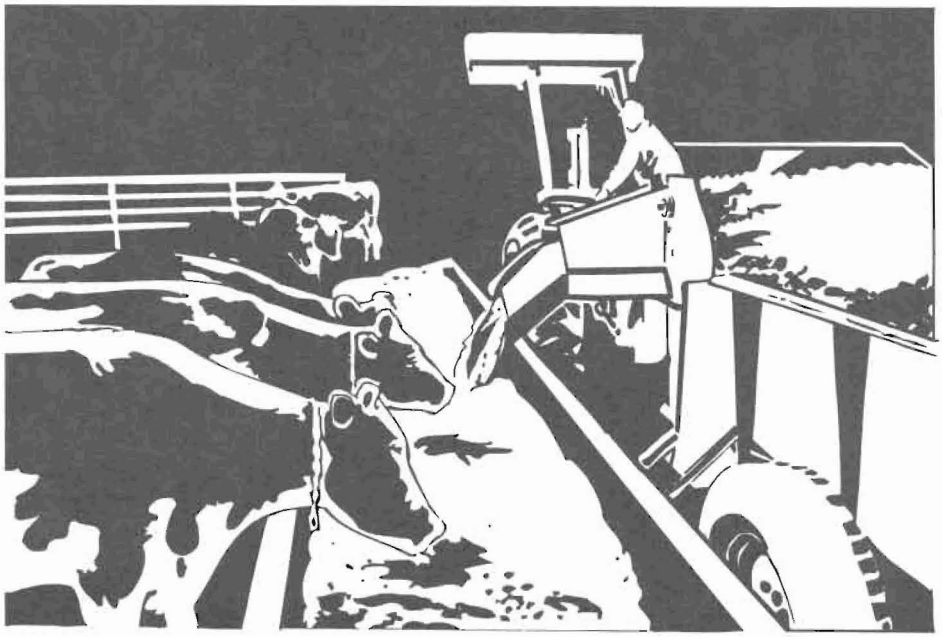
DAIRY FARM BUSINESS SUMMARY

MAY 1998 E.B. 98-06

NEW YORK LARGE HERD FARMS, 300 COWS OR LARGER 1997



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1997 DAIRY FARM BUSINESS SUMMARY
LARGE HERD DAIRY FARMS
300 Cows or Larger

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1997 DAIRY FARM BUSINESS SUMMARY
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. The information in this report represents an average of the data submitted from dairy farms with herds of 300 cows and larger in New York state for 1997.

Program Objective

The primary objective of the Dairy Farm Business Summary, DFBS, is to help farm managers improve the business and financial management of their 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. Thirty-five 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 1996 to 1997 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 40 large herd farms that participated in the 1997 DFBS program. Also presented is information concerning bST usage, culling rates, dairy enterprise efficiency, and milk parlor efficiency.

The summary and analysis section lists the average data for the 40 large herd farms that participated in the 1997 DFBS program. The format follows that of the individual farm DFBS printout and contains a brief explanation of each table and chart.

The fourth section presents a condensed summary and selected business factors for farms with 300-500 cows and farms with more than 500 cows.

The fifth section contains the income and expense profiles for the 300 cow and larger farms on a per cow and per cwt. 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. Cayuga, Cortland, Erie, Genesee, Jefferson, Livingston, Ontario, Saratoga, Schuyler, Tioga, Washington, Wayne and Wyoming counties had farms of this size in 1997. This report was written by Jason Karszes, Cooperative Extension agent for Erie and Wyoming counties and Wayne A. Knoblauch, Professor, Farm Management. Linda Putnam was in charge of data preparation. Melody Clark prepared the publication.

PROGRESS OF THE FARM BUSINESS

Comparing your business with average data from large DFBS dairy farms that participated in both of the last two years can be helpful in comparing performance and establishing goals for your business. It is equally important for you to determine the progress your business has made over the past two or three years, to compare this progress to your goals, and to set goals for the future. Please refer to the table on page 3 for selected factors from 35 farms with over 300 cows that participated in this DFBS project each of the last two years.

From 1996 to 1997 the average large herd grew by 8.7 percent by adding 47 cows. With this increase in herd size, farm capital per cow fell .4 percent to $5,587. The increase in herd size had little impact on labor efficiency. The 8.7 percent increase in herd size led to a 10.4 percent increase in worker equivalents on farm. With this increase cows per worker decreased 2.2 percent to 45 cows per worker equivalent. Due to an increase of 2.8 percent in milk sold per cow, the milk sold per worker equivalent increase by 1.1 percent to 1,019,945 lbs.

With the increase in cow numbers and the increase in milk sold per worker, total milk marketed during the year increased 11.7 percent to 13,228,685 pounds per farm.

An area of large change from 1996 to 1997 was in milk price received per cwt. of milk marketed. The average gross milk price received fell 9.2 percent to $13.48 per cwt. and the average net price received fell 9.1 percent to $13.04.

This large decrease in milk price put downward pressure on various cost categories. Hired labor expense per worker equivalent fell 1.4 percent to $28,711. Grain and concentrate expense per cwt. of milk sold fell 1.9 percent to $4.56. Labor & machinery costs per cow fell 1.4 percent to $975. Total costs to operate the farm on a per cwt. basis fell 2.4 percent to $12.90/cwt. Operating costs to produce milk fell 4.2 percent to $11.54/cwt.

While there was some downward pressure on costs to operate the farm, the resulting decrease was not sufficient to offset the decrease in milk price and two key expense measures increased. Grain & concentrate purchased as a percent of milk sales increased 9.7 percent to 34 percent. Labor as percent of milk sales increased 9.6 percent to 17.2 percent of milk sales.

Due to the fact that costs to operate the farm and to produce milk didn't decrease at the same rate as the price received for milk produced, profits were negatively impacted. Net farm income w/o appreciation fell 31.6 percent to $157,875, and net farm income with appreciation fell 30.3 percent to $182,065. This decrease in farm income led to a 54.7 percent decrease in labor and management income per operator, a 52.5 percent decrease in return to equity w/o appreciation, and a 30.2 percent decrease in return on all assets without appreciation.

With the severe drop in milk price during the summer months, many farms ran into cash commitment problems and needed to use borrowed capital to meet cash commitments. This use of borrowed capital coupled with the increase in herd size increased debt per cow 3.5 percent to $2,785 per cow and an increase of 4.2 percent in the debt to asset ratio.

The challenge in 1997 was reacting to the decrease in milk price from 1996. Milk price fell faster than costs and many farms weren't able to decrease costs as quickly as milk price fell. This lag led to several months of unprofitable production. With the recovery of milk price towards the end of 1997 and the ability of producers to eventually bring costs down, profitable production returned but the annual results decrease dramatically.

PROGRESS OF THE FARM BUSINESS

Same 35 Large Herd Dairy Farms, 1996 & 1997

Selected Factors	Average of 35 Farms 1996	Average of 35 Farms 1997	Percent Change
Size of Business			
Average number of cows	541	588	8.7
Average number of heifers	392	424	8.2
Milk sold, lbs.	11,848,165	13,228,685	11.7
Worker equivalent	11.75	12.97	10.4
Total tillable acres	1,026	1,067	4.0
Rates of Production			
Milk sold per cow, lbs.	21,890	22,497	2.8
Hay DM per acre, tons	3.3	3.1	-6.1
Corn silage per acre, tons	17.1	17.5	2.3
Labor Efficiency & Costs			
Cows per worker	46	45	-2.2
Milk sold/worker, lbs.	1,008,354	1,019,945	1.1
Hired labor cost/cwt.	$2.33	$2.29	-1.7
Hired labor cost/worker	$29,123	$28,711	-1.4
Hired labor cost as % of milk sales	15.7%	17.2%	9.6
Cost Control			
Grain & conc. purchased as % of milk sales	31%	34%	9.7
Grain & conc. per cwt. milk	$4.65	$4.56	-1.9
Dairy feed & crop expense per cwt. milk	$5.37	$5.25	-2.2
Labor & mach. costs/cow	$989	$975	-1.4
Total farm operating costs per cwt. sold	$13.22	$12.90	-2.4
Interest costs per cwt. milk	$0.88	$0.90	2.3
Milk marketing costs per cwt. milk sold	$0.50	$0.44	-12.0
Operating cost of producing cwt. of milk	$12.05	$11.54	-4.2
Capital Efficiency(average for the year)			
Farm capital per cow	$5,612	$5,587	-0.4
Mach. & equip. per cow	$864	$864	0.0
Asset turnover ratio	0.65	0.62	-4.6
Income Generation			
Gross milk sales per cow	$3,253	$3,034	-6.7
Gross milk sales per cwt.	$14.85	$13.48	-9.2
Net milk sales per cwt.	$14.35	$13.04	-9.1
Dairy cattle sales per cow	$247	$229	-7.3
Dairy calf sales per cow	$15	$18	20.0
Profitability			
Net farm income w/o apprec.	$230,786	$157,875	-31.6
Net farm income w/apprec.	$261,104	$182,065	-30.3
Labor & mgt. income per oper./manager	$75,059	$33,979	-54.7
Rate of return on equity capital w/o apprec.	9.9%	4.7%	-52.5
Rate of return on all capital w/o apprec.	8.6%	6.0%	-30.2
Financial Summary			
Farm net worth, end year	$1,665,502	$1,683,919	1.1
Debt to asset ratio	0.48	0.50	4.2
Farm debt per cow	$2,692	$2,785	3.5

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

On the following page selected factors for the top 20% 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 40 farms over 300 cows that participated in the DFBS project in 1997. 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.

