DAIRY FARM BUSINESS SUMMARY

JUNE 1995 E.B. 95-13

NEW YORK LARGE HERD FARMS, 300 COWS OR LARGER 1994

Jason Karszes
Stuart F. Smith
Linda D. Putnam

Department of Agricultural, Resource, and Managerial Economics
College of Agriculture and Life Sciences
Cornell University, Ithaca, New York 14853-7801

It is the Policy of Cornell University actively to support equality of educational and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, national or ethnic origin, sex, age or handicap. The University is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.

1994 DAIRY FARM BUSINESS SUMMARY
LARGE HERD DAIRY FARMS
300 Cows or Larger

Table of Contents

Page

INTRODUCTION 1

Program Objectives 1

Format 1

PROGRESS OF THE FARM BUSINESS 2

SUMMARY AND ANALYSIS OF THE FARM BUSINESS 4

Business Characteristics 4

Income Statement 4

Profitability Analysis 7

Farm and Family Financial Status 9

Statement of Owner Equity 13

Cash Flow Statement 14

Repayment Analysis 16

Cropping Analysis 19

Dairy Analysis 21

Cost of Producing Milk 23

Capital and Labor Efficiency Analysis 24

INCOME AND EXPENSE PROFILES 25

FARM BUSINESS CHART 27

IDENTIFY AND SET GOALS 30

GLOSSARY AND LOCATION OF COMMON TERMS 32

INDEX 36

1994 DAIRY FARM BUSINESS SUMMARY
LARGE HERD DAIRY FARMS[1]

INTRODUCTION

Dairy farmers throughout New York State have been participating in Cornell Cooperative Extension's Farm Business Summary and Analysis Program since the early 1950's. Managers of each participating farm business receive a comprehensive summary and analysis of 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 1994.

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 projections of planned changes within the business.

Format

This report is comprised of four sections. The first section charts the progress of the large herd farm business over two years. Twenty-four of the large herd farms participated in the summary the last two years. The average of selected business factors are presented for these farms and the changes that occurred from 1993 to 1994 are calculated.

The summary and analysis section lists the average data for the 31 large herd farms that participated in the 1994 DFBS program. The format follows that of the individual farm DFBS printout and contains a brief explanation of each table and chart.

The third section contains a new addition to this report. The income and expense profiles for the 300 cow and larger farms on a per cow and per cwt. of milk basis make up this section.

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

[1]The large herd summary is comprised of farms with 300 or more cows. Cayuga, Cortland, Erie, Genesee, Jefferson, Onondaga, Otsego, Rensselaer, St. Lawrence, Saratoga, Washington and Wyoming counties had farms of this size in 1994. This report was written by Jason Karszes, Cooperative Extension agent for Erie and Wyoming counties and Stuart F. Smith, Senior Extension Associate, Farm Management. Linda Putnam was in charge of data preparation. Judy Neno and Beverly Carcelli 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 establishing your goals for these parameters. It is equally important for you to determine the progress your business has made over the past two or three years, to compare this progress to your goals, and to set goals for the future. Please refer to the table on Page 3.

From 1993 to 1994 the average large herd grew 10.1 percent by adding 54 cows while debt per cow stayed relatively flat (-.2% change).

During February of 1994, bST became available to commercial dairy producers. Twenty-nine out of the 31 farms used bST during the year (page 4). The high adoption rate of this new technology appears to have made significant changes in performance measures used on the farm. Milk sold jumped 10.1 percent to 21,726 pounds per cow. This increase of milk sold per cow plus the growth in cow numbers resulted in a 21.1 percent increase in milk marketed per farm.

The adoption of bST seemed to have little effect on labor efficiency. The number of worker equivalents increased 5.4 percent on these farms, but taking into account the increase in herd size, cows per worker increased from 45 to 47. The increase in cows per worker coupled with the large increase in milk production per cow led to a 14.9 percent jump in milk sold per worker, to an average of 1,023,747 lbs.

The cost to produce milk in 1994 stayed relatively flat on a per cwt. of milk basis with no major changes from 1993. Relatively low feed costs that started in 1993 continued into 1994. Growing conditions were generally favorable for forage production again in 1994. bST was a new expense that was added in 1994, but given the large increase in milk sold, the operating costs to produce milk stayed the same.

The average milk price received on farms increased 27 cents per cwt. of milk sold, which combined with the 10.1 percent increase in milk production, led to a 12 percent increase in milk sales per cow. However, 1994 income from cow and calf sales dropped 20 percent. This was due in part to lower beef prices during the year and a decrease in culling rates that occurred with the adoption of bST.

The combination of a higher milk price, increased milk production per cow, increased herd size, increased labor efficiency, and relatively stable costs led to significantly higher levels of profitability in 1994. Net farm income without appreciation increased 29.6 percent to $237,812 per farm. Labor and management income per operator increased 48.9 percent to $74,562, and the rate of return on equity capital increased to 11.4 percent.

