTRIBUTION OF LABOR & MANAGEMENT INCOMES PER OPERATOR
92 Large Herd Dairy Farms, 2009



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
92 Large Herd Dairy Farms, 2009

Item	Average 92 Farms	Average Top 20% Farms
Net farm income with appreciation	$ -222,057	$ 144,720
Family labor unpaid @ $2,500 per month	- 1,239	- 806
Value of operators' labor & management	- 130,966	- 105,546
Return on equity capital with appreciation	$ -354,262	$ 38,368
Interest paid	+ 107,082	+ 90,357
Return on total capital with appreciation	$ -247,180	$ 128,725
Return on equity capital without appreciation	$ -388,312	$ 48,333
Return on total capital without appreciation	$ -281,230	$ 138,690
Rate of return on average equity capital:		
with appreciation	-7.2%	0.8%
without appreciation	-7.9%	1.0%
Rate of return on average total capital:		
with appreciation	-3.2%	1.8%
without appreciation	-3.6%	1.9%
Net farm income from operations ratio	-0.07	0.05

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 2009, leases were discounted by 8.15 percent.

Advanced government receipts are included as current liabilities. Government payments received in 2009 that are for participation in the 2010 program are the end year balance and payments received in 2008 for participation in the 2009 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.

2009 FARM BUSINESS & NONFARM MARKET VALUE BALANCE SHEET

92 Large Herd Dairy Farms, 2009

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 37,706	$ 76,853	Accounts payable	$ 96,441	$ 164,327
Accounts receivable	299,259	257,308	Operating debt	184,817	201,835
Prepaid expenses	15,073	8,284	Short Term	5,971	13,627
Feed & supplies	900,012	757,618	Advanced govt. receipts	0	0
			Current Portion:		
			Intermediate	202,880	216,487
			Long Term	63,174	67,960
Total Current	$ 1,252,050	$ 1,100,063	Total Current	$ 553,283	$ 664,236
Intermediate			Intermediate		
Dairy cows:			Structured debt		
owned	$ 1,236,527	$ 1,232,506	1-10 years	$1,028,232	$ 1,290,869
leased	4,112	4,954	Financial lease		
Heifers	744,017	727,534	(cattle/machinery)	11,505	11,765
Bulls/other livestock	15,100	15,864	Farm Credit stock	2,079	1,457
Mach./equipment owned	1,292,561	1,308,405	Total Intermediate	$1,041,816	$ 1,304,091
Mach./equipment leased	7,393	6,811			
Farm Credit stock	2,079	1,457			
Other stock/certificate	166,988	182,756			
Total Intermediate	$ 3,468,777	$ 3,480,288			
			Long Term		
Long Term			Structured debt		
Land/buildings:			>10 years	$ 993,422	$ 1,076,301
owned	$ 2,991,797	$ 3,150,466	Financial lease		
leased	280	3,141	(structures)	280	3,141
Total Long Term	$ 2,992,077	$ 3,153,606	Total Long Term	$ 993,702	$ 1,079,441
			Total Farm Liab.	$2,588,801	$ 3,047,769
Total Farm Assets	$ 7,712,903	$ 7,733,958	FARM NET WORTH	$5,124,102	$ 4,686,189

Nonfarm Assets, Liabilities & Net Worth (Average of 27 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	$ 11,130	$ 12,168	Nonfarm Liabilities	$ 2,612	$ 2,517
Cash value life insurance	72,385	80,293			
Nonfarm real estate	132,593	138,977			
Auto (personal share)	4,370	4,278			
Stocks & bonds	67,228	77,527			
Household furnishings	3,185	3,259			
All other nonfarm assets	16,235	19,722			
Total Nonfarm Assets	$ 307,126	$ 336,224	NONFARM NET WORTH	$ 304,513	$ 333,707

Farm & Nonfarm Assets, Liabilities, and Net Worth[12]	Jan. 1	Dec. 31
Total Assets	$ 8,020,029	$ 8,070,182
Total Liabilities	2,591,413	3,050,286
TOTAL FARM & NONFARM NET WORTH	$ 5,428,616	$ 5,019,896

[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
92 Large Herd Dairy Farms, 2009

Item		Average 92 Farms		Average Top 20% Farms
Financial Ratios - Farm:				
Percent equity		61%		66%
Debt/asset ratio: total		0.39		0.34
long-term		0.34		0.25
intermediate/current		0.43		0.40
Leverage Ratio		0.65		0.50
Current Ratio		1.66		1.61
Working Capital: $435,827	as % of Total Expenses:	12%	$356,598	11%
Farm Debt Analysis:				
Accounts payable as % of total debt		5%		5%
Long-term liabilities as a % of total debt		35%		31%
Current & intermediate liabilities as a % of total debt		65%		69%
Cost of term debt (weighted average)		5.1%		8.8%

	Average 92 Farms		Average Top 20% Farms	
Farm Debt Levels:	Per Cow	Per Tillable Acre Owned	Per Cow	Per Tillable Acre Owned
Total farm debt	$ 3,389	$ 3,768	$ 2,853	$ 2,606
Long-term debt	1,200	1,334	897	819
Long-term & intermediate	2,651	2,947	2,166	1,978
Intermediate & current debt	2,189	2,433	1,956	1,787

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
92 Large Herd Dairy Farms, 2009

Item	Average of 92 Farms			
		Real Estate		Machinery & Equipment
Value beginning of year		$ 2,991,797		$ 1,292,561
Purchases	$ 235,125 [13]		$ 155,548	
Gift/inheritance	+ 1,087		+ 571	
Lost capital	- 81,866			
Sales	- 10,687		- 9,949	
Depreciation	- 113,256		- 162,690	
Net investment		= 30,403		= -16,521
Appreciation		+ 128,266		+ 32,365
Value end of year		$ 3,150,466		$ 1,308,405

[13] $59,099 land and $176,025 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)
92 Large Herd Dairy Farms, 2009

Item	Average 92 Farms		Average Top 20% Farms	
Beginning of year farm net worth		$ 5,124,102		$4,932,486
Net farm income without appreciation	$ -256,107		$ 154,685	
+ Nonfarm cash income	+ 5,816		+ 3,001	
- Personal withdrawals & family expenditures excluding nonfarm borrowings	- 171,829		- $ 177,180	
Retained Earnings		+$ -422,120		+ $ -19,494
Nonfarm noncash transfers to farm	$ 1,658		$ 0	
+ Cash used in business from nonfarm capital	+ 32,222		+ 6,134	
- Note/mortgage from farm real estate sold (nonfarm)	- 2,049		- 0	
Contributed/Withdrawn Capital	=	+$ 31,831		+ $ 6,134
Appreciation	$ 34,050		$ -9,965	
- Lost capital	- 81,866		- 97,712	
Change in Valuation Equity		+$ -47,816		+ $ -107,677
Imbalance/Error		- -193		- -1,868
End of year farm net worth[14]		=$ 4,686,189		= $4,813,317
Change in net worth with appreciation		$ -437,913		$ -119,170
Change in Net Worth				
Without appreciation		$ -471,963		$ -109,205
With appreciation		$ -437,913		$ -119,170

[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
92 Large Herd Dairy Farms, 2009

Item		Average 92 Farms	
Cash Flow from Operating Activities			
Cash farm receipts	$ 3,468,151		
- Cash farm expenses	3,265,666		
- Extraordinary expense	1,790		
= Net cash farm income		$ 200,695	
Personal withdrawals/family expenses including nonfarm debt payments	$ 172,010		
- Nonfarm income	5,816		
- Net cash withdrawals from the farm		$ 166,194	
= Net Provided by Operating Activities			$ 34,501
Cash Flow From Investing Activities			
Sale of Assets: Machinery	$ 9,949		
+ real estate	8,638		
+ other stock & certificates	3,679		
= Total asset sales		$ 22,266	
Capital purchases: expansion livestock	$ 29,128		
+ machinery	155,548		
+ real estate	235,125		
+ other stock & certificates	18,995		
- Total invested in farm assets		$ 438,796	
= Net Provided by Investment Activities			$ -416,530
Cash Flow From Financing Activities			
Money borrowed (intermediate & long term)	$ 625,751		
+ Money borrowed (short-term)	16,609		
+ Increase in operating debt	17,019		
+ Cash from nonfarm capital used in business	32,222		
+ Money borrowed - nonfarm	180		
= Cash inflow from financing		$ 691,781	
Principal payments (intermediate & long-term)	$ 261,858		
+ Principal payments (short-term)	8,953		
+ Decrease in operating debt	0		
- Cash outflow for financing		$ 270,811	
= Net Provided by Financing Activities			$ 420,970
Cash Flow From Business			
Beginning farm cash, checking & savings		$ 37,706	
- Ending farm cash, checking & savings		76,854	
= Net Provided from Reserves			$ -39,148
Imbalance (error)			$ -207

ANNUAL CASH FLOW STATEMENT
18 Top 20% Large Herd Dairy Farms, 2009

Item		Average Top 20% Farms	
Cash Flow from Operating Activities			
Cash farm receipts	$3,186,789		
- Cash farm expenses	2,783,409		
- Extraordinary expense	1,185		
= Net cash farm income		$ 402,195	
Personal withdrawals/family expenses including nonfarm debt payments	$ 177,180		
- Nonfarm income	3,001		
- Net cash withdrawals from the farm		$ 174,179	
= Net Provided by Operating Activities			$ 228,016
Cash Flow From Investing Activities			
Sale of Assets: Machinery	$ 5,548		
+ real estate	2,222		
+ other stock & certificate	3,544		
= Total asset sales		$ 11,314	
Capital purchases: expansion livestock	$ 51,466		
+ machinery	104,889		
+ real estate	270,130		
+ other stock & certificate	41,802		
- Total invested in farm assets		$ 468,287	
= Net Provided by Investment Activities			$ -456,973
Cash Flow From Financing Activities			
Money borrowed (intermediate & long term)	$ 470,040		
+ Money borrowed (short-term)	5,252		
+ Increase in operating debt	0		
+ Cash from nonfarm capital used in business	6,134		
+ Money borrowed - nonfarm	0		
= Cash inflow from financing		$ 481,426	
Principal payments (intermediate & long-term)	$ 243,577		
+ Principal payments (short-term)	7,550		
+ Decrease in operating debt	4,765		
- Cash outflow for financing		$ 255,892	
= Net Provided by Financing Activities			$ 225,534
Cash Flow From Business			
Beginning farm cash, checking & savings		$ 55,691	
- Ending farm cash, checking & savings		54,136	
= Net Provided from Reserves			$ 1,555
Imbalance (error)			$ -1,868

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 2010. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 2010 debt payments shown below.