In 1997, 33 of the 40 farms over 300 cows filled out a supplementary data collection form that dealt with some additional management concerns of 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 33 farms and only represents these 33 farms.

SUPPLEMENTAL FARM BUSINESS CHART

33 Large Herd Farms, 1997

Culling Rate %	bST Expense Per Cow	bST Expense Per Cwt of Milk	% Herd on bST	Milk lbs Produced Per Labor Hour
23.1%	$14.62	$.07	10%	2,094
27.8	$51.12	$.24	34	1,623
30.4	$70.24	$.33	47	1,328
32.9	$78.04	$.36	52	1,182
37.5	$98.42	$.43	65	991
Average				
30.3	$62.63	$.28	41	1,446

		For Dairy Enterprise Only		
Total Cows by Labor hour Milking	Milk Harvested Per Machine	Worker Equivalents	Cows per Worker Equivalent	Pounds Sold per Worker Equivalent
33.8	674,443	12.18	145	3,325,406
26.7	615,655	6.17	105	2,303,337
22.4	530,956	4.63	97	2,136,979
20.7	406,321	3.77	91	1,849,576
17.1	313,078	3.22	70	1,465,249
Average				
24.2	507,914	6.06	101.7	2,224,573

TOP 20 PERCENT VS. AVERAGE

40 Large Herd Dairy Farms, 1997

Selected Factors	Average 1997	Top 20% 1997	Percent Difference
Size of Business			
Average number of cows	591	939	58.9
Average number of heifers	426	632	48.4
Milk sold, lbs.	13,199,278	21,740,910	64.7
Worker equivalent	13.02	18.28	40.4
Total tillable acres	1,108	1,390	25.5
Rates of Production			
Milk sold per cow, lbs.	22,352	23,153	3.6
Hay DM per acre, tons	2.97	3.67	23.6
Corn silage per acre, tons	17.37	20.05	15.4
Labor Efficiency & Costs			
Cows per worker	45	51	13.3
Milk sold/worker, lbs.	1,013,769	1,189,328	17.3
Hired labor cost/cwt.	$2.29	$2.55	11.4
Hired labor cost/worker	$28,355	$33,630	18.6
Hired labor cost as % of milk sales	16.9%	19.0%	12.4
Cost Control			
Grain & conc. purchased as % of milk sales	34%	33%	-2.9
Grain & conc. per cwt. milk	$4.58	$4.47	-2.4
Dairy feed & crop expense per cwt. milk	$5.32	$5.02	-5.6
Labor & mach. costs/cow	$977	$988	1.1
Total farm operating costs per cwt. sold	$13.01	$12.64	-2.8
Interest costs per cwt. milk	$0.88	$0.92	4.5
Milk marketing costs per cwt. milk sold	$0.43	$0.37	-14.0
Operating cost of producing cwt. of milk	$11.67	$11.08	-5.1
Capital Efficiency (average for the year)			
Farm capital per cow	$5,516	$5,603	1.6
Mach. & equip. per cow	$877	$802	-8.6
Asset turnover ratio	0.62	0.63	1.6
Income Generation			
Gross milk sales per cow	$3,018	$3,112	3.1
Gross milk sales per cwt.	$13.51	$13.44	-0.5
Net milk sales per cwt.	$13.08	$13.07	-0.1
Dairy cattle sales per cow	$218	$215	-1.4
Dairy calf sales per cow	$17	$18	5.9
Profitability			
Net farm income w/o apprec.	$139,160	$367,569	164.1
Net farm incom w/apprec.	$164,502	$368,294	123.9
Labor & mgt. income per oper./manager	$24,901	$141,369	467.7
Rate of return on equity capital w/o apprec.	3.53%	12.19%	245.3
Rate of return on all capital w/o apprec.	5.4%	9.48%	75.6
Financial Summary			
Farm net worth, end of year	$1,694,910	$2,465,654	45.5
Debt to asset ratio	0.49	0.54	10.2
Farm debt per cow	$2,707	$2,986	10.3

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
40 Large Herd Dairy Farms, 1997

Type of Farm	Number
Dairy	40

Type of Ownership	Number
Owner	40

Type of Business	Number
Single proprietorship	15
Partnership	13
Corporation	12

Business Record System	Number
Account Book	4
Agrifax (mail-in only)	3
On-Farm Computer	30
Other	3

BST Usage	Number
<25%	5
25-75%	28
>75%	3
Stopped Use in 1997	2
Not Used	2

Type of Barn	Number
Stanchion/Tie-Stall	0
Freestall	38
Combination	2

Milking System	Number
Pipeline	0
Herringbone parlor	28
Other parlor	12

Milking Frequency	Number
2x/day	5
3x/day	33
Other	2

Production Records	Number
DHIC	31
Owner-Sampler	5
Other	3
None	1

Income Statement

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

Cash paid is the actual cash outlay during the year and does not necessarily represent the cost of goods and services actually used in 1997.

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.

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CASH AND ACCRUAL FARM EXPENSES

40 Large Herd Dairy Farms, 1997

Expense Item	Cash Paid	-	Change in Inventory or Prepaid Expense	+	Change in Accounts Payable	=	Accrual Expenses
Hired Labor	$ 301,148		$ -166 <<		$ 432		$ 301,746
Feed							
Dairy grain & concentrate	584,471		-9,951		9,650		604,072
Dairy roughage	12,781		280		-19		12,482
Nondairy	272		0		0		272
Machinery							
Mach. hire, rent/lease	40,572		-197 <<		230		40,999
Mach. rep. & farm veh. exp	70,593		-37		1,537		72,166
Fuel, oil & grease	28,876		-402		368		29,646
Livestock							
Replacement livestock	18,726		0 <<		0		18,726
Breeding	16,655		152		415		16,919
Vet & medicine	55,855		-26		1,540		57,421
Milk marketing	56,850		-68 <<		42		56,959
Bedding	25,409		37		292		25,664
Milk supplies	37,188		-1,261		625		39,075
Cattle lease/rent	7,318		0 <<		-231		7,087
Custom boarding	23,390		0 <<		196		23,585
bST expense	37,258		-1,445		587		39,290
Other livestock expense	19,112		-637		169		19,917
Crops							
Fertilizer & lime	28,319		-4,152		2,608		35,079
Seeds & plants	22,053		-1,036		483		23,571
Spray, other crop exp.	26,059		878		1,434		26,615
Real Estate							
Land/bldg./fence repair	26,003		254		702		26,452
Taxes	19,436		111 <<		0		19,326
Rent & lease	31,266		454 <<		0		30,811
Other							
Insurance	16,372		15 <<		0		16,357
Utilities (farm share)	38,819		-51 <<		144		39,014
Interest paid	115,883		0 <<		543		116,426
Miscellaneous	15,978		-450		535		16,963
Total Operating Expenses	$1,676,660		$ -17,697		$ 22,281		$1,716,638
Expansion livestock	$ 33,788		$ 0 <<		$ 303		$ 34,090
Machinery depreciation							$ 62,757
Building depreciation							$ 41,959
Total Accrual Expenses							$1,855,444

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 1997 funds used to prepay 1998 leases exceed the amount of 1997 leases prepaid in 1996, the amount of this excess is subtracted to exclude it from 1997 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 1997 but not paid for. A decrease is subtracted because the resource was used before 1997.