PROGRESS OF THE FARM BUSINESS

Same 24 Large Herd Dairy Farms, 1993 & 1994

Selected Factors	Average of 24 Farms* 1993	1994	Percent Change
Size of Business			
Average number of cows	533	587	+10.1%
Average number of heifers	385	437	+13.5%
Milk sold, lbs.	10,522,201	12,743,194	+21.1%
Worker equivalent	11.81	12.45	+5.4%
Total tillable acres	1,037	1,087	+4.8%
Rates of Production			
Milk sold per cow, lbs.	19,729	21,726	+10.1%
Hay DM per acre, tons	3.50	3.69	+5.4%
Corn silage per acre, tons	16.3	16.7	+2.5%
Labor Efficiency & Costs			
Cows per worker	45	47	+4.4%
Milk sold/worker, lbs.	891,017	1,023,747	+14.9%
Hired labor cost/cwt.	$2.51	$2.37	-5.6%
Hired labor cost/worker	$23,395	$24,222	+8.2%
Hired labor cost as % of milk sales	19%	18%	-5.3%
Cost Control			
Grain & conc. purchased as % of milk sales	29%	28%	-3.4%
Dairy feed & crop expense per cwt. milk	$4.59	$4.48	-2.4%
Labor & mach. costs/cow	$903	$924	+2.3%
Operating cost of producing cwt. of milk	$10.36	$10.54	+1.7%
Capital Efficiency**			
Farm capital per cow	$5,631	$5,689	+1.0%
Mach. & equip. per cow	$813	$835	+2.7%
Asset turnover ratio	0.56	0.60	+7.1%
Profitability			
Net farm income w/o apprec.	$183,489	$237,812	+29.6%
Net farm income w/apprec.	$225,362	$281,396	+24.9%
Labor & mgt. income per oper./manager	$50,085	$74,562	+48.9%
Rate of return on equity capital w/ apprec.	9.3%	11.4%	+22.6%
Rate of return on all capital w/ apprec.	8.0%	9.3%	+16.3%
Financial Summary			
Farm net worth, end year	$1,737,125	$1,931,958	+11.2%
Debt to asset ratio	0.45	0.44	-2.2%
Farm debt per cow	$2,491	$2,486	-0.2%
Income Generation			
Gross milk sales per cow	$2,605	$2,926	+12.3%
Gross milk sales per cwt.	$13.20	$13.47	+2.0%
Net milk sales per cwt.	$12.73	$12.95	+1.7%
Dairy cattle sales per cow	$313	$247	-21.1%
Dairy calf sales per cow	$49	$39	-20.4%

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

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
31 Large Herd Dairy Farms, 1994

Type of Farm	Number
Dairy	31

Type of Ownership	Number
Owner	31

Type of Business	Number
Single proprietorship	10
Partnership	7
Corporation	14

Business Record System	Number
Agrifax (mail-in only)	3
On-Farm Computer	27
Other	1

bST Usage	Number
<25%	0
25-75%	26
>75%	1
Stopped Use in 1994	2
Not Used	2

Type of Barn	Number
Stanchion/Tie-Stall	0
Freestall	30
Combination	1

Milking System	Number
Pipeline	1
Herringbone parlor	23
Other parlor	7

Milking Frequency	Number
2x/day	5
3x/day	21
Other	5

Production Records	Number
DHIC	23
Owner-Sampler	0
Other	7
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 1994.

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
31 Large Herd Dairy Farms, 1994

Expense Item	Cash Paid +	Change in Inventory or Prepaid Expense +	Change in Accounts Payable =	Accrual Expenses
Hired Labor	$278,739	$-141 <<	$118	$278,716
Feed				
Dairy grain & conc.	467,747	-12,345	2,821	458,223
Dairy roughage	12,234	-1,188	1,280	12,326
Nondairy	0	0	0	0
Machinery				
Mach. hire, rent/lease	22,067	0 <<	-166	21,901
Machinery repairs/parts	68,343	-545	51	67,849
Auto exp. (farm share)	1,575	0 <<	32	1,607
Fuel, oil & grease	29,403	-303	-108	28,992
Livestock				
Replacement livestock	28,244	0 <<	0	28,244
Breeding	17,079	-182	5	16,902
Vet & medicine	53,509	-502	504	53,511
Milk marketing	64,338	11 <<	81	64,430
Cattle lease/rent	5,795	0 <<	0	5,795
Other livestock expense	119,900	-1,505	937	119,332
Crops				
Fertilizer & lime	33,733	-2,355	968	32,346
Seeds & plants	21,891	-2,267	48	19,672
Spray, other crop exp.	24,135	-1,084	0	23,051
Real Estate				
Land/bldg./fence repair	23,529	0	59	23,588
Taxes	21,721	-133 <<	-284	21,304
Rent & lease	24,907	-11 <<	192	25,088
Other				
Insurance	14,941	-1 <<	8	14,948
Telephone (farm share)	1,914	0 <<	-63	1,851
Electricity (farm share)	38,037	266 <<	-324	37,939
Interest paid	100,490	-54 <<	926	101,362
Miscellaneous	24,909	239	-480	24,668
Total Operating	$1,499,180	$-22,140	$6,605	$1,483,645
Expansion livestock	33,890	0	0	33,890
Machinery depreciation				64,695
Building depreciation				68,157
Total Accrual Expenses				$1,650,387

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 1994 funds used to prepay 1995 leases exceed the amount of 1994 leases prepaid in 1993, the amount of this excess is entered as a negative number to exclude it from 1994 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 1994 but not paid for. A decrease is subtracted because the resource was used before 1994.

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
31 Large Herd Dairy Farms, 1994

Receipt Item	Cash Receipts	+ Change in Inventory	+ Change in Accounts Receivable	= Accrual Receipts
Milk sales	$1,645,298		$8,584	$1,653,882
Dairy cattle	75,040	$62,128	187	137,355
Dairy calves	22,496		-1	22,495
Other livestock	407	659	0	1,066
Crops	10,004	30,271	-14	40,261
Government receipts	8,874	0*	903	9,777
Custom machine work	1,144		0	1,144
Gas tax refund	311		1	312
Other	14,306		23	14,329
Less nonfarm noncash cap.**		(-) 0		(-) 0
Total Receipts	$1,777,880	$93,058	$9,683	$1,880,621

*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 1994 for the 1995 crop year in excess of funds earned for 1994. Likewise, a decrease is added to cash government receipts because it represents funds earned for 1994 but received in 1993.

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[2] 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.