FARM DEBT PAYMENTS PLANNED
Large Herd Dairy Farms, 2008 & 2009

	Same 86 Dairy Farms			Same 18 Top 20% Farms		
	2009 Payments		Planned	2009 Payments		Planned
Debt Payments	Planned	Made	2010	Planned	Made	2010
Long-term	$ 113,000	$ 106,848	$ 114,695	$ 81,250	$ 89,817	$ 86,695
Intermediate-term	257,110	254,337	268,841	257,053	244,794	251,439
Short-term	5,434	9,768	8,346	7,833	8,106	7,276
Operating (net reduction)	6,854	63,362	27,423	0	100,294	27,779
Accounts payable (net reduction)	1,163	4,951	7,733	0	866	9,444
Total	$ 383,561	$ 439,266	$ 427,038	$ 577,279	$ 443,876	$ 392,576
Per cow	$ 436	$ 500		$ 674	$ 540	
Per cwt. 2009 milk	$ 1.75	$ 2.01		$ 2.52	$ 2.22	
Percent of total 2009 receipts	11%	12%		12%	13%	
Percent of 2009 milk receipts	12%	14%		13%	16%	

The cash flow coverage ratio and debt coverage ratio measure the ability of the farm business to meet its planned debt payments schedule. The ratios show the percentage of payments planned for 2009 (as of December 31, 2008) that could have been made with the amount available for debt service in 2009. Farmers who did not participate in DFBS in 2008 have their 2009 cash flow coverage ratio based on planned debt payments for 2010.

COVERAGE RATIOS
Same 86 Large Herd Dairy Farms, 2008 & 2009

Item	Average	Item	Average
Cash Flow Coverage Ratio		Debt Coverage Ratio	
Cash farm receipts	$ 3,455,352	Net farm income (without appreciation)	$ -244,574
- Cash farm expenses	3,255,424	+ Depreciation	277,937
+ Interest paid (cash)	106,218	+ Interest paid (accrual)	105,337
- Net personal withdrawals from farm[15]	169,152	- Net personal withdrawals from farm[15]	169,152
(A) = Amount Available for Debt Service	$ 136,993	(A') = Repayment Capacity	$ -30,452
(B) = Debt Payments Planned for 2009 (as of December 31, 2008)	$ 383,561	(B) = Debt Payments Planned for 2009 (as of December 31, 2008)	$ 383,561
(A/B) = Cash Flow Coverage Ratio for 2009	0.36	(A'/B) = Debt Coverage Ratio for 2009	-0.08

Same 18 Top 20% Dairy Farms, 2008 & 2009

(A) = Amount Available for Debt Service	$ 324,547	(A') = Repayment Capacity	$ 278,160
(B) = Debt Payments Planned for 2009	$ 346,136	(B) = Debt Payments Planned for 2009	$ 346,136
(A/B) = Cash Flow Coverage Ratio for 2009	0.94	(A'/B) = Debt Coverage Ratio for 2009	0.80

[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

92 Large Herd Dairy Farms, 2009

Item	Average 92 Farms Per Cow	Per Cwt.	Total
Number cows and cwt. Milk	878	218,683	
Accrual Operating Receipts			
Milk	$3,460	$13.89	$3,038,169
Dairy cattle	272	1.09	238,798
Dairy calves	38	0.15	33,305
Other livestock	8	0.03	7,108
Crops	33	0.13	28,819
Misc. receipts	202	0.81	177,573
Total Operating Receipts	$4,013	$16.11	$3,523,770
Accrual Operating Expenses			
Hired labor	$ 704	$ 2.83	$ 618,057
Dairy grain & concentrate	1,287	5.17	1,130,279
Dairy roughage	60	0.24	52,783
Nondairy feed	0	0.00	104
Professional nutritional services	1	0.00	585
Machinery hire/rent/lease	80	0.32	70,144
Machinery repair & farm vehicle expense	175	0.70	153,373
Fuel, oil & grease	137	0.55	120,047
Replacement livestock	10	0.04	8,678
Breeding	50	0.20	43,804
Veterinary & medicine	157	0.63	137,720
Milk marketing	214	0.86	187,867
Bedding	87	0.35	76,353
Milking supplies	95	0.38	83,393
Cattle lease	2	0.01	1,875
Custom boarding	102	0.41	89,585
bST expense	63	0.25	55,098
Livestock professional fees	11	0.05	9,907
Other livestock expense	17	0.07	14,704
Fertilizer & lime	96	0.39	84,330
Seeds & plants	88	0.36	77,656
Spray/other crop expenses	46	0.18	40,297
Crop professional fees	6	0.02	5,069
Land, building, fence repair	57	0.23	50,374
Taxes	49	0.20	42,816
Real estate rent/lease	63	0.25	55,542
Insurance	39	0.16	34,456
Utilities	90	0.36	78,631
Other professional fees	24	0.10	20,778
Miscellaneous	25	0.10	21,725
Total Less Interest Paid	$3,833	$15.39	$3,366,028
Net Accrual Operating Income (without interest paid)	$ 180	$ 0.72	$ 157,742
- Change in livestock/crop inventory[16]	111	0.45	97,570
- Change in accounts receivable	-48	-0.19	-41,951
- Change in feed/supply inventory[17]	-159	-0.64	-139,440
+ Change in accounts payable[18]	78	0.31	68,774
NET CASH FLOW	$ 353	$ 1.42	$ 310,336
- Net personal withdrawals from farm (see footnote on page 22)	189	0.76	165,626
Available for Farm Debt Payments & Investments	$ 165	$ 0.66	$ 144,710
- Farm debt payments	503	2.02	441,632
Available for Farm Investment	$ -338	$ -1.36	$ -296,922
- Capital purchases: cattle, machinery & improvements	500	2.01	438,796
Additional Capital Needed	$ 838	$ 3.36	$ 735,717

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

ANNUAL CASH FLOW WORKSHEET

18 Top 20% Large Herd Dairy Farms, 2009

Item	Average Top 20% Farms		
	Per Cow	Per Cwt.	Total
No. cows or cwt. milk	822	200,055	
Accrual Operating Receipts			
Milk	$3,382	$13.89	$2,779,418
Dairy cattle	337	1.38	276,826
Dairy calves	44	0.18	36,079
Other livestock	12	0.05	9,795
Crops	117	0.48	96,425
Misc. receipts	223	0.91	182,949
Total Operating Receipts	$4,115	$16.90	$3,381,492
Accrual Operating Expenses			
Hired labor	$ 676	$ 2.78	$ 555,574
Dairy grain & concentrate	1,181	4.85	970,809
Dairy roughage	67	0.28	55,468
Nondairy feed	0	0.00	360
Professional nutritional services	0	0.00	181
Mach. hire/rent/lease	55	0.22	44,998
Mach. repair & farm vehicle expense	167	0.69	137,442
Fuel, oil & grease	117	0.48	96,432
Replacement livestock	9	0.04	7,340
Breeding	43	0.18	35,018
Veterinary & medicine	136	0.56	111,735
Milk marketing	216	0.89	177,520
Bedding	53	0.22	43,656
Milking supplies	92	0.38	75,632
Cattle lease	5	0.02	3,902
Custom boarding	82	0.34	67,413
bST expense	55	0.23	45,389
Livestock professional fees	9	0.04	7,757
Other livestock expense	15	0.06	12,300
Fertilizer & lime	80	0.33	65,865
Seeds & plants	88	0.36	72,722
Spray/other crop expenses	51	0.21	41,580
Crop professional fees	3	0.01	2,519
Land, building, fence repair	43	0.18	35,144
Taxes	43	0.18	35,596
Real estate rent/lease	57	0.24	47,141
Insurance	34	0.14	27,885
Utilities	77	0.32	63,218
Other professional fees	25	0.10	20,624
Miscellaneous	20	0.08	16,151
Total Less Interest Paid	$3,501	$14.38	$2,877,373
Net Accrual Operating Income (without interest paid)	$ 613	$ 2.52	$ 504,119
- Change in livestock/crop inventory[19]	278	1.14	228,288
- Change in accounts receivable	-41	-0.17	-33,586
- Change in feed/supply inventory[20]	-118	-0.48	-96,826
+ Change in accounts payable[21]	111	0.46	91,613
NET CASH FLOW	$ 606	$ 2.49	$ 497,854
- Net personal withdrawals from farm(see footnote page 22)	211	0.87	173,307
Available for Farm Debt Payments & Investments	$ 395	$ 1.62	$ 324,547
- Farm debt payments	540	2.22	443,876
Available for Farm Investment	$ -145	$-0.60	$-119,329
- Capital purchases: cattle, machinery & improvements	570	2.34	468,287
Additional Capital Needed	$ 715	$ 2.94	$ 587,616

[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
92 Large Herd Dairy Farms, 2009

Item	Average 92 Farms			Average Top 20% Farms		
Land	Owned	Rented	Total	Owned	Rented	Total
Tillable	809	888	1,697	932	699	1,631
Nontillable	28	5	33	21	0	21
Other nontillable	191	6	197	137	0	137
Total	1,028	899	1,927	1,090	699	1,789
Crop Yields	Farms	Acres[22]	Prod/Acre	Farms	Acres	Prod/Acre
Hay crop	91	775	3.58 tn DM	17	749	3.12 tn DM
Corn silage	89	694	19.02 tn	17	630	18.61 tn
Other forage	13	99	1.91 tn DM	0	0	0.00 tn DM
Total forage	91	1,468	4.89 tn DM	17	1,388	4.59 tn DM
Corn grain	55	289	135 bu	11	313	147 bu
Oats	8	76	68 bu	0	0	0 bu
Wheat	9	98	63 bu	0	0	0 bu
Other crops	28	106		5	188	
Tillable pasture	5	314		0	0	
Idle tillable	17	63		6	69	
Total Tillable Acres	92	1,697		18	1,631	

[22]This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were corn grain 223, oats 3, wheat 16, tillable pasture 21, and idle 10.

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
91 Large Herd Dairy Farms, 2009 [23]

Item	Average 91 Farms	Average Top 20% Farms
Total tillable acres per cow	1.94	2.03
Total forage acres per cow	1.66	1.63
Harvested forage dry matter, tons per cow	8.12	7.50

[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, 2009

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	91[24]	6			6	
Ave. number of acres	1,716	634			516	
Fertilizer/lime	$ 49.27	$ 37.88	$ 5.35	$ 0.60	$ 41.64	$ 11.72
Seed/plants	47.02	69.79	9.66	0.74	21.67	5.97
Spray/other crop exp.	24.17	58.42	7.98	0.47	18.75	4.96
TOTAL	$ 120.46	$ 166.09	$ 22.99	$ 1.81	$ 82.06	$ 22.65
Average Top 20% Farms:						
No. of farms reporting	17[24]					
Ave. number of acres	1,727					
Fertilizer/lime	$ 43.01					
Seeds/plants	45.52					
Spray/other crop exp.	24.20					
TOTAL	$ 112.73					

[24] Excludes farms that do not harvest forages.