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
40 Large Herd Dairy Farms, 1997

Receipt Item	Cash Receipts	+	Change in Inventory	+	Change in Accounts Receivable	=	Accrual Receipts
Milk sales	$1,769,952				$ 13,639		$ 1,783,591
Dairy cattle	71,325		$ 57,371		-71		128,625
Dairy calves	10,365				-34		10,331
Other livestock	4,357		1,139		0		5,496
Crops	12,141		20,119		-1,933		30,327
Government receipts	17,800		-355 *		-250		17,194
Custom machine work	1,984				90		2,074
Gas tax refund	596				-66		529
Other	15,517				920		16,437
Less nonfarm noncash cap.**			(-) 0 **		(-) 0		(-) 0
Total Receipts	$1,904,036		$ 78,274		$ 12,294		$ 1,994,604

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

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

Changes in inventory of assets produced by the business are calculated by subtracting beginning of year values from end of year 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 1997 for the 1998 crop year in excess of funds earned for 1997. Likewise, a decrease is added to cash government receipts because it represents funds earned for 1997 but received in 1996.

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[3] 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.

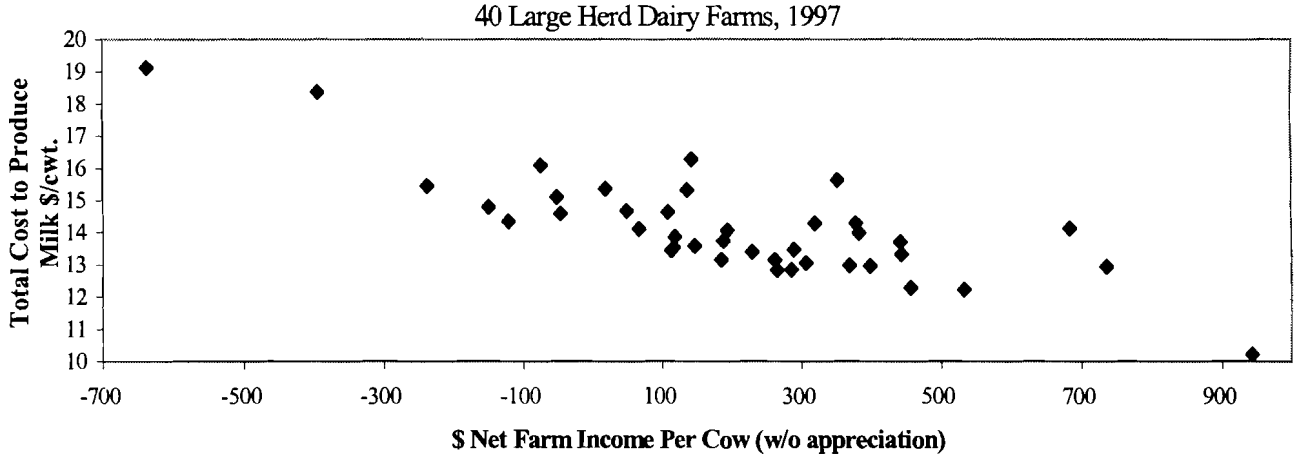
Net farm income is the return to the farm operators and other unpaid family members for their labor, management, and equity capital. It is the farm family's net annual return from working, managing, financing, and owning the farm business. This is not a measure of cash available from the year's business 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
40 Large Herd Dairy Farms, 1997

Item	Average Total	Average Per Cow	My Farm Total	My Farm Per Cow
Total accrual receipts	$ 1,994,604		$ _____	
Appreciation: Livestock	-4,691		_____	
Machinery	6,570		_____	
Real Estate	22,306		_____	
Other Stock/Certificates	1,157		_____	
Total Including Appreciation	$ 2,019,946		$ _____	
Total accrual expenses	1,855,444		- _____	
Net Farm Income (with appreciation)	$ 164,502	$278	$ _____	$ _____
Net Farm Income (w/o appreciation)	$ 139,160	$235	$ _____	$ _____

TOTAL COST TO PRODUCE MILK vs. NET FARM INCOME PER COW
40 Large Herd Dairy Farms, 1997



[3]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.

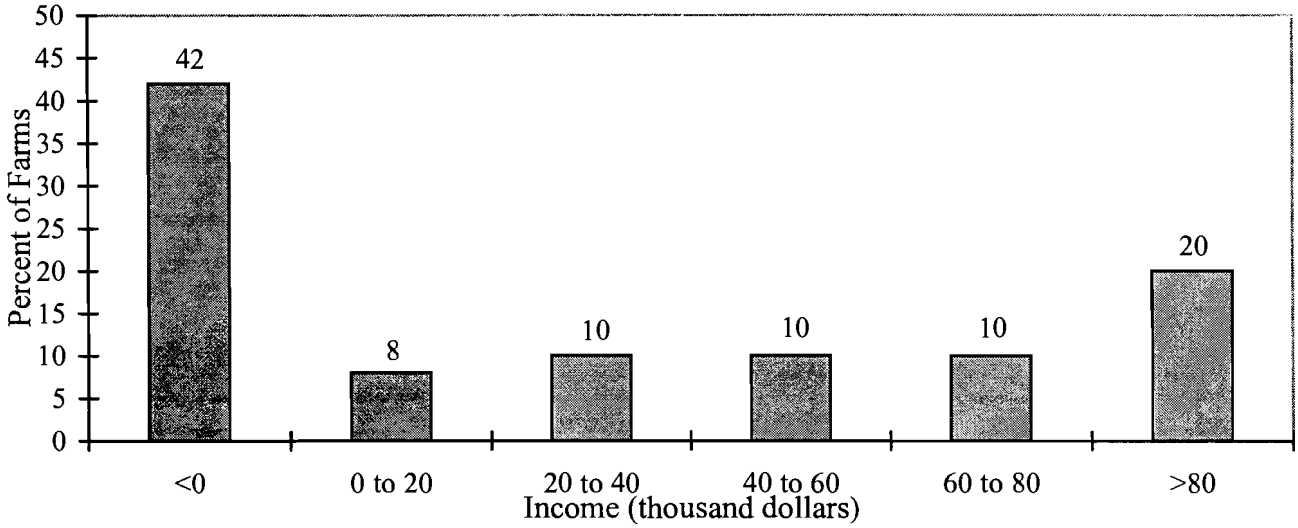
Labor and management income is the return which farm operators receive for their labor and management used in operating the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. 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
40 Large Herd Dairy Farms, 1997

Item	Average	My Farm
Net farm income without appreciation	$ 139,160	$ _____
Family labor unpaid @ $1,550 per month	- 2,790	- _____
Interest on $1,686,537 average equity capital @ 5% real rate	- 84,327	- _____
Labor & Management Income per Farm (2.09 operators/farm)	$ 52,043	$ _____
Labor & Management Income per Operator/Manager	$ 24,901	$ _____

Labor and management income per operator averaged $24,901 on these 40 farms in 1997. Returns to labor and management were negative on 42 percent of the farms. Labor and management income per operator ranged from $0 to $40,000 on 18 percent of the farms while 20 percent showed labor and management incomes of $80,000 or more per operator.

DISTRIBUTION OF LABOR & MANAGEMENT INCOMES PER OPERATOR
40 Large Herd Dairy Farms, 1997



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
40 Large Herd Dairy Farms, 1997

Item	Average	My Farm
Net farm income with appreciation	$ 164,502	$ _____
Family labor unpaid @ $1,550 per month	- 2,790	- _____
Value of operators' labor & management	- 76,820	- _____
Return on equity capital with appreciation	$ 84,892	$ _____
Interest paid	+ 116,426	+ _____
Return on total capital with appreciation	$ 201,318	$ _____
Return on equity capital without appreciation	$ 59,550	$ _____
Return on total capital without appreciation	$ 175,976	$ _____
Rate of return on average equity capital:		
with appreciation	5.03%	_____ %
without appreciation	3.53%	_____ %
Rate of return on average total capital:		
with appreciation	6.18%	_____ %
without appreciation	5.40%	_____ %

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 1997, leases were discounted by 9.25 percent.

Advanced government receipts are included as current liabilities. Government payments received in 1997 that are for participation in the 1996 program are the end year balance and payments received in 1996 for participation in the 1997 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.