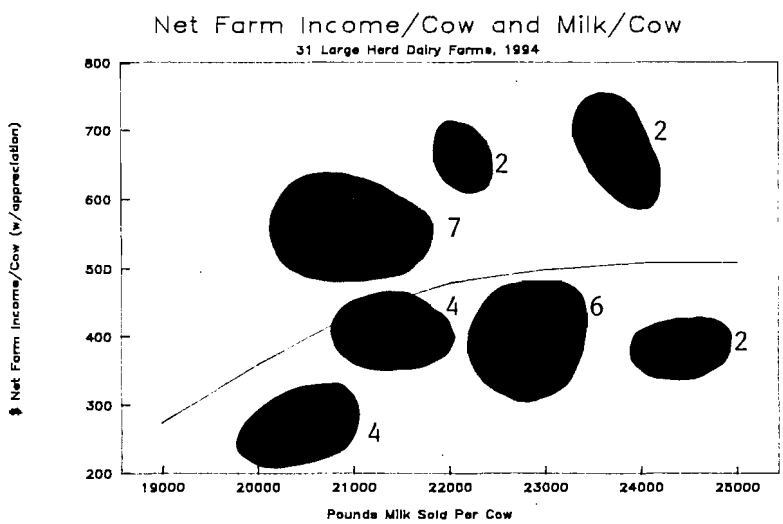
Net farm income is the return to the farm operators and other unpaid family members for their labor, management, and equity capital. It is the farm family's net annual return from working, managing, financing, and owning the farm business. This is not a measure of cash available from the year's business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

Net farm income in 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
31 Large Herd Dairy Farms, 1994

	Average		My Farm	
Item	Total	Per Cow	Total	Per Cow
Total accrual receipts	$1,880,621		$_____	
Appreciation: Livestock	2,390		_____	
Machinery	2,332		_____	
Real Estate	37,866		_____	
Other Stock/Certificates	-721		_____	
Total Including Appreciation	$1,922,488		$_____	
Total accrual expenses	-1,650,387		-_____	
Net Farm Income (with appreciation)	$272,101	$483	$_____	$_____
Net Farm Income (w/o appreciation)	$230,234	$409	$_____	$_____

The chart below shows the relationship between net farm income per cow (with appreciation) and pounds of milk sold per cow. Generally, farms with a higher production per cow have higher profitability per cow.



All but four of the 31 farms fall into one of the seven spots. The number of farms in each is indicated. The trend line represents the average of all 31 farms.

[2]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.

Return to operators' labor, management, and equity capital measures the total net farm income for the farm operator(s). It is calculated by deducting a charge for unpaid family labor from net farm income. Operators' labor is not included in unpaid family labor. Return to operators' labor, management, and equity capital has been calculated both with and without appreciation. Appreciation is an important part of the return to ownership of farm assets.

RETURN TO OPERATORS' LABOR, MANAGEMENT, AND EQUITY
31 Large Herd Dairy Farms, 1994

	Average		My Farm	
Item	With Apprec.	Without Apprec.	With Apprec.	Without Apprec.
Net farm income	$272,101	$230,234	$_____	$_____
Family labor unpaid @ $1,450 per month	-1,537	-1,537	$_____	-_____
Return to operators' labor, management, & equity	$270,564	$228,697	$_____	$_____

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 the opportunity cost of using equity capital, at a real interest rate of five percent, from the return to operators' labor, management, and equity capital 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
31 Large Herd Dairy Farms, 1994

Item	Average	My Farm
Return to operators' labor, management, & equity without appreciation	$228,697	$_____
Real interest @ 5% on $1,741,759 average equity capital	-87,088	-_____
Labor & Management Income	$141,609	$_____
Labor & Management Income per 1.97 Operator/Manager	$71,883	$_____

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
31 Large Herd Dairy Farms, 1994

Item	Average	My Farm
Return to operators' labor, management, & equity capital with appreciation	$270,564	$_____
Value of operators' labor & management	- 67,419	-_____
Return on equity capital with appreciation	$203,145	$_____
Interest paid	+ 101,362	+_____
Return on total capital with appreciation	$304,507	$_____
Return on equity capital without appreciation	$161,278	$_____
Return on total capital without appreciation	$262,640	$_____
Rate of return on average equity capital:		
with appreciation	11.66%	_____%
without appreciation	9.26%	_____%
Rate of return on average total capital:		
with appreciation	9.47%	_____%
without appreciation	8.17%	_____%

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 1994, leases were discounted by 8.25 percent.

Advanced government receipts are included as current liabilities. Government payments received in 1994 that are for participation in the 1995 program are the end year balance and payments received in 1993 for participation in the 1994 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.

1994 FARM BUSINESS & NONFARM BALANCE SHEET

31 Large Herd Dairy Farms, 1994

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$13,697	$13,813	Accounts payable	$25,778	$32,385
Accounts receivable	95,879	105,563	Operating debt	70,415	108,222
Prepaid exp.	5,917	6,020	Short-term	40,544	30,831
Feed & supplies	263,081	315,390	Advanced govt. rec.	0	0
			Current Portion:		
			Intermediate	85,610	97,380
			Long Term	36,760	40,198
Total	$378,574	$440,786	Total	$259,107	$309,016
Intermediate			Intermediate		
Dairy cows:			Structured debt		
owned	$539,566	$575,552	1-10 years	$556,003	$517,719
leased	6,191	2,702	Financial lease		
Heifers	226,700	255,296	(cattle/mach.)	35,766	23,376
Bulls/other lvstk.	3,627	4,224	Farm Credit stock	20,643	20,996
Mach./eq. owned	461,201	480,249			
Mach./eq. leased	29,575	20,674	Total	$612,412	$562,091
Farm Credit stock	20,643	20,996			
Other stock/cert.	50,652	51,541			
Total	$1,338,155	$1,411,234			
Long-Term			Long-Term		
Land/buildings:			Structured debt		
owned	$1,414,275	$1,448,544	>10 years	$592,229	$613,196
leased	0	0	Financial lease		
			(structures)	0	0
Total	$1,414,275	$1,448,544	Total	$592,229	$613,196
			Total Farm Liab.	$1,463,748	$1,484,303
Total Farm Assets	$3,131,004	$3,300,564	FARM NET WORTH	$1,667,256	$1,816,261

Nonfarm Assets, Liabilities & Net Worth (Average of 9 farms reporting)