Most machinery costs are associated with crop production 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]
91 Large Herd Dairy Farms, 2009

Machinery Expense Item	Average 91 Farms Total Expenses	Average 91 Farms Per Tillable Acre	Average Top 20% Farms Total Expenses	Average Top 20% Farms Per Tillable Acre
Fuel, oil & grease	$121,289	$ 70.69	$101,692	$ 58.88
Machinery repairs & farm vehicle exp.	155,022	90.35	145,327	84.14
Machine hire, rent & lease	70,512	41.10	45,491	26.34
Interest (5%)	66,085	38.52	64,697	37.46
Depreciation	164,457	95.85	133,894	77.52
Total	$577,364	$336.51	$491,102	$284.34

[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
92 Large Herd Dairy Farms, 2009

	Dairy Cows		Heifers					
			Bred		Open		Calves	
Item	No.	Value	No.	Value	No.	Value	No.	Value
Average 92 Farms:								
Beginning year (owned)	847	$1,236,527	273	$397,576	267	$243,290	188	$103,152
+ Change w/o apprec.		66,571		20,348		3,672		15,585
+ Appreciation		-70,592		-25,040		-19,117		-11,932
End year (owned)	894	$1,232,506	288	$392,884	271	$227,845	216	$106,805
End including leased	899							
Average number	878		739 (all age groups)					
Average Top 20% Farms:								
Beginning year (owned)	762	$1,078,258	227	$311,738	248	$212,019	186	$ 98,538
+ Change w/o apprec.		112,931		51,262		-7,636		25,885
+ Appreciation		-46,362		-17,863		-10,806		-14,361
End of year (owned)	842	$1,144,827	263	$345,137	243	$193,577	232	$110,061
End including leased	852							
Average number	822		702 (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
92 Large Herd Dairy Farms, 2009

Item	Average 92 Farms	Average Top 20% Farms
Total milk sold, lbs.	21,868,284	20,005,543
Milk sold per cow, lbs.	24,904	24,344
Butterfat per cow, lbs.	915 [26]	881
Protein per cow, lbs.	765 [26]	738
Total butterfat and protein per cow, lbs	1,680[26]	1,619
Other solids per cow, lbs.	1,445 [26]	1,436
Total components per cow, lbs.	3,125 [26]	3,055

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

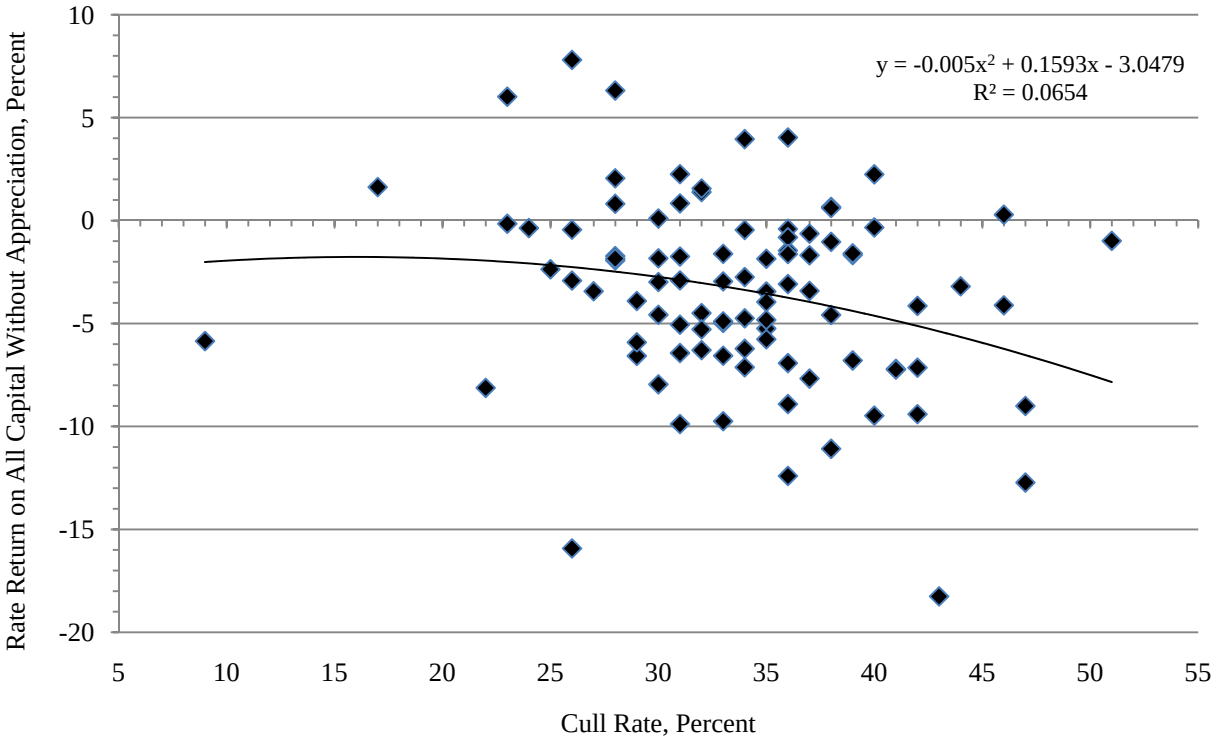
ANIMALS LEAVING THE HERD
92 Large Herd Dairy Farms, 2009

	Average 92 Farms		Average Top 20% Farms	
	Number	Percent[27]	Number	Percent[27]
Cows sold for beef	238	27.1	204	24.8
Cows sold for dairy	9	1.0	12	1.5
Cows died	61	6.9	53	6.4
Culling rate[28]	---	34.0	---	31.0

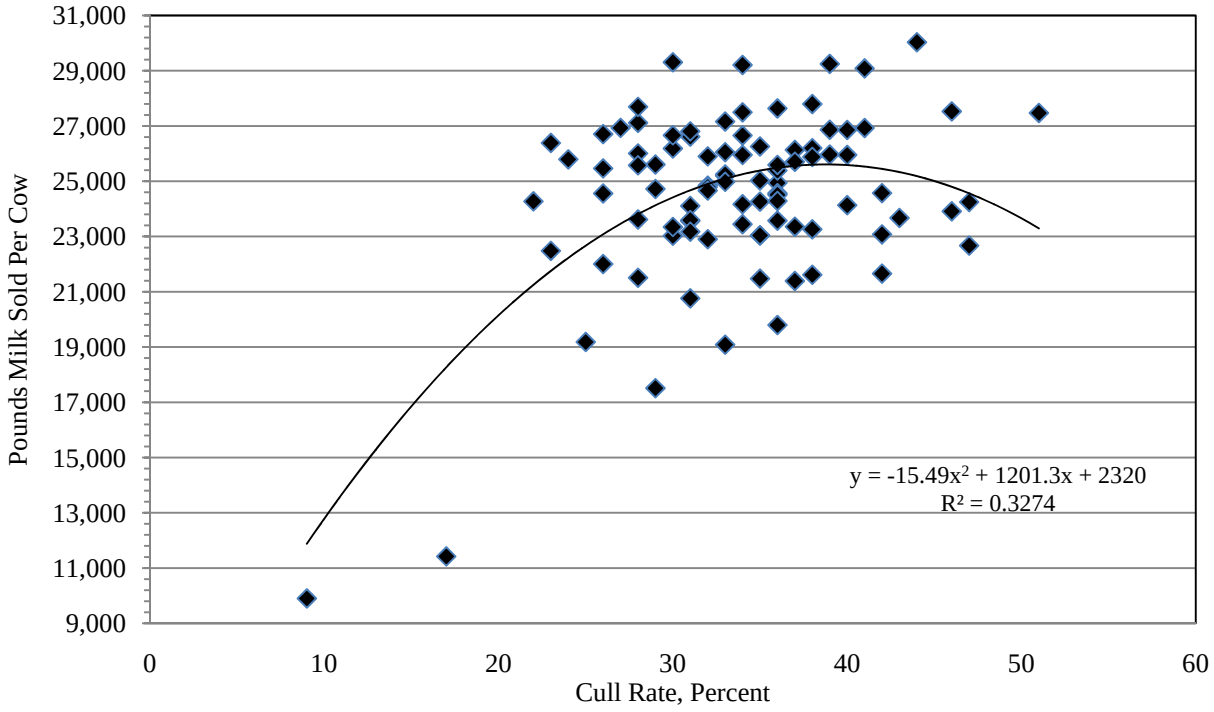
[27]Percent of average number of cows in the herd.
[28]Cows sold for beef plus cows died.

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 2009.

RETURN TO ALL CAPITAL WITHOUT APPRECIATION VERSUS CULL RATE
92 Large Herd Dairy Farms, 2009



MILK SOLD PER COW VERSUS CULL RATE
92 Large Herd Dairy Farms, 2009



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

92 Large Herd Dairy Farms, 2009

	Average 92 Farms			Average Top 20% Farms		
Item	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Accrual Costs of Producing Milk						
Operating costs	$ 3,016,539	$ 3,435	$13.79	$ 2,417,123	$ 2,941	$12.08
Purchased inputs costs	$ 3,294,275	$ 3,752	$15.06	$ 2,624,734	$ 3,194	$13.12
Total Costs	$ 3,671,738	$ 4,182	$16.79	$ 2,974,730	$ 3,620	$14.87
Accrual Receipts From Milk	$ 3,038,169	$ 3,460	$13.89	$ 2,779,418	$ 3,382	$13.89
Net Milk Receipts	$ 2,850,302	$ 3,198	$13.03	$ 2,601,898	$ 3,157	$13.01
Net Farm Income without appreciation	$ -256,107	$ -292	$ -1.17	$ 154,685	$ 188	$ 0.77
Net Farm Income with appreciation	$ -222,057	$ -253	$ -1.02	$ 144,720	$ 176	$ 0.72

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

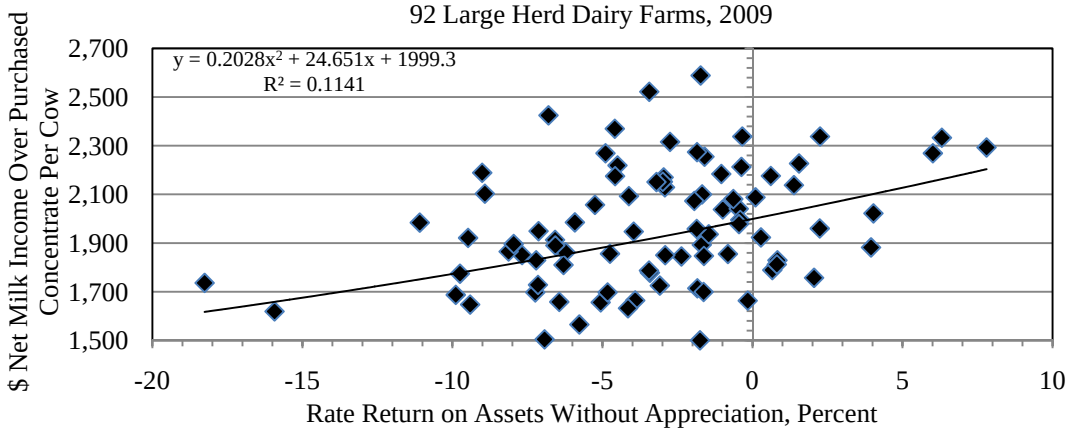
92 Large Herd Dairy Farms, 2009

	Average 92 Farms		Average Top 20% Farms	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrate	$ 1,287	$5.17	$ 1,181	$ 4.85
Purchased dairy roughage	60	0.24	68	0.28
Total Purchased Dairy Feed	$ 1,347	$5.41	$ 1,249	$ 5.13
Purchased grain & concentrate as % of milk receipts	37%		35%	
Purchased feed & crop expense	$ 1,583	$6.36	$ 1,471	$ 6.04
Purchased feed & crop expense as % of milk receipts	47%		45%	
Breeding	$ 50	$0.20	$ 43	$ 0.18
Veterinary & medicine	157	0.63	136	0.56
Milk marketing	214	0.86	216	0.89
Bedding	87	0.35	53	0.22
Milking supplies	95	0.38	92	0.38
Cattle lease	2	0.01	5	0.02
Custom boarding	102	0.41	82	0.34
bST expense	63	0.25	55	0.23
Livestock professional fees	11	0.05	9	0.04
Other livestock expenses	17	0.07	15	0.06

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

92 Large Herd Dairy Farms, 2009



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.