1997 FARM BUSINESS & NONFARM BALANCE SHEET

40 Large Herd Dairy Farms, 1997

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 16,382	$ 12,429	Accounts payable	$ 37,677	$ 60,260
Accounts receivable	120,664	132,959	Operating debt	130,652	171,223
Prepaid expenses	4,430	4,528	Short Term	8,004	9,794
Feed & supplies	354,868	357,192	Advanced govt. receipts	0	355
			Current Portion:		
			Intermediate	89,337	105,622
			Long Term	40,236	42,276
Total Current	$ 496,344	$ 507,108	Total Current	$ 305,907	$ 389,529
Intermediate			Intermediate		
Dairy cows:			Structured debt		
owned	$ 557,888	$ 594,639	1-10 years	$ 490,938	$ 565,540
leased	10,849	5,502	Financial lease		
Heifers	243,511	259,420	(cattle/machinery)	66,823	43,863
Bulls/other livestock	5,067	6,227	Farm Credit stock	14,556	16,605
Mach./equipment owned	444,226	497,749	Total Intermediate	$ 572,317	$ 626,008
Mach./equipment leased	55,974	38,361			
Farm Credit stock	14,556	16,605			
Other stock/certificate	69,985	64,474			
Total Intermediate	$1,402,056	$1,482,977			
			Long Term		
Long Term			Structured debt		
Land/buildings:			>10 years	$ 620,794	$ 632,757
owned	$1,278,781	$1,353,119	Financial lease		
leased	0	0	(structures)	0	0
Total Long Term	$1,278,781	$1,353,119	Total Long Term	$ 620,794	$ 632,757
			Total Farm Liab.	$1,499,018	$1,648,294
Total Farm Assets	$3,177,181	$3,343,204	FARM NET WORTH	$1,678,163	$1,694,910

Nonfarm Assets, Liabilities & Net Worth (Average of 14 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, checking & savings	$ 3,839	$ 4,571	Nonfarm Liabilities	$ 9,021	$ 10,669
Cash value life insurance	14,605	16,647			
Nonfarm real estate	9,643	25,000			
Auto (personal share)	6,321	5,229			
Stocks & bonds	3,833	5,133			
Household furnishings	9,571	9,714			
All other nonfarm assets	8,214	8,214			
Total Nonfarm Assets	$ 56,026	$ 74,508	NONFARM NET WORTH	$ 47,005	$ 63,839

Farm & Nonfarm Assets, Liabilities, and Net Worth*	Jan. 1	Dec. 31
Total Assets	$ 3,233,207	$ 3,417,712
Total Liabilities	1,508,039	1,658,963
TOTAL FARM & NONFARM NET WORTH	$ 1,725,168	$ 1,758,749

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

The following condensed balance sheet, including deferred taxes, contains average data from only those farmers who elected to provide the additional information required to compute deferred taxes.

Deferred taxes represent an estimate of the taxes that would be paid if the farm were sold at year end fair market values and date on the balance sheet. Accuracy is dependent on the accuracy of the market values and the tax basis data provided. Any tax liability for assets other than livestock, machinery, land, buildings and nonfarm assets is excluded. It is assumed that all gain on purchased livestock and machinery is ordinary gain and that listed market values are net of selling costs. The effects of investment tax credit carryover and recapture, carryover of operating losses, alternative minimum taxes and other than average exemptions and deductions are excluded because they have only minor influence on the taxes of most farms. However, they could be important.

CONDENSED BALANCE SHEET INCLUDING DEFERRED TAXES
December 31, 1997
Average of 9 New York Dairy Farms Reporting Data, 1997

ASSETS		LIABILITIES & NET WORTH	
		Current debts & payables	$ 90,672
		Current deferred taxes	34,647
Total Current Assets	$ 144,457	Total Current Liabilities	$125,319
		Intermediate debts & leases	$163,616
		Intermediate deferred taxes	111,920
Total Intermediate Assets	$ 507,840	Total Intermediate Liabilities	$275,536
		Long term debts & leases	$138,782
		Long term deferred taxes	56,189
Total Long Term Assets	$ 432,735	Total Long Term Liabilities	$194,971
TOTAL FARM ASSETS	$1,085,032	TOTAL FARM LIABILITIES	$595,826
		Farm Net Worth	$489,206
		Percent Equity (Farm)	45%
		Nonfarm debts	$ 0
		Nonfarm deferred taxes	6,239
Total Nonfarm Assets	$ 33,639	Total Nonfarm Liabilities	$ 6,239
TOTAL ASSETS	$1,118,671	TOTAL LIABILITIES	$602,065
		Total Net Worth	$516,606
		Percent Equity (Total)	46%

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
40 Large Herd Dairy Farms, 1997

Item	Average	My Farm
Financial Ratios - Farm:		
Percent equity	51%	_____ %
Debt/asset ratio: total	0.49	_____
long-term	0.47	_____
intermediate/current	0.51	_____
Farm Debt Analysis:		
Accounts payable as % of total debt	4%	_____ %
Long-term liabilities as a % of total debt	38%	_____ %
Current & intermediate liabilities as a % of total debt	62%	_____ %

Farm Debt Levels:	Per Cow	Per Tillable Acre Owned	Per Cow	Per Tillable Acre Owned
Total farm debt	$ 2,707	$2,676	$ _____	$ _____
Long-term debt	1,039	1,027	_____	_____
Long-term & intermediate	2,067	2,043	_____	_____
Intermediate & current debt	1,668	1,649	_____	_____

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
40 Large Herd Dairy Farms, 1997

Item	Average of 40 Farms			
	Real Estate		Machinery & Equipment	
Value beginning of year		$ 1,278,781		$ 444,226
Purchases	$ 126,781 *		$ 113,695	
Gift/inheritance	+ 0		+ 0	
Lost capital	- 28,888			
Sales	- 3,901		- 3,984	
Depreciation	- 41,959		- 62,757	
Net investment		= 52,032		= 46,953
Appreciation		+ 22,306		+ 6,570
Value end of year		$ 1,353,119		$ 497,749

*$14,698 land and $112,083 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)
40 Large Herd Dairy Farms, 1997

Item	Average		My Farm	
Beginning of year farm net worth		$ 1,678,163		$ _____
Net farm income w/o appreciation	$ 139,160		$ _____	
+ Nonfarm cash income	+ 9,263		+ _____	
- Personal withdrawals & family expenditures excluding nonfarm borrowings	- 102,243		- _____	
Retained Earnings		+ 46,180		+ _____
Nonfarm noncash transfers to farm	$ 0		$ _____	
+ Cash used in business from nonfarm capital	+ -23,177		+ _____	
- Note/mortgage from farm real estate sold (nonfarm)	- 175		- _____	
Contributed/Withdrawn Capital		+ -23,352		+ _____
Appreciation	$ 25,342		$ _____	
- Lost capital	- 28,888		- _____	
Change in Valuation Equity		+ -3,546		+ _____
Imbalance/Error		- 2,535		- _____
End of year farm net worth*		=$ 1,694,910		=$ _____
Change in net worth w/apprec.		$ 16,747		$ _____
Change in Net Worth				
Without appreciation		$ -8,595		$ _____
With appreciation		$ 16,747		$ _____

*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
40 Large Herd Dairy Farms, 1997

Item		Average	
Cash Flow from Operating Activities			
Cash farm receipts	$ 1,904,036		
- Cash farm expenses	1,676,660		
= Net cash farm income		$ 227,376	
Personal withdrawals/family expenses including nonfarm debt payments	$ 102,863		
- Nonfarm income	9,263		
- Net cash withdrawals from the farm		$ 93,600	
= Net Provided by Operating Activities			$ 133,776
Cash Flow From Investing Activities			
Sale of Assets: Machinery	$ 3,984		
+ real estate	3,726		
+ other stock/cert.	22,054		
= Total asset sales		$ 29,764	
Capital purchases: expansion livestock	$ 33,788		
+ machinery	113,695		
+ real estate	126,781		
+ other stock/cert.	15,386		
- Total invested in farm assets		$ 289,650	
= Net Provided by Investment Activities			$ -259,886
Cash Flow From Financing Activities			
Money borrowed (inter. & long term)	$ 252,346		
+ Money borrowed (short-term)	7,700		
+ Increase in operating debt	40,571		
+ Cash from nonfarm cap. used in business	-23,177		
+ Money borrowed - nonfarm	620		
= Cash inflow from financing		$ 278,060	
Principal payments (inter. & long-term)	$ 147,458		
+ Principal payments (short-term)	5,912		
+ Decrease in operating debt	0		
- Cash outflow for financing		$ 153,370	
= Net Provided by Financing Activities			$ 124,690
Cash Flow From Business			
Beginning farm cash, checking & savings		$ 16,382	
- Ending farm cash, checking & savings		12,429	
= Net Provided from Reserves			$ 3,953
Imbalance (error)			$ 2,533

ANNUAL CASH FLOW STATEMENT

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

Repayment Analysis

A valuable use of cash flow analysis is to compare the debt payments planned for the last year with the amount actually paid. The measures listed below provide a number of different perspectives on the repayment performance of the business. However, the critical question to many farmers and lenders is whether planned payments can be made in 1998. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 1998 debt payments shown below.