Assets	Jan. 1	Dec. 31	Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, chkg. & savings	$714	$2,169	Nonfarm Liab.	$10,104	$9,665
Cash value life ins.	26,949	28,999			
Nonfarm real estate	28,889	28,889			
Auto (personal sh.)	7,667	7,778			
Stocks & bonds	867	1,478			
Household furn.	3,667	3,667			
All other	26,283	38,398	NONFARM NET		
Total Nonfarm	$95,035	$111,378	WORTH	$84,931	$101,712

Farm & Nonfarm Assers, Liabilities & Net Worth*	Jan. 1	Dec. 31
Total Assets	$3,226,039	$3,411,942
Total Liabilities	1,473,852	1,493,968
TOTAL FARM & NONFARM NET WORTH	$1,752,187	$1,917,974

*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, 1994
Average of 12 New York Dairy Farms Reporting Data, 1994

ASSETS		LIABILITIES & NET WORTH	
		Current debts & payables	$80,678
		Current deferred taxes	28,791
Total Current Assets	$106,867	Total Current Liabilities	$109,469
		Intermediate debts & leases	$131,814
		Intermediate deferred taxes	103,642
Total Intermediate Assets	$396,178	Total Intermediate Liabilities	$235,456
		Long term debts & leases	$147,975
		Long term deferred taxes	79,196
Total Long Term Assets	$438,030	Total Long Term Liabilities	$227,170
TOTAL FARM ASSETS	$941,075	TOTAL FARM LIABILITIES	$572,095
		Farm Net Worth	$368,981
		Percent Equity (Farm)	39%
		Nonfarm debts	$700
		Nonfarm deferred taxes	8,881
Total Nonfarm Assets	$38,089	Total Nonfarm Liabilities	$9,581
TOTAL ASSETS	$979,164	TOTAL LIABILITIES	$581,675
		Total Net Worth	$397,489
		Percent Equity (Total)	41%

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
31 Large Herd Dairy Farms, 1994

Item	Average	My Farm
Financial Ratios - Farm:		
Percent equity	55%	_____%
Debt/asset ratio: total	0.45	_____
long-term	0.42	_____
intermediate/current	0.47	_____
Farm Debt Analysis:		
Accounts payable as % of total debt	2%	_____%
Long-term liabilities as a % of total debt	41%	_____%
Current & intermediate liabilities as a % of total debt	59%	_____%

Farm Debt Levels:	Per Cow	Per Tillable Acre Owned	Per Cow	Per Tillable Acre Owned
Total farm debt	$2,559	$2,356	$_____	$_____
Long-term debt	1,057	973	_____	_____
Long-term & intermediate	2,026	1,866	_____	_____
Intermediate & current debt	1,502	1,383	_____	_____

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
31 Large Herd Dairy Farms, 1994

Item	Average of 31 Farms			
	Real Estate		Machinery & Equipment	
Value beginning of year		$1,414,275		$461,201
Purchases	$105,110		$87,064	
Gift/inheritance	+ 0		+ 3,323	
Lost capital	- 36,395		.	
Sales	- 4,154		- 8,976	
Depreciation	- 68,157		- 64,695	
Net investment		= -3,597		= 16,716
Appreciation		+ 37,866		+ 2,332
Value end of year		$1,448,544		$480,249

*$2,779 land and $102,330 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)
31 Large Herd Dairy Farms, 1994

Item	Average		My Farm	
Beginning of year farm net worth		$1,667,256		$_____
Net farm income w/o appreciation	$ 230,234		$_____	
+ Nonfarm cash income	+ 16,426		+_____	
- Personal withdrawals & family expenditures excluding nonfarm borrowings	- 107,934		-_____	
Retained Earnings		+ 138,726		$_____
Nonfarm noncash transfers to farm	$3,323		$_____	
+ Cash used in business from nonfarm capital	+ 2,525		+_____	
- Note/mortgage from farm real estate sold (nonfarm)	- 968		-_____	
Contributed/Withdrawn Capital		+ 4,880		+$_____
Appreciation	$ 41,867		$_____	
- Lost capital	- 36,395		-_____	
Change in Valuation Equity		+ 5,472		+$_____
Imbalance/Error		- 76		-$_____
End of year farm net worth*		=$1,816,261		=$_____
Change in net worth w/apprec.		$ 149,005		$_____
Change in Net Worth				
Without appreciation		$107,138		$_____
With appreciation		$149,005		$_____

*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
31 Large Herd Dairy Farms, 1994

Item		Average	
Cash Flow from Operating Activities			
Cash farm receipts	$1,777,880		
- Cash farm expenses	1,499,180		
= Net cash farm income		$278,701	
Nonfarm income	$ 16,426		
- Personal withdrawals/family expenses including nonfarm debt payments	107,934		
+ Net cash nonfarm income		$-91,508	
= Net Provided by Operating Activities			$187,193
Cash Flow From Investing Activities			
Sale of Assets: Machinery	$ 8,976		
+ real estate	3,186		
+ other stock/cert.	2,473		
= Total asset sales		$ 14,635	
Capital purchases: expansion livestock	$ 33,890		
+ machinery	87,064		
+ real estate	105,110		
+ other stock/cert.	4,083		
- Total invested in farm assets		$230,146	
= Net Provided by Investment Activities			$-215,511
Cash Flow From Financing Activities			
Money borrowed (inter. & long term)	$ 175,143		
+ Money borrowed (short-term)	7,108		
+ Increase in operating debt	37,807		
+ Cash from nonfarm cap. used in business	2,525		
+ Money borrowed - nonfarm	0		
= Cash inflow from financing		$222,583	
Principal payments (inter. & long-term)	$ 177,252		
+ Principal payments (short-term)	16,821		
+ Decrease in operating debt	0		
- Cash outflow for financing		$194,073	
= Net Provided by Financing Activities			$28,510
Cash Flow From Business			
Beginning farm cash, checking & savings		$ 13,697	
- Ending farm cash, checking & savings		13,813	
= Net Provided from Reserves			$ -116
Imbalance (error)			$ 76

ANNUAL CASH FLOW STATEMENT

Item		My Farm	
Cash Flow from Operating Activities			
Cash farm receipts	$_____		
- Cash farm expenses	_____		
= Net cash farm income		$_____	
Nonfarm income	$_____		
- Personal withdrawals/family expenses including nonfarm debt payments	_____		
+ Net cash nonfarm income		$_____	
= 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 1995. The cash flow projection worksheet on the next page can be used to estimate repayment ability, which can then be compared to planned 1995 debt payments shown below.