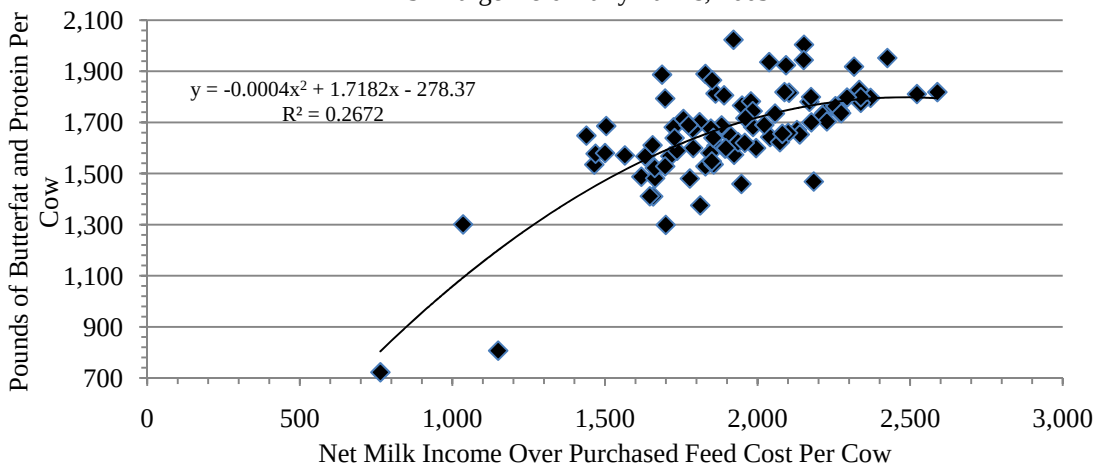
COMPONENT PRODUCTION AND COSTS PER HUNDREDWEIGHT BY NET MILK INCOME OVER PURCHASED FEED COST PER COW

92 Large Herd Dairy Farms, 2009

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.
$ 2,380	27,393	981	$ 842	$ 4.88	$ 12.91	$ 13.11
2,218	25,171	924	785	4.56	13.19	13.26
2,125	26,947	979	829	5.25	13.14	12.96
2,031	25,331	944	782	5.32	13.99	13.10
1,943	24,571	933	757	5.44	13.95	13.20
1,872	25,073	915	769	5.95	13.64	12.94
1,822	23,987	880	739	5.52	13.17	12.86
1,734	23,923	884	722	5.95	14.28	13.11
1,658	22,360	844	701	5.93	14.85	13.22
1,321	20,274	762	619	6.53	14.14	12.76

POUNDS BUTTERFAT AND PROTEIN PER COW VERSUS NET MILK INCOME OVER PURCHASED FEED COST PER COW

92 Large Herd Dairy Farms, 2009



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

92 Large Herd Dairy Farms, 2009

Item	Average 92 Farms		Average Top 20% Farms	
Total Accrual Operating Expenses	$ 3,473,110		$ 2,967,730	
Expansion Livestock, Accrual	+ 29,031		+ 51,466	
1. Total Accrual Operating Expenses, Including Expansion Livestock		$ 3,502,141		$ 3,019,196
Total Accrual Receipts	$ 3,523,770		$ 3,381,492	
Milk Sales, Accrual	- 3,038,169		- 2,779,418	
2. Total Accrual Nonmilk Receipts		- 485,601		- 602,074
3. Operating Costs of Producing Milk		$ 3,016,540		$ 2,417,122
Cwt. of Milk Sold	÷ 218,683		÷ 200,055	
Operating Costs/Cwt.	= $13.79		= $12.08	
Machinery Depreciation		+ 162,690		+ 126,562
Building Depreciation		+ 113,256		+ 79,864
Extraordinary Expenses		+ 1,790		+ 1,185
4. Purchased Inputs Cost of Producing Milk		$ 3,294,276		$ 2,624,733
Cwt. of Milk Sold	÷ 218,683		÷ 200,055	
Purchased Inputs Cost/Cwt.	= $15.06		= $13.12	
Family Labor Unpaid ($2,500/month)		+ 1,239		+ 806
Real Interest on Equity Capital		+ 245,257		+ 243,645
Value of Operators' Labor & Management		+ 130,966		+ 105,546
5. Total Costs of Producing Milk		$ 3,671,738		$ 2,974,730
Cwt. Milk Sold	÷ 218,683		÷ 200,055	
Total Costs/Cwt.	= $16.79		= $14.87	

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

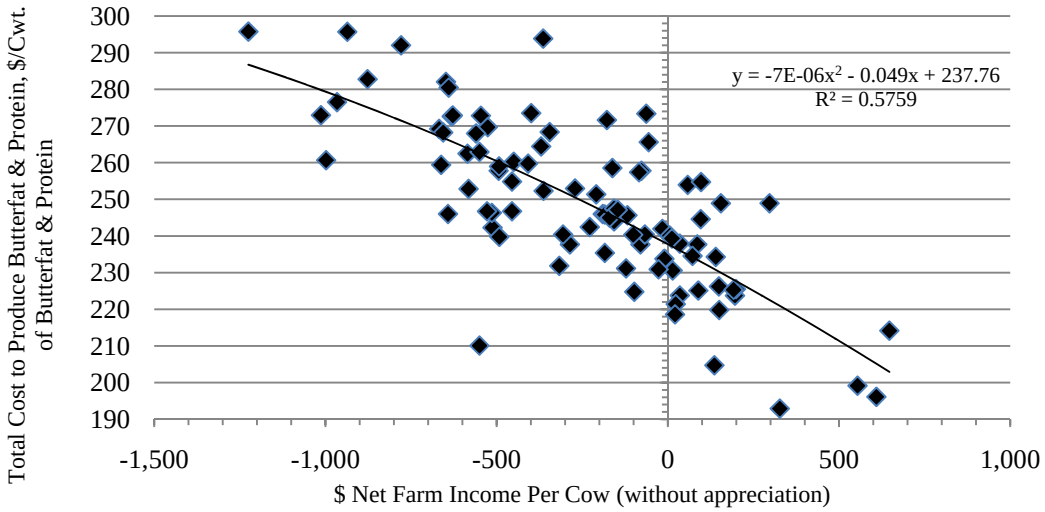
Same 84 Large Herd Dairy Farms, 2008 & 2009

Item	Average Same 84 Large Herd Dairy Farms 2008	Average Same 84 Large Herd Dairy Farms 2009	Average Top 20% Farms 2008	Average Top 20% Farms 2009
Cwt. of butterfat and protein sold	13,761.12	14,454.06	11,028.81	11,840.43
Accrual Operating Receipts				
Milk	$288.20	$205.60	$290.24	$208.29
Dairy cattle	19.46	16.62	19.48	22.47
Dairy calves	1.70	2.28	2.41	2.86
Other livestock	0.94	0.51	1.46	0.87
Crops	11.22	2.42	13.09	8.04
Miscellaneous receipts	7.40	12.00	9.78	15.85
Total Operating Receipts	$328.92	$239.43	$336.46	$258.40
Accrual Operating Expenses				
Hired labor	$43.74	$41.63	$42.64	$40.56
Dairy grain & concentrate	87.48	76.92	83.03	73.26
Dairy roughage	4.85	3.74	6.42	4.96
Nondairy feed	0.00	0.01	0.01	0.03
Professional nutritional services	0.04	0.04	0.08	0.02
Machine hire, rent & lease	4.58	4.45	4.08	3.68
Machine repair & vehicle expense	12.46	10.25	12.65	10.10
Fuel, oil & grease	13.37	8.08	12.45	7.29
Replacement livestock	1.46	0.66	0.54	0.66
Breeding	3.96	3.05	3.60	2.73
Veterinary & medicine	10.39	9.44	9.09	8.45
Milk marketing	12.59	12.76	13.11	14.13
Bedding	5.26	5.18	3.20	3.07
Milking supplies	5.68	5.55	6.35	5.56
Cattle lease	0.12	0.09	0.12	0.06
Custom boarding	6.86	6.64	4.99	6.03
bST expense	3.62	3.67	3.09	3.06
Livestock professional fees	0.66	0.68	0.75	0.69
Other livestock expense	1.34	0.95	1.19	0.86
Fertilizer & lime	6.80	5.47	9.42	5.64
Seeds & plants	4.93	5.15	5.07	5.58
Spray & other crop expense	2.97	2.81	2.48	3.32
Crop professional fees	0.45	0.37	0.23	0.23
Land, building & fence repair	5.27	3.24	4.14	2.55
Taxes	2.87	3.01	3.33	2.73
Real estate rent/lease	3.79	3.64	3.99	3.56
Insurance	2.58	2.43	2.64	2.48
Utilities	5.88	5.32	5.91	4.82
Interest paid	7.68	7.11	7.21	6.93
Other professional fees	1.61	1.45	1.86	1.84
Miscellaneous	1.82	1.41	1.99	1.24
Total Operating Expenses	$265.12	$235.21	$255.66	$226.14
Expansion livestock	2.95	2.14	5.42	4.60
Extraordinary expense	0.10	0.08	0.06	0.11
Machinery depreciation	12.41	11.30	13.35	9.99
Real Estate depreciation	8.33	7.71	6.87	5.85
Total Expenses	$288.91	$256.44	$281.36	$246.69
Net Farm Income without appreciation	$40.01	$-17.01	$55.09	$11.70

[29]Average data for farms that provided complete milk component data for 2008 – 2009.