FARM DEBT PAYMENTS PLANNED

Same 35 Large Herd Dairy Farms, 1996 & 1997

	Average			My Farm		
	1997 Payments		Planned	1997 Payments		Planned
Debt Payments	Planned	Made	1998	Planned	Made	1998
Long-term	$ 96,111	$136,630	$ 101,041	$_____	$_____	$_____
Intermediate-term	135,877	122,200	154,685	_____	_____	_____
Short-term	6,806	7,006	8,057	_____	_____	_____
Operating (net reduction)	2,469	0	8,343	_____	_____	_____
Accounts payable (net reduction)	3,046	0	9,867	_____	_____	_____
Total	$244,309	$265,836	$ 281,993	$_____	$_____	$_____
Per cow	$ 415	$ 452		$_____	$_____	
Per cwt. 1997 milk	$ 1.85	$ 2.01		$_____	$_____	
Percent of total 1997 receipts	12%	13%		_____	_____	
Percent of 1997 milk receipts	14%	15%		_____	_____	

The cash flow coverage ratio measures the ability of the farm business to meet its planned debt payments schedule. The ratio shows the percentage of payments planned for 1997 (as of December 31, 1996) that could have been made with the amount available for debt service in 1997. Farmers who did not participate in DFBS in 1996 have their 1997 cash flow coverage ratio based on planned debt payments for 1998.

CASH FLOW COVERAGE RATIO

Same 35 Large Herd Dairy Farms, 1996 & 1997

Item		Average	My Farm
	Cash farm receipts	$ 1,901,781	$_____
-	Cash farm expenses	1,677,670	_____
+	Interest paid	118,525	_____
-	Net personal withdrawals from farm**	96,126	_____
(A) =	Amount Available for Debt Service	$ 246,510	$_____
(B) =	Debt Payments Planned for 1997 (as of 12/31/96)	$ 244,309	$_____
(A÷B) =	Cash Flow Coverage Ratio for 1997	1.01	_____

**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

40 Large Herd Dairy Farms, 1997

Item	Regional Average Per Cow	Regional Average Per Cwt.	Total
Number cows and cwt. milk	591	131,993	
Accrual Operating Receipts			
Milk	$ 3,018	$13.51	$ 1,783,591
Dairy cattle	218	0.97	128,625
Dairy calves	17	0.08	10,331
Other livestock	9	0.04	5,496
Crops	51	0.23	30,327
Misc. receipts	61	0.27	36,234
Total	$ 3,375	$15.11	$ 1,994,604
Accrual Operating Expenses			
Hired labor	$ 511	$2.29	$ 301,746
Dairy grain & concentrate	1,022	4.58	604,072
Dairy roughage	21	0.09	12,482
Nondairy feed	0	0.00	272
Mach. hire/rent/lease	69	0.31	40,999
Mach. repair & farm vehicle expense	122	0.55	72,166
Fuel, oil & grease	50	0.22	29,646
Replacement livestock	32	0.14	18,726
Breeding	29	0.13	16,919
Vet & medicine	97	0.44	57,421
Milk marketing	96	0.43	56,959
Bedding	43	0.19	25,664
Milking supplies	66	0.30	39,075
Cattle lease	12	0.05	7,087
Custom boarding	40	0.18	23,585
bST expense	66	0.30	39,290
Other livestock expense	34	0.15	19,917
Fertilizer & lime	59	0.27	35,079
Seeds & plants	40	0.18	23,571
Spray/other crop expenses	45	0.20	26,615
Land, building, fence repair	45	0.20	26,452
Taxes	33	0.15	19,326
Real estate rent/lease	52	0.23	30,811
Insurance	28	0.12	16,357
Utilities	66	0.30	39,014
Miscellaneous	29	0.13	16,963
Total Less Interest Paid	$ 2,708	$12.12	$ 1,600,212
Net Accrual Operating Income			
(without interest paid)	$ 667	$2.99	$394,392
- Change in livestock/crop inventory*	132	0.59	78,274
- Change in accounts receivable	21	0.09	12,294
- Change in feed/supply inventory**	-30	-0.13	-17,697
+ Change in accts. payable***	37	0.16	21,738
NET CASH FLOW	$ 581	$2.60	$ 343,259
- Net personal withdrawals from farm (see footnote on p. 16)	$ 157	$0.70	$ 92,980
Available for Farm Debt Payments & Investments	$ 423	$1.90	$ 250,279
- Farm debt payments	450	2.01	265,767
Available for Farm Investment	$ -26	$-0.12	$ -15,488
- Capital purchases: cattle, machinery & improvements	$ 490	$2.19	$ 289,650

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

***Excludes change in interest account payable.

ANNUAL CASH FLOW WORKSHEET

Item	My Farm Per Cow or Per Cwt.	My Farm Expected Change	1998 Projection
No. cows or cwt. milk			
Accrual Operating Receipts			
Milk	$	$	$
Dairy cattle			
Dairy calves			
Other livestock			
Crops			
Misc. receipts			
Total	$	$	$
Accrual Operating Expenses			
Hired labor	$	$	$
Dairy grain & concentrate			
Dairy roughage			
Nondairy feed			
Mach. hire/rent/lease			
Mach. repair & farm vehicle expense			
Fuel, oil & grease			
Replacement livestock			
Breeding			
Vet & medicine			
Milk marketing			
Bedding			
Milking supplies			
Cattle lease			
Custom boarding			
bST expense			
Other livestock expense			
Fertilizer & lime			
Seeds & plants			
Spray/other crop expenses			
Land, building, fence repair			
Taxes			
Real estate rent/lease			
Insurance			
Utilities			
Miscellaneous			
Total Less Interest Paid	$	$	$
Net Accrual Operating Income			
(without interest paid)	$	$	$
- Change in livestock/crop inventory*			
- Change in accounts receivable			
- Change in feed/supply inventory**			
+ Change in accounts payable***			
NET CASH FLOW	$	$	$
- Net personal withdrawals from farm(see footnote p.18)	$	$	$
Available for Farm Debt Payments & Investments	$	$	$
- Farm debt payments			
Available for Farm Investment	$	$	$
- Capital purchases: cattle, machinery & improvements	$	$	$
Additional Capital Needed	$	$	$

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

***Excludes change in interest account payable.

Cropping Analysis

The cropping program is an important part of the dairy farm business and often represents opportunities for improved productivity and profitability. A complete evaluation of what the available land resources are, how they are being used, 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
40 Large Herd Dairy Farms, 1997

Item	Average			My Farm		
Land	Owned	Rented	Total	Owned	Rented	Total
Tillable	616	492	1,108			
Nontillable	52	4	56			
Other nontillable	184	8	192			
Total	852	503	1,355			

Crop Yields	Farms	Acres*	Prod/Acre	Acres	Prod/Acre
Hay crop	39	454	2.96 tn DM		tn DM
Corn silage	39	507	17.39 tn		tn
Other forage	3	67	1.34 tn DM		tn DM
Total forage	39	966	4.25 tn DM		tn DM
Corn grain	17	183	106.10 bu		bu
Oats	3	22	47.73 bu		bu
Wheat	7	91	62.53 bu		bu
Other crops	12	172			
Tilllable pasture	10	40			
Idle	5	90			
Total Tillable Acres	40	1,108			

*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were corn grain 78, oats 2, wheat 16, tillable pasture 10, and idle 11.

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
40 Large Herd Dairy Farms, 1997

Item	Average	My Farm
Total tillable acres per cow	1.87	
Total forage acres per cow	1.59	
Harvested forage dry matter, tons per cow	6.77	

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 not used on these farms.

CROP RELATED ACCRUAL EXPENSES

Large Herd Dairy Farms Reporting, 1997

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	40	8			8	
Ave. number of acres	1,108	661			506	
Fertilizer/lime	$ 31.66	$ 32.25	$ 6.22	$ 0.26	$ 18.12	$ 6.99
Seed/plants	21.27	25.81	4.98	0.21	12.45	4.80
Spray/other crop exp.	24.02	41.69	8.04	0.34	7.64	2.95
TOTAL	$ 76.95	$ 99.75	$ 19.24	$ 0.81	$ 38.21	$ 14.74
My Farm:						
Fertilizer/lime	$_____	$_____	$_____	$_____	$_____	$_____
Seeds/plants	_____	_____	_____	_____	_____	_____
Spray/other crop exp.	_____	_____	_____	_____	_____	_____
TOTAL	$_____	$_____	$_____	$_____	$_____	$_____

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

40 Large Herd Dairy Farms, 1997

Machinery Expense Item	Average Total Expenses	Average Per Till. Acre	My Farm Total Expenses	My Farm Per Till. Acre
Fuel, oil & grease	$ 29,646	$ 26.76	$_____	$_____
Mach. repairs & farm veh. exp.	72,166	65.13	_____	_____
Machine hire, rent & lease	40,999	37.00	_____	_____
Interest (5%)	25,908	23.38	_____	_____
Depreciation	62,757	56.64	_____	_____
Total	$ 231,476	$ 208.91	$_____	$_____

Dairy Analysis

Analysis of the dairy enterprise can reveal a great deal about the strengths and weaknesses of the dairy farm business. Information on this page should be used in conjunction with DHI and other dairy production information. Changes in dairy herd size and market values that occur during the year are identified in the table below. The change in inventory value without appreciation is attributed to physical changes in herd size and quality. Any change in inventory is included as an accrual farm receipt when calculating all of the profitability measures on pages 9 and 10.