FARM DEBT PAYMENTS PLANNED
Same 24 Large Herd Dairy Farms, 1993 & 1994

	Average			My Farm		
	1994 Payments		Planned	1994 Payments		Planned
Debt Payments	Planned	Made	1995	Planned	Made	1995
Long-term	$85,668	$108,219	$100,620	$_____	$_____	$_____
Intermediate-term	125,058	173,602	140,995	_____	_____	_____
Short-term	25,800	22,424	16,827	_____	_____	_____
Operating (net reduction)	5,837	0	23,679	_____	_____	_____
Accounts payable (net reduction)	4,854	0	3,985	_____	_____	_____
Total	$247,217	$304,245	$286,107	$_____	$_____	$_____
Per cow	$421	$518		$_____	$_____	
Per cwt. 1994 milk	$1.94	$2.39		$_____	$_____	
Percent of total 1994 receipts	13%	16%		_____	_____	
Percent of 1994 milk receipts	14%	18%		_____	_____	

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 1994 (as of December 31, 1993) that could have been made with the amount available for debt service in 1994. Farmers who did not participate in DFBS in 1993 have their 1994 cash flow coverage ratio based on planned debt payments for 1995.

CASH FLOW COVERAGE RATIO
Same 24 Large Herd Dairy Farms, 1993 & 1994

Item		Average	My Farm
	Cash farm receipts	$1,844,029	$_____
	- Cash farm expenses	1,565,065	_____
	+ Interest paid	98,772	_____
	- Net personal withdrawals from farm**	94,938	_____
(A)	= Amount Available for Debt Service	$282,798	$_____
(B)	= Debt Payments Planned for 1994 (as of 12/31/93)	$247,217	$_____
(A+B)	= Cash Flow Coverage Ratio for 1994	1.14	_____

**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

31 Large Herd Dairy Farms, 1994

Item	Regional Average Per Cow	Regional Average Per Cwt.	Total
No. cows and cwt. milk	563.4	122,637.5	
Accrual Operating Receipts			
Milk	$2,935.54	$13.49	$1,653,882
Dairy cattle	243.80	1.12	137,355
Dairy calves	39.93	0.18	22,495
Other livestock	1.89	0.01	1,066
Crops	71.46	0.33	40,261
Misc. receipts	45.37	0.21	25,561
Total	$3,337.99	$15.34	$1,880,621
Accrual Operating Expenses			
Hired labor	$494.71	$2.27	$278,716
Dairy grain & concentrate	813.32	3.74	458,223
Dairy roughage	21.88	0.10	12,326
Nondairy feed	0.00	0.00	0
Mach. hire/rent/lease	38.87	0.18	21,901
Mach. repair/parts & auto	123.28	0.57	69,455
Fuel, oil & grease	51.46	0.24	28,992
Replacement livestock	50.13	0.23	28,244
Breeding	30.00	0.14	16,902
Vet & medicine	94.98	0.44	53,511
Milk marketing	114.36	0.53	64,430
Cattle lease	10.29	0.05	5,795
Other livestock expense	211.81	0.97	119,332
Fertilizer & lime	57.41	0.26	32,346
Seeds & plants	34.92	0.16	19,672
Spray/other crop expenses	40.91	0.19	23,051
Land, building, fence repair	41.87	0.19	23,588
Taxes	37.81	0.17	21,304
Real estate rent/lease	44.53	0.20	25,088
Insurance	26.53	0.12	14,948
Utilities	70.62	0.32	39,789
Miscellaneous	43.78	0.20	24,668
Total Less Interest Paid	$2,453.47	$11.27	$1,382,283
Net Accrual Operating Income			
(without interest paid)	$884.52	$4.06	$498,338
- Change in livestock/crop inventory*	165.17	0.76	93,058
- Change in accounts receivable	17.19	0.08	9,683
+ Change in feed/supply inventory**	-39.30	-0.18	-22,140
+ Change in accts. payable***	10.08	0.05	5,679
NET CASH FLOW	$672.94	$3.09	$379,136
- Net personal withdrawals from farm (see footnote on p. 16)	$162.42	$0.75	$91,508
Available for Farm Debt Payments & Investments	$510.52	$2.34	$287,628
- Farm debt payments	521.13	2.39	293,605
Available for Farm Investment	$-10.61	$-0.05	$-5,977
- Capital purchases: cattle, machinery & improvements	$408.49	$1.88	$230,146

*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	1995 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/parts & auto	_____	_____	_____
Fuel, oil & grease	_____	_____	_____
Replacement livestock	_____	_____	_____
Breeding	_____	_____	_____
Vet & medicine	_____	_____	_____
Milk marketing	_____	_____	_____
Cattle lease	_____	_____	_____
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.16)	$_____	$_____	$_____
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
31 Large Herd Dairy Farms, 1994

Item	Average			My Farm		
Land	Owned	Rented	Total	Owned	Rented	Total
Tillable	630	441	1,071	_____	_____	_____
Nontillable	45	8	53	_____	_____	_____
Other nontillable	192	13	204	_____	_____	_____
Total	867	461	1,328	_____	_____	_____

Crop Yields	Farms	Acres*	Prod/Acre	Acres	Prod/Acre
Hay crop	30	452	3.80 tn DM	_____	_____ tn DM
Corn silage	31	434	17.08 tn	_____	_____ tn
			5.56 tn DM		_____ tn DM
Other forage	5	100	2.19 tn DM	_____	_____ tn DM
Total forage	31	888	4.57 tn DM	_____	_____ tn DM
Corn grain	19	181	126.86 bu	_____	_____ bu
Oats	3	43	39.91 bu	_____	_____ bu
Wheat	6	52	55.02 bu	_____	_____ bu
Other crops	6	187		_____	
Tilllable pasture	9	34		_____	
Idle	7	51		_____	
Total Tillable Acres	31	1,071		_____	

*This column represents the average acreage for the farms producing that crop. Average acreages including those farms not producing were corn grain 111, oats 4, tillable pasture 10, and idle 12.