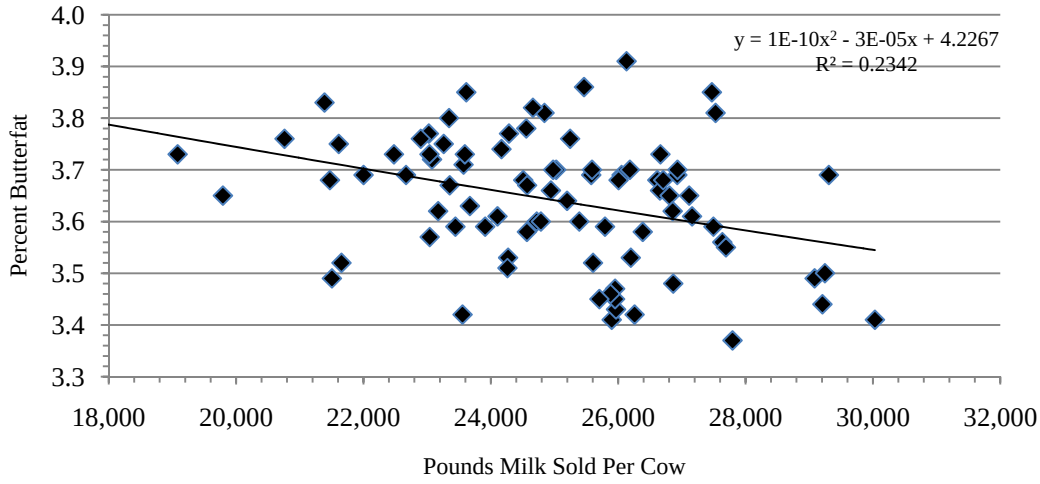
TOTAL COST TO PRODUCE BUTTERFAT & PROTEIN VERSUS NET FARM INCOME PER COW

92 Large Herd Dairy Farms, 2009



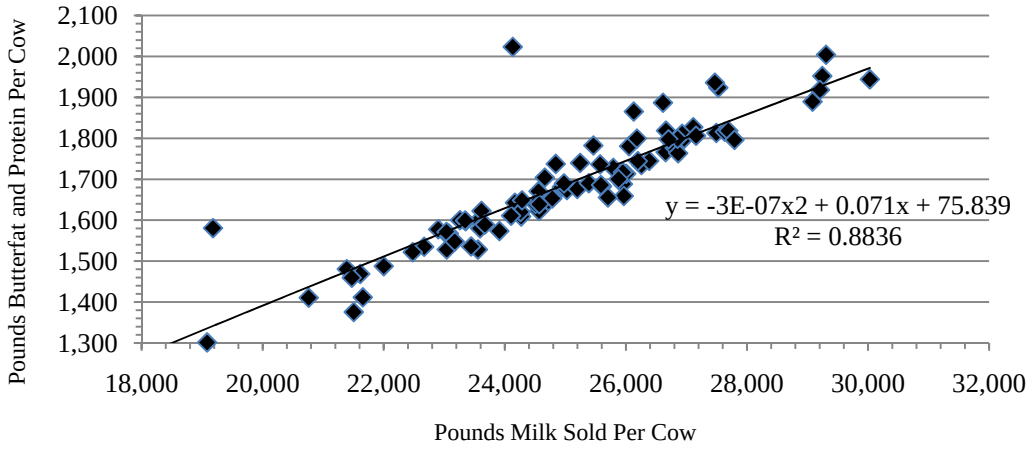
POUNDS MILK SOLD PER COW VERSUS PERCENT BUTTERFAT

92 Large Herd Dairy Farms, 2009



POUNDS OF BUTTERFAT AND PROTEIN PER COW VERSUS POUNDS MILK SOLD PER COW

92 Large Herd Dairy Farms, 2009



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
92 Large Herd Dairy Farms, 2009

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Average 92 Farms:				
Farm capital	$ 400,801	$ 8,796	$ 4,551	$ 9,548
Real estate		3,499		3,799
Machinery & equipment	67,856	1,489	770	
Ratios				
Asset turnover ratio	Operating Expense	Interest Expense	Depreciation Expense	
0.46	0.96	0.03	0.08	
Average Top 20% Farms:				
Farm capital	$ 407,930	$ 8,692	$ 4,379	$ 7,659
Real estate		3,629		3,198
Machinery & equipment	69,865	1,489	750	
Ratios				
Asset turnover ratio	Operating Expense	Interest Expense	Depreciation Expense	
0.47	0.87	0.03	0.06	

LABOR FORCE INVENTORY AND ANALYSIS
92 Large Herd Dairy Farms, 2009

Labor Force	Months	Age	Years of Education	Value of Labor & Mgmt.
Operator number 1	13.00	53	14	$ 62,745
Operator number 2	9.29	46	14	42,399
Operator number 3	4.07	44	15	18,433
Operator number 4	2.21	50	15	7,390
Family paid	3.90			
Family unpaid	0.50			
Hired	198.24			
Total	231.21 / 12 = 19.27 Worker Equivalent			
	2.13 Operator/Manager Equivalent			
Average Top 20% Farms:				
Total	210.07 / 12 = 17.51 Worker Equivalent			
Operator's	1.97 Operator/Manager Equivalent			

Labor Efficiency	Average 92 Farms Total	Average 92 Farms Per Worker	Average Top 20% Farms Total	Average Top 20% Farms Per Worker
Cows, average number	878	46	822	47
Milk sold, pounds	21,868,284	1,134,983	20,005,543	1,142,793
Tillable acres	1,697	88	1,631	93

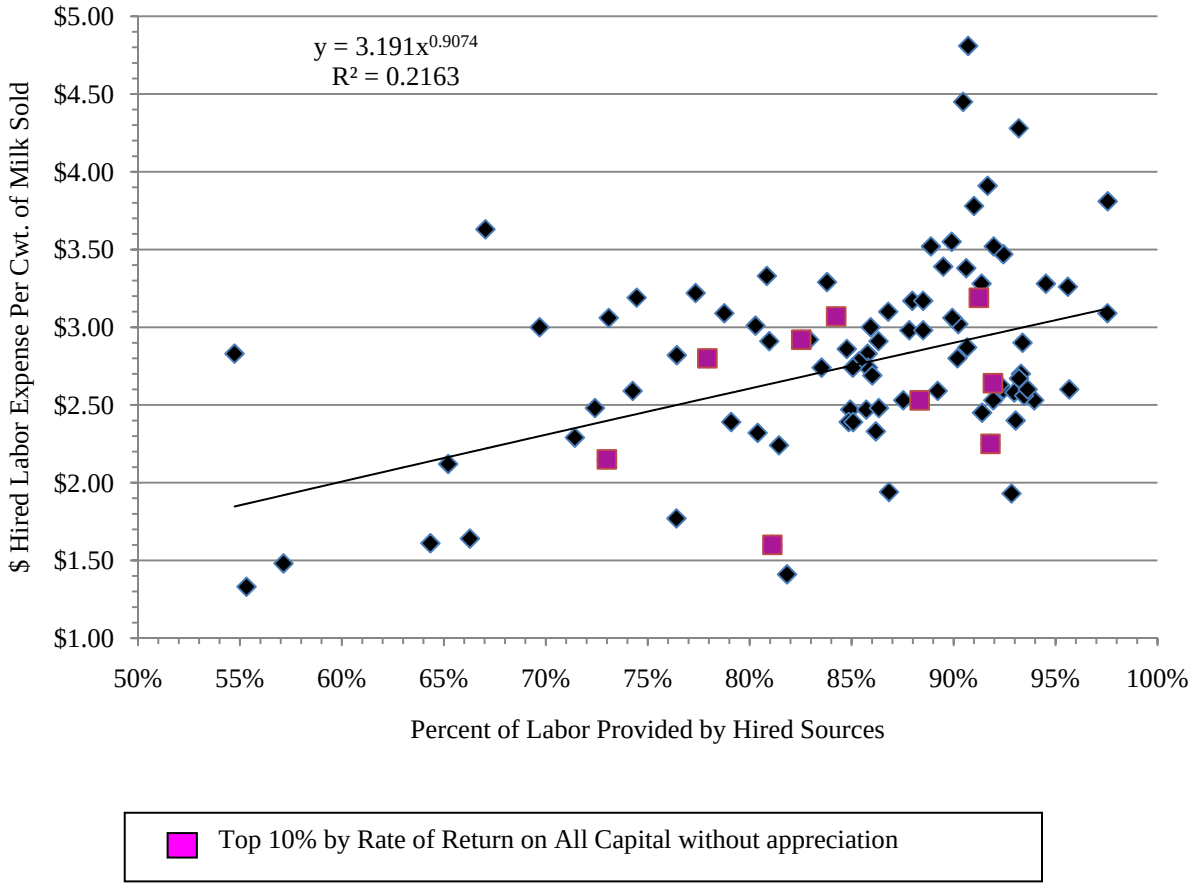
Labor Costs	Average 92 Farms Total	Average 92 Farms Per Cow	Average 92 Farms Per Cwt.	Average Top 20% Farms Total	Average Top 20% Farms Per Cow	Average Top 20% Farms Per Cwt.
Value of operator(s) labor ($2,500/month)	$ 71,425	$ 81	$0.33	$ 67,325	$ 82	$ 0.34
Family unpaid ($2,500/month)	1,250	1	0.01	800	1	0.00
Hired	618,057	704	2.83	555,574	676	2.78
Total Labor	$ 690,732	$ 787	$3.16	$ 623,699	$ 759	$ 3.12
Machinery Cost	571,633	651	2.61	466,602	568	2.33
Total Labor & Machinery	$1,262,365	$ 1,438	$5.77	$ 1,090,301	$ 1,327	$ 5.45
Hired labor expense per hired worker equiv.		$ 36,691			$ 36,467	
Hired labor expense as % of milk sales		20.3%			20.0%	

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

92 Large Herd Dairy Farms, 2009



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.

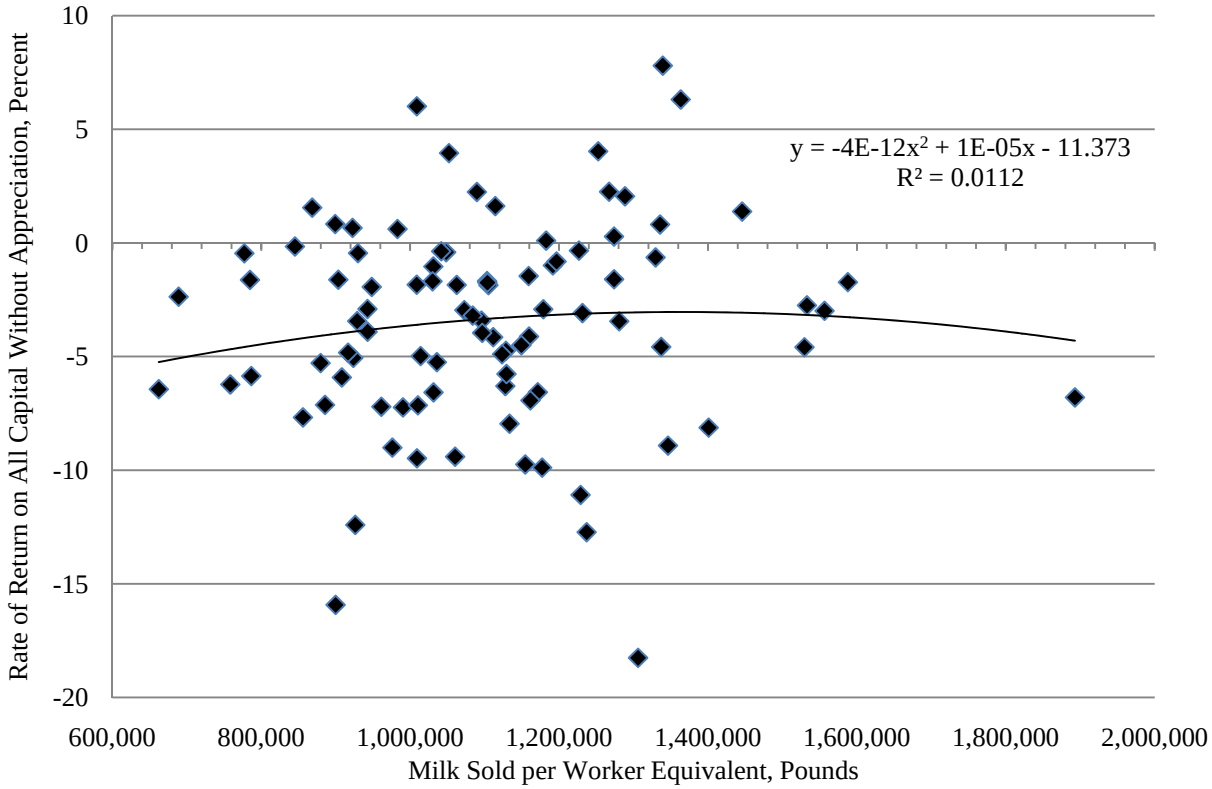
Months of hired labor		_____		
Months of family paid labor	+	_____		
Total hired labor	=		_____	
Total Labor Months	÷		_____	
Percent of labor from hired sources	x 100 =			_____%