DAIRY HERD INVENTORY

40 Large Herd Dairy Farms, 1997

	Dairy Cows		Heifers					
			Bred		Open		Calves	
Item	No.	Value	No.	Value	No.	Value	No.	Value
Beginning year (owned)	553	$ 557,888	158	$ 139,372	142	$ 72,027	110	$ 32,112
+ Change w/o apprec.		39,895		6,660		7,691		3,126
+ Appreciation		-3,144		-544		-743		-282
End year (owned)	593	$ 594,639	165	$ 145,488	152	$ 78,975	121	$ 34,956
End including leased	609							
Average number	591		426 (all age groups)					
My Farm:								
Beginning year (owned)	____	$_____	___	$_____	___	$_____	____	$_____
+ Change w/o apprec.		_____		_____		_____		_____
+ Appreciation		_____		_____		_____		_____
End of year (owned)	____	$_____	___	$_____	___	$_____	____	$_____
End including leased	____							
Average number	____		___ (all age groups)					

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

40 Large Herd Dairy Farms, 1997

Item	Average	My Farm
Total milk sold, lbs.	13,199,278	_____
Milk sold per cow, lbs.	22,352	_____
Average milk plant test, percent butterfat	3.65	_____

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

40 Large Herd Dairy Farms, 1997

	Average			My Farm		
Item	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Accrual Costs of Producing Milk						
Operating costs	$ 1,539,715	$ 2,605	$11.67	$_____	$_____	$_____
Purchased inputs costs	$ 1,644,431	$ 2,782	$12.46	$_____	$_____	$_____
Total Costs	$ 1,808,368	$ 3,060	$13.70	$_____	$_____	$_____
Accrual Receipts From Milk	$ 1,783,591	$ 3,018	$13.51	$_____	$_____	$_____
Net Farm Income w/o apprec.	$ 139,160	$ 235	$1.05	$_____	$_____	$_____
Net Farm Income with apprec.	$ 164,502	$ 278	$1.25	$_____	$_____	$_____

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

40 Large Herd Dairy Farms, 1997

	Average		My Farm	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & conc.	$1,022	$4.58	$_____	$_____
Purchased dairy roughage	21	0.09	_____	_____
Total Purchased Dairy Feed	$1,043	$4.67	$_____	$_____
Purchased grain & conc. as % of milk receipts	34%		__%	
Purchased feed & crop exp.	$1,188	$5.32	$_____	$_____
Purchased feed & crop exp. as % of milk receipts	39%		__%	
Breeding	$ 29	$0.13	$_____	$_____
Veterinary & medicine	97	0.44	_____	_____
Milk marketing	96	0.43	_____	_____
Bedding	43	0.19	_____	_____
Milking supplies	66	0.30	_____	_____
Cattle lease	12	0.05	_____	_____
Custom boarding	40	0.18	_____	_____
bST expense	66	0.30		
Other livestock expenses	34	0.15	_____	_____

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
40 Large Herd Dairy Farms, 1997

Item			Average 40 Farms
Total Accrual Operating Expenses	$	1,716,638	
Expansion Livestock, Accrual	+	34,090	
1. Total Accrual Operating Expenses, Including Expansion Livestock			$ 1,750,728
Total Accrual Receipts	$	1,994,604	
Milk Sales, Accrual	-	1,783,591	
2. Total Accrual Nonmilk Receipts			- 211,013
3. Operating Costs of Producing Milk			$ 1,539,715
Cwt. of Milk Sold	÷	131,992.8	
Operating Costs/Cwt.	=	$11.67	
Machinery Depreciation			+ 62,757
Building Depreciation			+ 41,959
4. Purchased Inputs Cost of Producing Milk			$ 1,644,431
Cwt. of Milk Sold	÷	131,992.8	
Purchased Inputs Cost/Cwt.	=	$12.46	
Family Labor Unpaid ($1,550/month)			+ 2,790
Real Interest on Equity Cap.			+ 84,327
Value of Operators' Labor & Management			+ 76,820
5. Total Costs of Producing Milk			$ 1,808,368
Cwt. Milk Sold	÷	131,992.8	
Total Costs/Cwt.	=	$13.70	

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

40 Large Herd Dairy Farms, 1997

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	$ 250,399	$ 5,516	$ 2,942	$ 5,293
Real estate		2,227		2,136
Machinery & equipment	39,797	877	468	
Asset turnover ratio	0.62			
My Farm:				
Farm capital	$_____	$_____	$_____	$_____
Real estate		_____		_____
Machinery & equipment	_____	_____	_____	
Asset turnover ratio	_____			

LABOR FORCE INVENTORY AND ANALYSIS

40 Large Herd Dairy Farms, 1997

Labor Force	Months	Age	Years of Education	Value of Labor & Mgmt.
Operator number 1	13.7	47	14	$ 40,002
Operator number 2	8.1	38	14	22,381
Operator number 3	4.0	41	14	12,187
Operator number 4	0.9	25	15	2,250
Family paid	6.1			
Family unpaid	1.8			
Hired	121.6			
Total	156.2	/ 12 = 13.02 Worker Equivalent		
		2.09 Operator/Manager Equivalent		
My Farm: Total	_____	/ 12 = _____ Worker Equivalent		
Operator's	_____	/ 12 = _____ Operator/Manager Equivalent		

Labor Efficiency	Average Total	Average Per Worker	My Farm Total	My Farm Per Worker
Cows, average number	591	45	_____	_____
Milk sold, pounds	13,199,278	1,013,769	_____	_____
Tillable acres	1,108	85	_____	_____
Work units	5,748	441		

Labor Costs	Average Total	Average Per Cow	Average Per Cwt.	My Farm Total	My Farm Per Cow	My Farm Per Cwt.
Value of operator(s) labor ($1,550/mo.)	$ 41,385	$ 70	$0.31	$_____	$_____	$_____
Family unpaid ($1,550/mo.)	2,790	5	0.02	_____	_____	_____
Hired	301,746	511	2.29	_____	_____	_____
Total Labor	$ 345,921	$ 585	$2.62	$_____	$_____	$_____
Machinery Cost	231,476	392	1.75	_____	_____	_____
Total Labor & Mach.	$ 577,397	$ 977	$4.37	$_____	$_____	$_____

CONDENSED SUMMARY & SELECTED BUSINESS FACTORS

CONDENSED FARM BUSINESS SUMMARY FOR TWO LARGE HERD GROUPS

40 Large Herd Dairy Farms, 1997

Item	22 Farms with 300-500 Cows		18 Farms with ≥500 Cows	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
ACCRUAL EXPENSES				
Hired labor	$453	$2.10	$541	$2.38
Dairy grain & concentrate	996	4.61	1,038	4.56
Dairy roughage	43	0.20	10	0.04
Nondairy feed	1	0.01	0	0.00
Machine hire, rent & lease	42	0.20	83	0.37
Machine repairs & farm vehicle expense	132	0.61	117	0.51
Fuel, oil & grease	53	0.25	49	0.21
Replacement livestock	45	0.21	25	0.11
Breeding	31	0.14	28	0.12
Veterinary & medicine	92	0.43	100	0.44
Milk marketing	115	0.53	87	0.38
Bedding	35	0.16	48	0.21
Milking supplies	64	0.30	67	0.30
Cattle lease & rent	5	0.02	16	0.07
Custom boarding	22	0.10	49	0.22
bST expense	59	0.27	70	0.31
Other livestock expense	43	0.20	29	0.13
Fertilizer & lime	62	0.29	58	0.26
Seeds & plants	42	0.19	39	0.17
Spray & other crop expense	50	0.23	42	0.19
Land, building & fence repair	31	0.14	52	0.23
Taxes & rent	88	0.41	84	0.37
Utilities	60	0.28	69	0.31
Interest paid	213	0.99	189	0.83
Misc. (including insurance)	53	0.24	58	0.25
Total Operating Expenses	$2,831	$13.10	$2,948	$12.96
Expansion livestock	98	0.45	37	0.16
Machinery depreciation	118	0.55	100	0.44
Building depreciation	78	0.36	68	0.30
Total Accrual Expenses	$3,125	$14.46	$3,153	$13.86
ACCRUAL RECEIPTS				
Milk sales	$2,925	$13.54	$3,071	$13.50
Dairy cattle	232	1.07	211	0.93
Dairy calves	18	0.08	17	0.08
Other livestock	16	0.07	6	0.03
Crops	29	0.14	63	0.28
Miscellaneous receipts	60	0.28	62	0.27
Total Accrual Receipts	$3,280	$15.17	$3,430	$15.08
PROFITABILITY ANALYSIS (Total)				
Net farm income (without appreciation)	$56,347		$240,375	
Net farm income (with appreciation)	$89,910		$255,669	
Labor & management income	$634		$114,927	
Number of operators	1.88		2.38	
Labor & management income/operator	$337		$48,289	
Rates of return on: Equity capital w/o apprec.	-0.9%		5.9%	
Equity capital w/ apprec.	2.3%		6.5%	
All capital w/o apprec.	3.3%		6.5%	
All capital w/ apprec.	4.9%		6.8%	