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
31 Large Herd Dairy Farms, 1994

Item	Average	My Farm
Total tillable acres per cow	1.90	_____
Total forage acres per cow	1.58	_____
Harvested forage dry matter, tons per cow	7.21	_____

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, 1994

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	31	10			10	
Ave. number of acres	1,071	661			415	
Fert./lime	$30.20	$33.60	$ 5.82	$0.25	$17.17	$4.18
Seed/plants	18.37	26.56	4.60	0.19	14.33	3.49
Spray/other crop exp.	21.52	38.13	6.60	0.28	6.63	1.62
TOTAL	$70.09	$98.29	$17.02	$0.72	$38.13	$9.29
My Farm:						
Fert./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
31 Large Herd Dairy Farms, 1994

Machinery Expense Item	Average Total Expenses	Average Per Till. Acre	My Farm Total Expenses	My Farm Per Till. Acre
Fuel, oil & grease	$28,992	$27.07	$_____	$_____
Machinery repairs & parts	67,849	63.35	_____	_____
Machine hire, rent & lease	21,901	20.45	_____	_____
Auto expense (farm share)	1,606	1.50	_____	_____
Interest (5%)	23,536	21.98	_____	_____
Depreciation	64,695	60.41	_____	_____
Total	$208,580	$194.75	$_____	$_____

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 7 and 8.

DAIRY HERD INVENTORY

31 Large Herd Dairy Farms, 1994

	Dairy Cows		Heifers					
			Bred		Open		Calves	
Item	No.	Value	No.	Value	No.	Value	No.	Value
Beginning year (owned)	537	$539,566	144	$120,507	123	$65,858	126	$40,335
+ Change w/o apprec.		34,666		24,266		5,070		-1,873
+ Appreciation		1,320		1,095		27		11
End year (owned)	569	$575,552	169	$145,868	138	$70,955	125	$38,473
End including leased	580							
Average number	563		418 (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

31 Large Herd Dairy Farms, 1994

Item	Average	My Farm
Total milk sold, lbs.	12,263,753	_____
Milk sold per cow, lbs.	21,768	_____
Average milk plant test, percent butterfat	3.64	_____

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
31 Large Herd Dairy Farms, 1994

	Average			My Farm		
Item	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Accrual Costs of Producing Milk						
Operating costs	$1,290,796	$2,291	$10.53	$_____	$_____	$_____
Purchased inputs costs	$1,423,648	$2,527	$11.61	$_____	$_____	$_____
Total Costs	$1,579,692	$2,804	$12.88	$_____	$_____	$_____
Accrual Receipts From Milk	$1,653,882	$2,936	$13.49	$_____	$_____	$_____
Net Farm Income w/o apprec.	$ 230,234	$ 409	$ 1.88	$_____	$_____	$_____
Net Farm Income with apprec.	$ 272,101	$ 483	$ 2.22	$_____	$_____	$_____

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
31 Large Herd Dairy Farms, 1994

	Average		My Farm	
Item	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & conc.	$813	$3.74	$_____	$_____
Purchased dairy roughage	22	0.10	_____	_____
Total Purchased Dairy Feed	$835	$3.84	$_____	$_____
Purchased grain & conc. as % of milk receipts	28%		__%	
Purchased feed & crop exp.	$968	$4.45	$_____	$_____
Purchased feed & crop exp. as % of milk receipts	33%		__%	
Breeding	$ 30	$0.14	$_____	$_____
Veterinary & medicine	95	0.44	_____	_____
Milk marketing	114	0.53	_____	_____
Cattle lease	10	0.05	_____	_____
Other livestock expenses	212	0.97	_____	_____

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
31 Large Herd Dairy Farms, 1994

Item	Average 31 Farms	
Total Accrual Operating Expenses	$1,483,645	
Expansion Livestock, Accrual	+ 33,890	
1. Total Accrual Operating Expenses, Including Expansion Livestock		$1,517,535
Total Accrual Receipts	$1,880,621	
Milk Sales, Accrual	- 1,653,882	
2. Total Accrual Nonmilk Receipts		- 226,739
3. Operating Costs of Producing Milk		$1,290,796
Cwt. of Milk Sold	+ 122,637.5	
Operating Costs/Cwt.	= $10.53	
Machinery Depreciation		+ 64,695
Building Depreciation		+ 68,157
4. Purchased Inputs Cost of Producing Milk		$1,423,648
Cwt. of Milk Sold	+ 122,637.5	
Purchased Inputs Cost/Cwt.	= $11.61	
Family Labor Unpaid ($1,400/month)		+ 1,537
Real Interest on Equity Cap.		+ 87,088
Value of Operating Labor & Management		+ 67,419
5. Total Costs of Producing Milk		$1,579,692
Cwt. Milk Sold	+ 122,637.5	
Total Costs/Cwt.	= $12.88	

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

31 Large Herd Farms, 1994

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	$272,463	$5,708	$3,003	$5,104
Real estate		2,541		2,272
Machinery & equipment	42,012	880	463	
Asset turnover ratio		.60		
My Farm:				
Farm capital	$_____	$_____	$_____	$_____
Real estate		_____		_____
Machinery & equipment	_____	_____	_____	
Asset turnover ratio		_____		