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
92 Large Herd Dairy Farms, 2009

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	$ 1.68	12%	$ 26,774	$ 9.70
	2.32	17	29,962	10.86
	2.50	18	31,616	11.46
	2.60	19	32,650	11.83
	2.74	20	34,260	12.41
	2.87	21	36,402	13.19
	3.00	21	37,921	13.74
	3.14	23	39,824	14.43
	3.36	24	42,182	15.28
Average of Highest Decile	3.97	28	46,404	16.81

RATE OF RETURN ON ALL CAPITAL WITHOUT APPRECIATION VERSUS MILK SOLD PER WORKER EQUIVALENT
92 Large Herd Dairy Farms, 2009



CONDENSED SUMMARY & SELECTED BUSINESS FACTORS

CONDENSED FARM BUSINESS SUMMARY FOR THREE LARGE HERD GROUPS

92 Large Herd Dairy Farms, 2009

Item	30 Farms with 300-599 Cows		28 Farms with 600-899 Cows		34 Farms with ≥900 Cows	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.	Per Cow	Per Cwt.
ACCRUAL EXPENSES						
Hired labor	$ 614	$ 2.59	$ 685	$ 2.78	$ 737	$ 2.91
Dairy grain & concentrate	1,272	5.37	1,282	5.20	1,293	5.10
Dairy roughage	79	0.34	71	0.29	50	0.20
Nondairy feed	0	0.00	0	0.00	0	0.00
Professional nutritional services	1	0.01	1	0.01	0	0.00
Machine hire, rent & lease	118	0.50	80	0.32	69	0.27
Machine repairs & farm vehicle expense	170	0.72	177	0.72	175	0.69
Fuel, oil & grease	142	0.60	133	0.54	137	0.54
Replacement livestock	19	0.08	11	0.04	7	0.03
Breeding	50	0.21	55	0.22	48	0.19
Veterinary & medicine	144	0.61	161	0.65	159	0.63
Milk marketing	216	0.91	225	0.91	209	0.82
Bedding	83	0.35	95	0.39	85	0.33
Milking supplies	83	0.35	93	0.38	99	0.39
Cattle lease & rent	1	0.00	1	0.00	3	0.01
Custom boarding	66	0.28	101	0.41	112	0.44
bST expense	28	0.12	46	0.19	79	0.31
Livestock professional fees	17	0.07	11	0.04	10	0.04
Other livestock expense	17	0.07	20	0.08	15	0.06
Fertilizer & lime	102	0.43	88	0.36	98	0.39
Seeds & plants	89	0.38	84	0.34	90	0.36
Spray & other crop expense	45	0.19	52	0.21	43	0.17
Crop professional fees	5	0.02	6	0.02	6	0.02
Land, building & fence repair	44	0.19	48	0.19	65	0.26
Taxes & rent	110	0.46	102	0.41	117	0.46
Utilities	97	0.41	78	0.32	93	0.36
Interest paid	111	0.47	129	0.52	122	0.48
Other professional fees	20	0.08	19	0.08	27	0.10
Misc. (including insurance)	59	0.25	69	0.28	64	0.25
Total Operating Expenses	$3,803	$16.05	$3,923	$15.90	$4,012	$15.83
Expansion livestock	53	0.22	31	0.12	29	0.11
Extraordinary expense	4	0.02	5	0.02	0	0.00
Machinery depreciation	147	0.62	180	0.73	198	0.78
Building depreciation	121	0.51	113	0.46	138	0.55
Total Accrual Expenses	$4,129	$17.42	$4,252	$17.23	$4,377	$17.27
ACCRUAL RECEIPTS						
Milk sales	$3,296	$13.91	$3,457	$14.02	$3,507	$13.84
Dairy cattle	330	1.39	276	1.12	254	1.00
Dairy calves	33	0.14	48	0.19	35	0.14
Other livestock	27	0.12	2	0.01	5	0.02
Crops	35	0.15	45	0.18	27	0.11
Miscellaneous receipts	268	1.13	210	0.85	180	0.71
Total Accrual Receipts	$3,990	$16.84	$4,038	$16.37	$4,009	$15.82
PROFITABILITY ANALYSIS (Total)						
Net farm income (without appreciation)	$-60,693		$-153,363		$-513,143	
Net farm income (with appreciation)	$-74,071		$-146,202		$-415,101	
Labor & management income	$-189,755		$-348,814		$-905,295	
Number of operators	2.00		1.98		2.37	
Labor & management income/operator	$-94,877		$-176,169		$-381,981	
Rates of return on: Equity capital w/o apprec.	-6.1%		-7.0%		-8.8%	
Equity capital w/ apprec.	-6.6%		-6.8%		-7.6%	
All capital w/o apprec.	-2.8%		-2.9%		-4.2%	
All capital w/ apprec.	-3.2%		-2.8%		-3.4%	

SELECTED BUSINESS FACTORS FOR THREE LARGE HERD GROUPS

92 Large Herd Dairy Farms, 2009

Item	30 Farms with 300-599 Cows	28 Farms with 600-899 Cows	34 Farms with ≥ 900 Cows
Cropping Program Analysis			
Total Tillable acres	978	1,402	2,575
Tillable acres rented[30]	610	781	1,222
Hay crop acres[30]	491	629	1,124
Corn silage acres[30]	328	574	1,054
Hay crop, tons DM/acre	3.0	3.6	3.8
Corn silage, tons/acre	17.0	19.2	19.5
Forage DM per cow, tons	7.8	8.2	8.2
Tillable acres/cow	2.3	1.9	1.9
Fertilizer & lime expense/tillable acre	$41.98	$52.94	$52.46
Machinery cost/tillable acre	$292	$334	$353
Dairy Analysis			
Number of cows	441	721	1,393
Number of heifers	383	626	1,147
Milk sold, lbs.	10,452,678	17,788,885	35,300,384
Butterfat & protein, lbs./cow	1,617	1,684	1,697
Milk sold/cow, lbs.	23,697	24,666	25,343
Operating cost of prod. milk/cwt.	$13.34	$13.67	$13.96
Total cost of prod. milk/cwt.	$16.61	$16.64	$16.90
Price/cwt. milk sold	$13.91	$14.02	$13.84
Purchased dairy feed/cow	$1,351	$1,354	$1,344
Purchased dairy feed/cwt. milk	$5.70	$5.49	$5.30
Purchased grain & concentrate as % of milk receipts	38%	37%	37%
Purchased feed & crop expense/cwt. milk	$6.72	$6.42	$6.24
Net milk income over purchased feed costs per cow	$1,814	$1,944	$1,981
Capital Efficiency			
Farm capital/worker	$357,606	$375,577	$426,671
Farm capital/cow	$8,650	$8,614	$8,914
Real estate/cow	$3,500	$3,165	$3,642
Machinery investment/cow	$1,503	$1,574	$1,449
Asset turnover ratio	0.46	0.47	0.46
Labor Efficiency			
Worker equivalent	10.67	16.54	29.10
Operator/manager equivalent	2.00	1.98	2.37
Milk sold/worker, lbs.	979,479	1,075,832	1,212,933
Cows/worker	41	44	48
Labor cost/cow	$775	$779	$793
Financial Measures			
Percent equity	63%	60%	60%
Debt/asset ratio - long term	0.36	0.31	0.35
Debt/asset ratio - intermediate & current	0.37	0.46	0.43
Change in net worth with appreciation	$-191,200	$-308,263	$-762,373
Total farm debt per cow	$3,079	$3,411	$3,468
Debt payments made per cow	$374	$599	$492
Debt payments as % of milk sales	11%	17%	14%
Amount available for debt service	$61,688	$149,222	$192,950
Debt coverage ratio for 2009	0.18	0.11	-0.24

[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 line 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 line 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

30 Large Herd Dairy Farms with 300 – 599 Cows, 2009

	QUINTILE				
Item	1	2	3	4	5
Accrual Operating Receipts					
Milk	$3,738	$3,539	$3,393	$3,207	$2,632
Dairy cattle	684	366	292	217	106
Dairy calves	94	48	28	15	-17
Other livestock	120	7	0	0	-2
Crops	245	93	16	-12	-139
Miscellaneous receipts	367	286	265	231	200
Total Operating Receipts	$4,697	$4,330	$3,975	$3,796	$3,220
Accrual Operating Expenses					
Hired labor	$ 346	$ 523	$ 640	$ 730	$ 861
Dairy grain & concentrate	909	1,103	1,262	1,424	1,631
Dairy roughage	0	1	18	76	359
Nondairy feed	0	0	0	0	2
Professional nutritional services	0	0	0	0	6
Machinery hire/rent/lease	6	30	82	153	301
Mach. repair & farm vehicle exp.	83	116	154	196	285
Fuel, oil & grease	73	118	132	166	212
Replacement livestock	0	0	0	0	112
Breeding	16	37	48	62	91
Veterinary & medicine	84	126	137	158	218
Milk marketing	121	181	215	241	324
Bedding	26	56	74	100	163
Milking supplies	37	58	78	99	138
Cattle lease	0	0	0	0	3
Custom boarding	0	0	0	46	314
bST expense	0	0	6	47	99
Livestock professional fees	1	9	17	20	39
Other livestock expense	0	4	11	21	48
Fertilizer & lime	16	43	78	122	242
Seeds & plants	28	67	86	112	146
Spray/other crop expenses	4	35	47	57	81
Crop professional fees	0	0	2	7	14
Land, building, fence repair	14	23	39	50	94
Taxes	13	31	40	60	81
Real estate rent/lease	16	34	58	75	144
Insurance	16	29	33	45	72
Utilities	61	81	89	111	149
Interest	27	72	99	136	213
Other professional fees	5	12	19	26	36
Miscellaneous	5	12	16	21	43
Total Operating Expenses	$3,099	$3,589	$3,843	$3,979	$4,550
Expansion livestock	0	0	0	6	273
Extraordinary expense	0	0	0	0	24
Machinery depreciation	55	116	138	166	243
Building depreciation	33	80	97	126	259
Net Farm Income w/o Appreciation	$ 327	$ 26	$ -90	$ -336	$ -583