SELECTED BUSINESS FACTORS FOR TWO LARGE HERD GROUPS

40 Large Herd Dairy Farms, 1997

Item	22 Farms with 300-500 Cows	18 Farms with ≥ 500 Cows
Cropping Program Analysis		
Total Tillable acres	775	1,519
Tillable acres rented*	351	663
Hay crop acres*	341	566
Corn silage acres*	310	720
Hay crop, tons DM/acre	2.7	3.2
Corn silage, tons/acre	16.6	17.8
Forage DM per cow, tons	7.1	6.6
Tillable acres/cow	2.1	1.8
Fertilizer & lime expense/tillable acre	$29.30	$33.14
Machinery cost/tillable acre	$186	$223
Dairy Analysis		
Number of cows	363	868
Number of heifers	248	643
Milk sold, lbs.	7,845,600	19,742,663
Milk sold/cow, lbs.	21,605	22,733
Operating cost of prod. milk/cwt.	$11.91	$11.55
Total cost of prod. milk/cwt.	$14.33	$13.39
Price/cwt. milk sold	$13.54	$13.50
Purchased dairy feed/cow	$1,039	$1,047
Purchased dairy feed/cwt. milk	$4.81	$4.61
Purchased grain & concentrate as % of milk receipts	34%	34%
Purchased feed & crop expense/cwt. milk	$5.52	$5.22
Capital Efficiency		
Farm capital/worker	$236,300	$258,533
Farm capital/cow	5,631	5,469
Real estate/cow	2,276	2,206
Machinery investment/cow	971	830
Asset turnover ratio	0.60	0.63
Labor Efficiency		
Worker equivalent	8.65	18.36
Operator/manager equivalent	1.88	2.38
Milk sold/worker, lbs.	907,006	1,075,308
Cows/worker	42	47
Labor cost/cow	$567	$596
Financial Measures		
Percent equity	49%	51%
Debt/asset ratio - long term	0.47	0.47
Debt/asset ratio - intermediate & current	0.54	0.50
Change in net worth with appreciation	$13,375	$20,867
Total farm debt per cow	$2,852	$2,629
Debt payments made per cow	$499	$428
Debt payments as % of milk sales	17%	14%
Amount available for debt service	$155,358	$354,754
Cash flow coverage ratio for 1997	0.89	1.09

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

INCOME AND EXPENSE PROFILE

Use the following two tables to make an income and expense profile for your dairy farm business. 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

40 Large Herd Dairy Farms, 1997

	QUINTILE				
Item	1	2	3	4	5
Accrual Operating Receipts					
Milk	$3,342	$3,074	$2,988	$2,850	$2,651
Dairy cattle	412	257	198	156	81
Dairy calves	30	21	17	14	9
Other livestock	56	4	0	0	-3
Crops	188	72	32	-7	-80
Misc. receipts	118	69	51	38	24
Total Operating Receipts	$3,803	$3,472	$3,330	$3,189	$2,867
Accrual Operating Expenses					
Hired labor	$307	$412	$479	$547	$655
Dairy grain & concentrate	819	960	1,015	1,103	1,174
Dairy roughage	0	1	11	28	112
Nondairy feed	0	0	0	0	3
Mach. hire/rent/lease	0	8	33	66	185
Mach. repair & farm veh. exp.	67	102	127	159	196
Fuel, oil & grease	27	40	54	64	87
Replacement livestock	0	0	12	44	141
Breeding	10	21	30	38	53
Vet & medicine	61	78	91	110	140
Milk marketing	65	92	103	113	156
Bedding	16	30	36	49	68
Milking supplies	29	48	64	77	107
Cattle lease	0	0	0	2	32
Custom boarding	0	0	0	19	147
bST expense	6	46	72	82	102
Other livestock expense	9	17	27	39	103
Fertilizer & lime	13	33	55	70	131
Seeds & plants	15	30	39	53	61
Spray/other crop expenses	10	32	47	58	90
Land, building, fence repair	4	17	30	57	81
Taxes	15	23	30	40	60
Real estate rent/lease	7	21	44	70	107
Insurance	15	21	24	30	47
Utilities	39	57	65	77	97
Interest	98	160	207	241	323
Miscellaneous	8	15	22	33	59
Total Operating Expenses	$2,567	$2,766	$2,876	$2,982	$3,215
Expansion Livestock	0	0	3	83	264
Machinery Depreciation	46	74	109	134	189
Building Depreciation	26	54	73	84	145
Net Farm Income w/o Apprec.	$580	$336	$202	$91	$-214

RECEIPTS AND EXPENSES PER CWT. OF MILK SOLD

40 Large Herd Dairy Farms, 1997

Item	QUINTILE 1	2	3	4	5
Accrual Operating Receipts					
Milk	$14.38	$13.73	$13.48	$13.30	$12.96
Dairy cattle	1.82	1.22	.90	.71	.36
Dairy calves	.14	.10	.08	.06	.04
Other livestock	.28	.02	.00	.00	-.01
Crops	.83	.33	.15	-.03	-.37
Misc. receipts	.55	.32	.24	.17	.11
Total Operating Receipts	$16.72	$15.60	$14.97	$14.59	$13.95
Accrual Operating Expenses					
Hired labor	$1.41	$1.87	$2.19	$2.53	$2.95
Dairy grain & concentrate	3.75	4.29	4.71	5.00	5.42
Dairy roughage	.00	.00	.05	.12	.53
Nondairy feed	.00	.00	.00	.00	.02
Mach. hire/rent/lease	.00	.03	.16	.31	.77
Mach. repair & farm veh. exp.	.30	.46	.58	.74	.92
Fuel, oil & grease	.12	.18	.24	.29	.41
Replacement livestock	.00	.00	.05	.21	.63
Breeding	.05	.09	.14	.17	.25
Vet & medicine	.28	.35	.41	.50	.67
Milk marketing	.30	.42	.46	.53	.74
Bedding	.08	.14	.17	.22	.30
Milking supplies	.14	.22	.30	.35	.47
Cattle lease	.00	.00	.00	.01	.15
Custom boarding	.00	.00	.00	.09	.65
bST expense	.03	.21	.33	.37	.44
Other livestock expense	.04	.08	.12	.18	.47
Fertilizer & lime	.06	.15	.25	.34	.60
Seeds & plants	.07	.14	.18	.23	.28
Spray/other crop expenses	.04	.15	.20	.27	.43
Land, building, fence repair	.02	.08	.14	.26	.35
Taxes	.07	.10	.14	.18	.29
Real estate rent/lease	.03	.09	.21	.31	.49
Insurance	.07	.09	.11	.13	.22
Utilities	.18	.25	.30	.35	.44
Interest	.44	.71	.91	1.13	1.56
Miscellaneous	.04	.07	.10	.15	.26
Total Operating Expenses	$12.03	$12.56	$12.92	$13.54	$14.71
Expansion Livestock	.00	.00	.02	.37	1.22
Machinery Depreciation	.21	.33	.48	.63	.92
Building Depreciation	.11	.24	.32	.41	.69
Net Farm Income w/o Apprec.	$2.50	$1.48	$0.92	$0.42	$-1.09

FARM BUSINESS CHART

The Farm Business chart is a tool which can be used in analyzing your business. Compare your business by drawing a line through or near the figure in each column which represents your current level of performance. The five figures in each column represent the average of each 20 percent or quintile of farms included in this summary. Each column of the chart is independent of the others. The farms which are in the top 20 percent for one factor would not necessarily be the same farms which make up the 20 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