LABOR FORCE INVENTORY AND ANALYSIS

31 Large Herd Dairy Farms, 1994

Labor Force	Months	Age	Years of Education	Value of Labor & Mgmt.
Operator number 1	11.95	46	14	$37,226
Operator number 2	6.61	42	14	17,935
Operator number 3	5.06	40	13	12,258
Family paid	5.45			
Family unpaid	1.06			
Hired	111.50			
Total	141.63	/ 12 = 11.80 Worker Equivalent		
		1.97 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	563	48	_____	_____
Milk sold, pounds	12,263,753	1,039,069	_____	_____
Tillable acres	1,071	91	_____	_____
Work units	5,508	467	_____	_____

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 ($1,450/mo.)	$34,249	$61	$0.28	$_____	$_____	$_____
Family unpaid ($1,450/mo.)	1,537	3	0.01	_____	_____	_____
Hired	278,717	495	2.27	_____	_____	_____
Total Labor	$314,503	$558	$2.56	$_____	$_____	$_____
Machinery Cost	208,580	370	1.70	_____	_____	_____
Total Labor & Mach.	$523,083	$928	$4.26	$_____	$_____	$_____

INCOME AND EXPENSE PROFILE

Use the following two tables to make an income and expense profile for your dairy farm business. Circle the income and cost measures closest to the one for your farm, from one of the five columns on each line. 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.

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.

RECEIPTS AND EXPENSES PER COW

31 Large Herd Dairy Farms, 1994

	QUINTILE				
Item	1	2	3	4	5
Accrual Operating Receipts					
Milk	$3,245	$3,053	$2,911	$2,834	$2,718
Dairy cattle	378	298	233	194	117
Dairy calves	58	42	38	34	28
Other livestock	8	3	1	0	-1
Crops	173	101	53	29	-37
Misc. receipts	87	55	46	24	11
Total Operating Receipts	$3,758	$3,517	$3,340	$3,162	$2,989
Accrual Operating Expenses					
Hired labor	$235	$437	$485	$530	$641
Dairy grain & concentrate	701	777	823	862	948
Dairy roughage	0	0	7	28	83
Nondairy feed	0	0	0	0	0
Mach. hire/rent/lease	0	3	19	26	118
Mach. repair/parts & auto	68	109	132	156	198
Fuel, oil & grease	30	43	55	69	94
Replacement livestock	0	0	7	42	174
Breeding	12	20	28	38	58
Vet & medicine	60	84	92	114	145
Milk marketing	68	87	109	139	232
Cattle lease	0	0	0	4	41
Other livestock expense	137	166	190	229	354
Fertilizer & lime	15	29	53	71	144
Seeds & plants	14	28	36	41	60
Spray/other crop expenses	7	33	44	56	71
Land, building, fence repair	10	26	33	50	88
Taxes	20	30	36	44	65
Real estate rent/lease	18	29	39	57	91
Insurance	13	20	25	32	55
Utilities	48	58	67	88	112
Interest	80	141	173	206	255
Miscellaneous	11	24	33	50	76
Total Operating Expenses	$2,364	$2,502	$2,665	$2,810	$3,050
Expansion Livestock	0	0	14	75	205
Machinery Depreciation	70	92	102	124	117
Building Depreciation	51	72	88	118	196
Net Farm Income w/o Apprec.	$580	$419	$363	$326	$232

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

31 Large Herd Dairy Farms, 1994

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)
20.6	1,084	23,351,762	23,916	5.3	20	61	1,292,458
11.7	524	11,482,087	22,327	4.1	19	48	1,063,907
10.0	423	9,659,840	21,576	3.5	17	45	987,199
8.6	377	8,241,008	20,981	3.0	15	42	926,845
6.6	322	6,736,070	20,325	1.9	14	37	821,887

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)
$701	23%	$266	$726	$874	$3.96
777	26	317	867	932	4.28
823	28	359	923	990	4.51
862	31	437	999	1,033	4.74
948	32	539	1,159	1,131	5.19

	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)
$1.08	$19,201	8%	$0.32	$0.28	$0.64
2.00	25,016	15	0.39	0.39	0.78
2.27	27,196	16	0.51	0.44	0.90
2.38	30,739	18	0.63	0.50	1.03
2.87	32,342	22	1.03	0.66	1.54

*( ) = 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)
$206	$47	$2,078	$ 9.64	$2,553	$12.06
231	63	2,210	10.30	2,721	12.37
250	71	2,318	10.79	2,844	12.89
281	81	2,429	11.05	3,010	13.77
491	155	2,658	11.70	3,243	14.63

Expense Ratios

Operating	Depreciation	Interest
(CALC)	(CALC)	(CALC)
69.1%	3.9%	2.4%
73.7	5.2	4.3
77.8	6.0	5.1
79.5	7.0	6.1
82.2	10.3	7.7

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)
$14.19	$13.40	$3,245	$378	$58
13.66	13.07	3,053	298	42
13.41	12.93	2,911	233	38
13.27	12.77	2,834	194	34
13.02	12.46	2,718	117	28

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)
$1,383	$ 932	6.1%	$148	$0.74
2,035	1,573	7.8	267	1.28
2,293	1,832	8.3	369	1.91
2,742	2,182	8.7	532	2.50
3,546	2,990	9.7	694	3.33

Cash Flow Analysis				
Amount Available for Family Living, Debt Service & Investment		Personal Withdrawals & Family Expenditures		Cash Flow Coverage Ratio
Per Cow	Per Cwt.	Per Cow	Per Cwt.	
(12)	(12)	(CALC)	(CALC)	(8)
$847	$3.89	$372	$1.71	2.47
762	3.45	247	1.13	1.65
641	2.96	191	0.87	1.09
571	2.54	128	0.59	0.74
430	2.02	93	0.43	0.41

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)
$4,138	$1,301	$ 575	$18,594	0.82
5,305	2,210	698	23,077	0.64
5,663	2,532	807	25,346	0.59
6,139	2,826	959	27,936	0.53
7,382	3,622	1,458	30,719	0.47

Solvency				
Percent Equity	Leverage Ratio	Debt to Asset Ratios		
		Total	Current/Intermed.	Long Term
(5)	(CALC)	(5)	(5)	(5)
75%	0.32	0.23	0.22	0.04
61	0.62	0.37	0.36	0.25
55	0.81	0.44	0.43	0.43
49	1.03	0.50	0.49	0.58
38	1.80	0.61	0.72	0.82