RECEIPTS AND EXPENSES PER CWT. OF MILK SOLD

30 Large Herd Dairy Farms with 300 – 599 Cows, 2009

Item	QUINTILE 1	2	3	4	5
Accrual Operating Receipts					
Milk	$14.78	$14.10	$13.82	$13.59	$13.20
Dairy cattle	3.00	1.56	1.18	0.93	0.47
Dairy calves	0.41	0.22	0.12	0.06	-0.07
Other livestock	0.53	0.03	0.00	0.00	-0.01
Crops	1.01	0.39	0.06	-0.06	-0.60
Miscellaneous receipts	1.74	1.25	1.08	0.97	0.80
Total Operating Receipts	$19.55	$17.63	$16.46	$15.68	$15.24
Accrual Operating Expenses					
Hired labor	$ 1.57	$ 2.26	$ 2.82	$ 2.98	$ 3.42
Dairy grain & concentrate	4.16	4.83	5.22	5.86	6.58
Dairy roughage	0.00	0.00	0.08	0.31	1.74
Nondairy feed	0.00	0.00	0.00	0.00	0.01
Professional nutritional services	0.00	0.00	0.00	0.00	0.03
Machinery hire/rent/lease	0.02	0.13	0.37	0.61	1.34
Mach. repair & farm vehicle exp.	0.33	0.50	0.64	0.89	1.24
Fuel, oil & grease	0.33	0.48	0.57	0.71	0.91
Replacement livestock	0.00	0.00	0.00	0.00	0.48
Breeding	0.07	0.15	0.21	0.26	0.36
Veterinary & medicine	0.38	0.51	0.58	0.69	0.86
Milk marketing	0.55	0.76	0.89	1.06	1.32
Bedding	0.12	0.25	0.31	0.39	0.65
Milking supplies	0.16	0.24	0.34	0.41	0.59
Cattle lease	0.00	0.00	0.00	0.00	0.01
Custom boarding	0.00	0.00	0.00	0.21	1.23
bST expense	0.00	0.00	0.03	0.19	0.37
Livestock professional fees	0.00	0.04	0.07	0.08	0.16
Other livestock expense	0.00	0.02	0.05	0.10	0.21
Fertilizer & lime	0.07	0.18	0.35	0.52	1.09
Seeds & plants	0.13	0.28	0.37	0.44	0.63
Spray/other crop expenses	0.02	0.14	0.19	0.23	0.35
Crop professional fees	0.00	0.00	0.01	0.03	0.06
Land, building, fence repair	0.06	0.11	0.17	0.20	0.40
Taxes	0.06	0.14	0.18	0.25	0.32
Real estate rent/lease	0.06	0.16	0.24	0.32	0.62
Insurance	0.07	0.12	0.14	0.20	0.32
Utilities	0.27	0.34	0.41	0.46	0.58
Interest	0.11	0.29	0.43	0.65	0.93
Other professional fees	0.02	0.06	0.08	0.11	0.15
Miscellaneous	0.02	0.05	0.07	0.10	0.23
Total Operating Expenses	$13.98	$14.71	$16.05	$17.30	$18.69
Expansion livestock	0.00	0.00	0.00	0.03	1.19
Extraordinary expense	0.00	0.00	0.00	0.00	0.10
Machinery depreciation	0.24	0.47	0.57	0.69	1.17
Building depreciation	0.14	0.32	0.39	0.61	1.11
Net Farm Income w/o Appreciation	$ 1.26	$ 0.11	$-0.36	$-1.48	$-2.73

RECEIPTS AND EXPENSES PER COW

28 Large Herd Dairy Farms with 600 – 899 Cows, 2009

Item	QUINTILE 1	2	3	4	5
Accrual Operating Receipts					
Milk	$3,955	$3,566	$3,432	$3,260	$3,012
Dairy cattle	487	330	273	197	79
Dairy calves	143	63	39	23	-34
Other livestock	11	1	0	0	-3
Crops	245	79	24	-6	-133
Miscellaneous receipts	330	236	192	165	134
Total Operating Receipts	$4,618	$4,212	$3,952	$3,830	$3,510
Accrual Operating Expenses					
Hired labor	$ 541	$ 610	$ 673	$ 737	$ 877
Dairy grain & concentrate	1034	1163	1250	1368	1598
Dairy roughage	0	3	17	62	241
Nondairy feed	0	0	0	0	1
Professional nutritional services	0	0	0	0	6
Machinery hire/rent/lease	4	35	61	100	190
Mach. repair & farm vehicle exp.	106	138	164	205	268
Fuel, oil & grease	88	117	135	146	183
Replacement livestock	0	0	0	0	49
Breeding	26	42	56	65	86
Veterinary & medicine	109	135	157	175	225
Milk marketing	120	153	197	260	374
Bedding	45	77	87	111	154
Milking supplies	49	67	83	109	163
Cattle lease	0	0	0	0	3
Custom boarding	0	0	8	85	366
bST expense	0	0	24	86	115
Livestock professional fees	0	4	11	15	25
Other livestock expense	0	1	13	21	64
Fertilizer & lime	36	58	76	100	170
Seeds & plants	46	69	80	97	127
Spray/other crop expenses	16	37	50	64	94
Crop professional fees	0	0	2	9	16
Land, building, fence repair	9	24	37	63	105
Taxes	16	36	48	59	72
Real estate rent/lease	14	34	50	68	118
Insurance	18	32	35	42	62
Utilities	49	65	79	93	107
Interest	39	91	127	167	221
Other professional fees	1	6	13	22	57
Miscellaneous	6	15	26	32	80
Total Operating Expenses	$3,359	$3,550	$3,768	$4,192	$4,707
Expansion livestock	0	0	0	5	127
Extraordinary expense	0	0	0	0	30
Machinery depreciation	61	148	186	232	286
Building depreciation	42	80	103	122	209
Net Farm Income w/o Appreciation	$ 223	$ -36	$ -204	$ -417	$ -676

RECEIPTS AND EXPENSES PER CWT. OF MILK SOLD
28 Large Herd Dairy Farms with 600 – 899 Cows, 2009

Item	QUINTILE 1	2	3	4	5
Accrual Operating Receipts					
Milk	$15.01	$14.26	$13.93	$13.71	$13.21
Dairy cattle	2.00	1.37	1.06	0.82	0.34
Dairy calves	0.60	0.25	0.15	0.09	-0.13
Other livestock	0.04	0.00	0.00	0.00	-0.01
Crops	1.06	0.32	0.10	-0.02	-0.55
Miscellaneous receipts	1.33	0.97	0.81	0.69	0.53
Total Operating Receipts	$18.03	$17.19	$16.34	$15.77	$14.70
Accrual Operating Expenses					
Hired labor	$ 2.15	$ 2.53	$ 2.76	$ 3.12	$ 3.53
Dairy grain & concentrate	4.30	4.89	5.21	5.61	6.10
Dairy roughage	0.00	0.01	0.08	0.25	0.94
Nondairy feed	0.00	0.00	0.00	0.00	0.00
Professional nutritional services	0.00	0.00	0.00	0.00	0.02
Machinery hire/rent/lease	0.02	0.14	0.26	0.43	0.71
Mach. repair & farm vehicle exp.	0.41	0.58	0.70	0.85	1.08
Fuel, oil & grease	0.36	0.46	0.56	0.62	0.75
Replacement livestock	0.00	0.00	0.00	0.00	0.20
Breeding	0.10	0.16	0.24	0.27	0.36
Veterinary & medicine	0.44	0.56	0.62	0.72	0.92
Milk marketing	0.52	0.66	0.80	1.04	1.39
Bedding	0.18	0.29	0.36	0.44	0.67
Milking supplies	0.19	0.29	0.36	0.43	0.64
Cattle lease	0.00	0.00	0.00	0.00	0.01
Custom boarding	0.00	0.00	0.04	0.36	1.45
bST expense	0.00	0.00	0.10	0.34	0.42
Livestock professional fees	0.00	0.02	0.05	0.06	0.10
Other livestock expense	0.00	0.00	0.05	0.08	0.27
Fertilizer & lime	0.14	0.23	0.31	0.41	0.72
Seeds & plants	0.17	0.27	0.35	0.42	0.52
Spray/other crop expenses	0.06	0.15	0.21	0.27	0.40
Crop professional fees	0.00	0.00	0.01	0.04	0.07
Land, building, fence repair	0.04	0.09	0.15	0.25	0.42
Taxes	0.07	0.14	0.20	0.24	0.31
Real estate rent/lease	0.06	0.13	0.21	0.28	0.51
Insurance	0.07	0.13	0.14	0.18	0.26
Utilities	0.19	0.29	0.33	0.37	0.44
Interest	0.16	0.36	0.53	0.66	0.92
Other professional fees	0.01	0.02	0.05	0.10	0.22
Miscellaneous	0.02	0.06	0.10	0.14	0.33
Total Operating Expenses	$13.83	$15.08	$15.99	$16.80	$18.05
Expansion livestock	0.00	0.00	0.00	0.02	0.51
Extraordinary expense	0.00	0.00	0.00	0.00	0.13
Machinery depreciation	0.24	0.60	0.76	0.93	1.24
Building depreciation	0.16	0.32	0.40	0.56	0.85
Net Farm Income w/o Appreciation	$ 0.86	$-0.14	$-0.86	$-1.65	$-2.71

RECEIPTS AND EXPENSES PER COW

34 Large Herd Dairy Farms with 900 or More Cows, 2009

Item	QUINTILE 1	2	3	4	5
Accrual Operating Receipts					
Milk	$3,959	$3,690	$3,566	$3,353	$2,870
Dairy cattle	407	306	261	184	122
Dairy calves	81	44	28	20	6
Other livestock	50	1	0	0	-22
Crops	243	92	13	-69	-145
Miscellaneous receipts	363	227	174	139	85
Total Operating Receipts	$4,659	$4,252	$3,976	$3,794	$3,358
Accrual Operating Expenses					
Hired labor	$ 545	$ 661	$ 713	$ 808	$ 978
Dairy grain & concentrate	953	1,214	1,278	1,381	1,607
Dairy roughage	2	18	47	73	123
Nondairy feed	0	0	0	0	0
Professional nutritional services	0	0	0	0	1
Machinery hire/rent/lease	4	38	60	91	170
Mach. repair & farm vehicle exp.	95	152	179	206	266
Fuel, oil & grease	90	122	135	154	192
Replacement livestock	0	0	0	0	27
Breeding	21	32	43	62	84
Veterinary & medicine	109	145	166	184	207
Milk marketing	125	175	202	235	320
Bedding	13	67	95	110	133
Milking supplies	42	70	88	113	163
Cattle lease	0	0	0	0	15
Custom boarding	0	3	23	80	297
bST expense	0	66	90	102	137
Livestock professional fees	0	2	11	15	23
Other livestock expense	0	0	11	27	46
Fertilizer & lime	31	60	83	107	214
Seeds & plants	49	78	91	103	144
Spray/other crop expenses	4	33	44	58	85
Crop professional fees	0	0	2	10	22
Land, building, fence repair	17	36	54	72	133
Taxes	27	39	52	62	81
Real estate rent/lease	17	45	61	89	138
Insurance	21	30	40	50	76
Utilities	57	80	90	107	140
Interest	34	84	109	158	258
Other professional fees	5	12	22	36	66
Miscellaneous	3	13	21	27	59
Total Operating Expenses	$3,243	$3,871	$4,091	$4,260	$4,642
Expansion livestock	0	0	0	22	113
Extraordinary expense	0	0	0	0	0
Machinery depreciation	113	158	197	242	304
Building depreciation	70	94	137	173	212
Net Farm Income w/o Appreciation	$ -948	$ -579	$ -365	$ -125	$ 125