40 Large Herd Dairy Farms, 1997

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
(11)*	(11)	(11)	(10)	(9)	(9)	(11)	(11)
24.1	1,232	28,635,034	24,448	4.3	21	57	1,292,823
14.5	593	13,207,671	22,917	3.3	19	48	1,072,086
10.8	451	9,756,789	22,260	2.7	17	44	956,190
8.8	360	7,864,277	21,081	2.3	15	40	856,582
7.0	317	6,532,622	19,245	1.5	12	35	734,240

Cost Control

Grain Bought Per Cow	% Grain is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cow	Feed & Crop Expenses Per Cwt. Milk
(10)	(10)	(11)	(11)	(10)	(10)
$819	28%	$271	$760	$1,001	$4.49
960	32	333	863	1,141	5.17
1,015	35	391	993	1,219	5.56
1,103	37	449	1,045	1,262	5.77
1,174	40	551	1,205	1,335	6.27

Hired Labor Expense			Expenses Per Cwt.		
Per Cwt.	Per Hired Worker Equiv.	As % of Milk Sales	Milk Marketing	Veterinary & Medicine	Other Livestock
(11)	(CALC)	(CALC)	(10)	(10)	(10)
$1.41	$19,983	10%	$0.30	$0.28	$0.04
1.87	24,204	14	0.42	0.35	0.08
2.19	26,632	16	0.46	0.41	0.12
2.53	29,049	19	0.53	0.50	0.18
2.95	33,495	22	0.74	0.67	0.47

*( ) = 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)

Machinery & Crop Expense		Operating Cost		Total Cost	
Per Tillable Acre	Per Ton Dry Matter	Per Cow	Per Cwt.	Per Cow	Per Cwt.
(CALC)	(CALC)	(10)	(10)	(10)	(10)
$194	$58	$2,222	$10.38	$2,740	$12.40
253	68	2,527	11.41	2,949	13.37
286	76	2,623	11.79	3,077	13.94
314	92	2,711	12.22	3,183	14.57
417	118	2,916	13.60	3,509	16.45

Expense Ratios

Operating	Depreciation	Interest
(CALC)	(CALC)	(CALC)
64.7%	2.7%	2.9%
71.4	4.0	4.7
75.8	5.1	5.9
78.5	6.8	7.6
84.9	10.0	10.6

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
(10)	(CALC)	(10)	(10)	(10)
$14.38	$13.72	$3,342	$412	$30
13.73	13.23	3,074	257	21
13.48	13.07	2,988	198	17
13.30	12.84	2,850	156	14
12.96	12.55	2,651	81	9

Debt Management

Farm Debt Per Cow		Cost of	Planned Debt Payments	
Total	Intermediate & Long Term	Borrowed Capital	Per Cow	Per Cwt.
(5)	(5)	(CALC)	(8)	(8)
$1,474	$994	5.5%	$276	$1.20
2,377	1,699	6.8	389	1.68
2,810	2,154	7.3	467	2.10
3,236	2,592	7.8	516	2.38
3,917	3,329	8.5	644	3.11

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
(12)	(12)	(CALC)	(CALC)	(8)
$804	$3.55	$321	$1.44	1.61
640	2.98	192	0.87	1.19
559	2.65	154	0.70	0.93
488	2.24	116	0.54	0.69
353	1.56	70	0.33	0.42

Capital Efficiency				
Farm Capital Per Cow	Real Estate Investment Per Cow	Machinery Investment Per Cow	Total Labor Cost Per Worker Equivalent	Asset Turnover Ratio
(11)	(11)	(11)	(CALC)	(11)
$4,110	$1,191	$528	$19,453	0.85
4,908	1,875	721	22,817	0.68
5,599	2,228	917	25,084	0.60
6,337	2,576	1,084	26,740	0.53
7,162	3,509	1,351	31,546	0.47

Solvency				
Percent	Leverage	Debt to Asset Ratios		
Equity	Ratio	Total	Current/Intermed.	Long Term
(5)	(CALC)	(5)	(5)	(5)
73%	0.27	0.27	0.29	0.08
57	0.43	0.43	0.42	0.34
51	0.50	0.50	0.52	0.49
41	0.59	0.59	0.59	0.62
24	0.76	0.76	0.82	0.86

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
(3)	(3)	(3)	(3)	(3)
$191,742	17.8%	24.3%	11.1%	11.8%
55,106	6.4	7.4	6.9	7.4
11,706	1.8	4.6	5.1	6.0
-18,581	-3.7	0.6	2.5	4.3
-89,827	-28.8	-14.1	-2.4	-1.0

Net Farm Income Without Appreciation		Net Farm Income From Operations	Net Income Efficiency
Per Cow	Per Cwt.	Ratio	Ratio
(10)	(10)	(CALC)	(CALC)
$580	$2.50	15.3%	15.2%
336	1.48	9.8	9.3
186	0.86	5.7	6.7
84	0.37	2.5	4.3
-214	-1.09	-7.5	-0.2

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 **Specific**.

2. Goals should be **Measurable**.

3. Goals should be **Achievable** but challenging.

4. Goals should be **Rewarding**.

5. Goals should designate a **Time** when each goal will be achieved.

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

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

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

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

b. Identify 4-6 objectives.

c. Identify SMART goals.

Worksheet for Setting Goals

I. Mission and Objectives

_____

_____

_____

_____

_____

_____

_____

_____

Worksheet for Setting Goals (Continued)

II. Goals

What	How	When	Who is Responsible

Summarize Your Business Performance

The Farm Business Charts on pages 31-33 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 8).

Accrual Receipts - (defined on page 8).

Annual Cash Flow Statement - (defined on page 16).

Appreciation - (defined on page 9).

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

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

bST Expense per Cow – bST expense per cow is calculated by dividing the accrual bST expense by the average number of milking and dry cows for the year.

bST Expense per Cwt – bST expense per cwt. is calculated by dividing the accrual bST expense by the total hundredweight of milk produced during the year.

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

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

Cash Flow Coverage Ratio - (defined on page 18).

Cash Paid - (defined on page 6).

Cash Receipts - (defined on page 8).

Change in Accounts Payable - (defined on page 8).

Change in Accounts Receivable - (defined on page 8).

Change in Inventory - (defined on page 6).

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 8 & 9 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 11).

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.

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

Debt to Asset Ratios - (defined on page 12).

Deferred Taxes - (defined on page 11).

Depreciation Expense Ratio - The percentage of Total Accrual Receipts that is charged to depreciation expense. Machinery Depreciation (DFBS p. 2) plus Building Depreciation (p. 2) 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 miik income committed to debt repayment, calculated by dividing planned debt payments by total milk receipts. A reliable measure of repayment ability, see page 18.

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 (p. 2) by number of hired plus family paid worker equivalent (p. 11).

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 (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 (p. 2) divided by Total Accrual Receipts (p. 3) times 100.

Labor and Management Income - (defined on page 10).

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 (p. 9) and total machinery expenses (p. 9), then divide by number of tillable acres, owned & rented (p. 9).

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 (p. 9) and total machinery expenses (p. 9), then divide by total forage, production, tons DM (p. 9).

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

Milk Pounds Produced per Labor Hour – Calculated by dividing the total pounds milk produced by the total number of labor hours used to operate the milking center for 1 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.

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.

Net Farm Income - (defined on page 9).

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 (p. 3) 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 (p. 3) by number of cwt. of milk sold, which is total milk sold (p. 10) 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 (p. 3) by average number of cows for the year (p. 10).

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 (p. 3), plus Accrual Interest Paid (p. 2), divided by number of operators (p. 3), divided by Total Accrual Receipts (p. 3) times 100.

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. (p. 10) minus accrual milk marketing expense per cwt. (p. 10).

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 24).

Operating Expense Ratio - The percentage of Total Accrual Receipts that is used for operating expenses, excluding interest & depreciation. Total Accrual Expenses (p. 2) minus Machinery Depreciation (p. 2), minus Building Depreciation (p. 2), minus Accrual Interest Expense (p. 2), 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, DHIC, milk house and parlor supplies, livestock board, registration fees and transfers.

Percent Herd on bST – Calculated by taking the accrual bST expense for the year and dividing by an average price of $5.25 per dose, then dividing by 26, then dividing by the average number of milking and dry cows in the herd.

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 (p. 7) divided by pounds milk sold (p. 10) times 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 (p. 7) divided by average number of cows (p. 10).

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 24).

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 11).

Return on Total Capital - (defined on page 11).

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 24).

Total Cows by Labor Hour Milking – 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. 11) divided by number of worker equivalents (p. 11).

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.

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