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)
$289,802	19.8%	25.2%	12.4%	14.6%
93,949	11.8	14.0	9.2	10.4
55,568	7.1	8.9	7.2	8.3
23,056	3.9	5.4	5.0	5.9
5,462	0.8	1.8	2.7	3.2

Net Farm Income Without Appreciation		Net Farm Income From Operations Ratio	Net Income Efficiency Ratio
Per Cow	Per Cwt.		
(10)	(10)	(CALC)	(CALC)
$580	$2.61	16.3%	19.4%
419	1.99	13.5	14.6
363	1.60	10.7	9.4
326	1.48	9.5	6.0
232	1.08	7.1	4.1

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 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 27-29 can be used to help identify strengths and weaknesses of your farm business. Identify three major strengths and three areas of your farm business that need improvement.

Strengths:

Needs improvement:

GLOSSARY AND LOCATION OF COMMON TERMS

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 6)

Accrual Receipts - (defined on page 6)

Annual Cash Flow Statement - (defined on page 14)

Appreciation - (defined on page 7)

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

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

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 16)

Cash Paid - (defined on page 4)

Cash Receipts - (defined on page 6)

Change in Accounts Payable - (defined on page 6)

Change in Accounts Receivable - (defined on page 6)

Change in Inventory - (defined on page 4)

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.

Current Portion - (defined on page 9)

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 10)

Deferred Taxes - (defined on page 9)

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 milk income committed to debt repayment, calculated by dividing planned debt payments by total milk receipts. A reliable measure of repayment ability, see page 16.

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 8)

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

Labor Efficiency - Production capacity and output per worker.

Leverage Ratio - 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).

Net Farm Income - (defined on page 7).

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 22).

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.

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 22).

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

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

Return on Equity Capital - (defined on page 9).

Return on Total Capital - (defined on page 9).

Return to Operators' Labor, Management, and Equity Capital - (defined on page 8).

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 22).

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.

INDEX

	Page(s)
Accounts Payable	5, 10
Accounts Receivable	6, 10
Accrual Expenses	5, 7
Accrual Receipts	6, 7
Acreage	19
Advanced Government Receipts	9, 10
Age	24
Amount Available for Debt Service	16
Annual Cash Flow Statement	14
Appreciation	7,13,21
Asset Turnover Ratio	24
Balance Sheet	10
Barn Type	4
Business Type	4
Capital Efficiency	24
Cash From Nonfarm Capital Used in the Business	14
Cash Flow Coverage Ratio	16
Cash Paid	4
Cash Receipts	6, 14
Change in Accounts Payable	5
Change in Accounts Receivable	6
Change in Inventory	4, 6
Change in Net Worth	13
Crop Expenses	5, 19
Crop/Dairy Ratios	19
Current Portion	9, 10
Dairy (farm)	4
Dairy Cash-Crop (farm)	4
Debt per Cow	12
Debt to Asset Ratios	12
Deferred Taxes	11
Depreciation	5, 12
Dry Matter	19
Education	24
Equity Capital	9
Expansion Livestock	5, 14
Expenses	5
Farm Business Chart	27,28,29
Farm Debt Payments as Percent of Milk Sales	16
Farm Debt Payments Per Cow	16
Financial Lease	10
Income Statement	4
Inflows	14
Labor & Mgmt. Income	8
Labor & Mgmt. Income Per Oper.	8
Labor Efficiency	24
Land Resources	19
Liquidity	12
Lost Capital	12
Machinery Expenses	5,20
Milking Frequency	4
Milk Production	21
Milking System	4
Money Borrowed	14
Net Farm Income	7
Net Investment	12
Net Worth	10
Number of Cows	21
Operating Costs of Producing Milk	22,23
Opportunity Cost	9
Other Livestock Expenses	5
Outflows	14
Part-Time Cash-Crop Dairy	4
Part-Time Dairy (farm)	4
Percent Equity	11,12
Personal Withdrawals and Family Expenditures Including Nonfarm Debt Payment	14
Principal Payments	14
Profitability	7
Purchased Inputs Cost	22,23
Receipts	6
Record System	4
Repayment Analysis	16
Replacement Livestock	5
Retained Earnings	13
Return on Equity Capital	9
Return on Total Capital	9
Return to Operator's Labor & Mgmt. & Equity Capital	8
Solvency	12
Total Costs of Producing Milk	22,23
Whole Farm Method	22,23
Worker Equivalent	24
Yields Per Acre	19

OTHER A.R.M.E. EXTENSION BULLETINS

No. 95-04	DFBS Expert System For Analyzing Dairy Farm Businesses Users' Guide for Version 5.0	Linda D. Putnam Stuart F. Smith
No. 95-05	The Evolution of Milk Pricing and Government Intervention in Dairy Markets	Eric M. Erba Andrew M. Novakovic
No. 95-06	The Evolution of Federal Water Pollution Control Policies	Gregory L. Poe
No. 95-07	An Economic Evaluation of Two Alternative Uses of Excess Capacity in the Milking Parlor	Eric M. Erba Wayne A. Knoblauch
No. 95-08	A Presentation Guide to: The U.S. Food Industry	Edward W. McLaughlin Kristen Park
No. 95-09	Dairy Farm Business Summary Western Plain Region 1994	Stuart F. Smith Linda D. Putnam Jason Karszes Michael Stratton David Thorp
No. 95-10	Dairy Farm Business Summary Northern New York Region 1994	Stuart F. Smith Linda D. Putnam George Allhusen Patricia Beyer Anita Deming Richard Spaulding George Yarnall
No. 95-11	Proceedings: Toward the 1995 Farm Bill and Beyond	NILDP -- Education Committee
No. 95-12	Dairy Farm Business Summary Western Plateau Region 1994	George L. Casler Andrew N. Dufresne James Grace Joan S. Petzen Linda D. Putnam