RECEIPTS AND EXPENSES PER CWT. OF MILK SOLD

34 Large Herd Dairy Farms with 900 or More Cows, 2009

Item	QUINTILE 1	2	3	4	5
Accrual Operating Receipts					
Milk	$14.85	$14.05	$13.84	$13.54	$13.17
Dairy cattle	1.90	1.17	1.00	0.69	0.50
Dairy calves	0.33	0.18	0.12	0.08	0.02
Other livestock	0.36	0.00	0.00	0.00	-0.09
Crops	1.00	0.36	0.05	-0.27	-0.65
Miscellaneous receipts	1.47	0.92	0.77	0.55	0.31
Total Operating Receipts	$18.58	$16.42	$15.58	$15.04	$14.58
Accrual Operating Expenses					
Hired labor	$ 2.37	$ 2.60	$ 2.80	$ 3.12	$ 3.87
Dairy grain & concentrate	4.15	4.73	5.03	5.40	6.22
Dairy roughage	0.01	0.07	0.19	0.29	0.57
Nondairy feed	0.00	0.00	0.00	0.00	0.00
Professional nutritional services	0.00	0.00	0.00	0.00	0.00
Machinery hire/rent/lease	0.02	0.15	0.24	0.35	0.76
Mach. repair & farm vehicle exp.	0.39	0.58	0.71	0.85	1.05
Fuel, oil & grease	0.36	0.48	0.54	0.62	0.75
Replacement livestock	0.00	0.00	0.00	0.00	0.11
Breeding	0.09	0.13	0.17	0.24	0.34
Veterinary & medicine	0.44	0.58	0.65	0.69	0.85
Milk marketing	0.50	0.70	0.82	0.98	1.24
Bedding	0.06	0.26	0.38	0.45	0.51
Milking supplies	0.18	0.27	0.35	0.43	0.67
Cattle lease	0.00	0.00	0.00	0.00	0.06
Custom boarding	0.00	0.01	0.10	0.29	1.26
bST expense	0.00	0.26	0.35	0.39	0.52
Livestock professional fees	0.00	0.01	0.04	0.06	0.10
Other livestock expense	0.00	0.00	0.05	0.11	0.18
Fertilizer & lime	0.12	0.23	0.32	0.44	1.00
Seeds & plants	0.21	0.30	0.35	0.41	0.58
Spray/other crop expenses	0.02	0.12	0.18	0.24	0.34
Crop professional fees	0.00	0.00	0.01	0.04	0.10
Land, building, fence repair	0.07	0.15	0.22	0.28	0.51
Taxes	0.11	0.15	0.20	0.25	0.36
Real estate rent/lease	0.07	0.18	0.24	0.36	0.57
Insurance	0.08	0.12	0.16	0.21	0.30
Utilities	0.23	0.32	0.38	0.42	0.56
Interest	0.13	0.32	0.42	0.70	1.04
Other professional fees	0.02	0.05	0.08	0.14	0.27
Miscellaneous	0.01	0.05	0.08	0.11	0.26
Total Operating Expenses	$13.91	$14.89	$16.06	$17.10	$18.41
Expansion livestock	0.00	0.00	0.00	0.08	0.47
Extraordinary expense	0.00	0.00	0.00	0.00	0.00
Machinery depreciation	0.47	0.66	0.79	0.92	1.20
Building depreciation	0.28	0.38	0.52	0.69	0.91
Net Farm Income w/o Appreciation	$ -3.88	$ -2.27	$ -1.45	$ -0.47	$ 0.56

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

92 Large Herd Dairy Farms, 2009

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)
41.8	2,143	56,150,342	28,614	5.8	26	65	1,517,374
29.5	1,301	33,356,512	27,069	4.6	23	54	1,307,184
23.7	1,084	27,294,228	26,421	4.2	21	50	1,223,839
21.3	922	22,961,322	25,911	3.9	20	48	1,160,555
18.2	807	19,830,514	25,341	3.6	19	46	1,116,323
15.9	692	16,958,521	24,684	3.4	18	44	1,073,558
14.0	620	13,987,624	24,116	3.1	17	42	1,023,611
12.5	517	12,287,208	23,434	2.9	16	40	964,781
10.3	442	10,320,265	22,549	2.6	15	37	911,428
7.7	361	8,324,308	18,201	1.9	14	33	790,760

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)
$ 858	29%	$2,392	$396	$1,025	$1,164	$5.19
1,062	32	2,233	519	1,241	1,369	5.67
1,148	33	2,144	584	1,333	1,441	5.90
1,206	36	2,054	614	1,381	1,506	6.12
1,255	37	1,958	649	1,435	1,558	6.29
1,290	38	1,886	682	1,477	1,614	6.55
1,363	40	1,836	708	1,516	1,676	6.83
1,438	41	1,754	746	1,580	1,746	7.13
1,520	43	1,670	797	1,663	1,816	7.47
1,720	48	1,351	890	1,856	2,041	8.15

[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)
$1.68	$26,774	12%	$0.42	$0.36	$0.00
2.32	29,962	17	0.63	0.49	0.00
2.50	31,616	18	0.67	0.53	0.00
2.60	32,650	19	0.75	0.57	0.02
2.74	34,260	20	0.80	0.61	0.04
2.87	36,402	21	0.87	0.65	0.06
3.00	37,921	21	0.99	0.68	0.08
3.14	39,824	23	1.08	0.74	0.12
3.36	42,182	24	1.20	0.79	0.16
3.97	46,404	28	1.46	0.97	0.29

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)
$303	$76	$2,388	$11.23	$3,155	$14.10
350	86	2,917	12.19	3,639	15.38
375	95	3,061	12.57	3,824	15.91
394	101	3,164	13.07	3,947	16.29
424	106	3,271	13.49	4,059	16.63
462	112	3,384	13.90	4,165	17.04
501	121	3,592	14.37	4,307	17.42
538	129	3,760	14.72	4,471	17.98
579	142	3,994	15.57	4,748	18.55
939	275	4,229	16.44	4,975	19.57

bST Expense Per Cow	bST Expense Per Cwt.	Culling Rate	Expense Ratios		
			Operating	Depreciation	Interest
(12)	(12)	(12)	(14)	(14)	(14)
$ 0	$0.00	22%	0.83	0.02	0.01
0	0.00	28	0.88	0.05	0.01
0	0.00	30	0.90	0.05	0.02
5	0.02	32	0.92	0.06	0.02
37	0.15	33	0.94	0.07	0.03
68	0.27	35	0.96	0.08	0.03
86	0.34	36	0.99	0.09	0.04
96	0.37	38	1.02	0.10	0.05
109	0.41	40	1.06	0.11	0.06
137	0.51	45	1.13	0.13	0.06

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)
$15.26	$14.32	$4,050	$641	$147
14.55	13.69	3,782	432	70
14.24	13.27	3,651	349	58
14.07	13.13	3,579	312	45
13.93	13.01	3,514	294	37
13.82	12.92	3,423	261	27
13.70	12.84	3,335	219	22
13.54	12.70	3,243	184	18
13.31	12.55	3,082	152	11
13.09	12.25	2,608	61	-37

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)
$ 691	$ 444	2.5%	$ 18	$0.00
1,640	1,146	3.7	182	0.80
2,269	1,697	4.0	269	1.00
2,706	2,031	4.0	331	1.00
3,173	2,384	4.0	401	1.78
3,662	2,693	4.0	473	2.00
4,133	3,202	4.2	531	2.00
4,635	3,661	5.0	592	2.56
5,151	4,137	5.0	675	3.00
6,027	4,915	6.1	799	3.44

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)
$1,135	$4.34	$488	$2.02	4.96
767	3.22	314	1.33	1.81
624	2.63	249	1.03	1.05
522	2.15	217	0.94	0.76
420	1.82	192	0.82	0.52
325	1.39	158	0.66	0.22
234	0.96	134	0.53	0.05
83	0.32	111	0.45	-0.16
-78	-0.32	88	0.35	-0.54
-409	-1.65	57	0.23	-1.36

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)
$ 5,553	$1,211	$ 645	$28,389	0.77
7,101	2,384	985	30,155	0.59
7,682	2,716	1,174	31,302	0.54
8,035	2,979	1,332	32,035	0.50
8,612	3,254	1,470	33,479	0.48
9,047	3,488	1,588	34,852	0.46
9,475	3,754	1,758	36,964	0.43
9,971	4,203	1,904	39,036	0.40
10,743	4,780	2,146	40,717	0.37
12,153	6,238	2,462	46,938	0.32

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)
92%	0.10	0.09	0.08	0.00	33%	14.47%
82	0.24	0.20	0.21	0.02	24	3.55
75	0.37	0.27	0.26	0.10	20	2.50
69	0.49	0.33	0.32	0.19	18	2.12
61	0.68	0.40	0.42	0.28	14	1.84
56	0.82	0.45	0.45	0.37	11	1.67
51	0.99	0.50	0.51	0.49	8	1.45
47	1.16	0.54	0.58	0.59	5	1.24
43	1.40	0.58	0.67	0.72	0	1.00
29	2.90	0.72	0.85	0.95	-13	0.63

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)
$ 42,827	4.11%	5.36%	4.03%	4.71%
-44,916	-0.75	0.91	0.67	2.00
-88,072	-2.31	-1.48	-0.61	0.33
-117,198	-3.88	-3.37	-1.67	-0.85
-166,437	-5.63	-4.72	-2.51	-2.01
-211,524	-7.31	-7.07	-3.64	-3.40
-258,045	-11.00	-10.59	-4.83	-4.54
-344,925	-14.19	-13.37	-6.11	-6.34
-502,681	-18.27	-19.62	-7.52	-8.36
-1,013,791	-37.18	-39.18	-11.80	-14.46

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)
$ 353	$ 1.37	8%	19%
113	0.49	3	13
22	0.09	1	11
-63	-0.25	-2	9
-146	-0.59	-4	8
-242	-1.00	-6	7
-401	-1.68	-10	6
-517	-2.08	-13	5
-612	-2.50	-16	3
-897	-3.76	-24	1

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).

Deferred Taxes - (defined on page 17).

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

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EB No	Title	Fee (if applicable)	Author(s)
2010-03	The Effectiveness of Farm-to-Chef Marketing of Local Foods: an Empirical Assessment from Columbia County, NY"		Schmit, T., Lucke, A. and S. Hadcock
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