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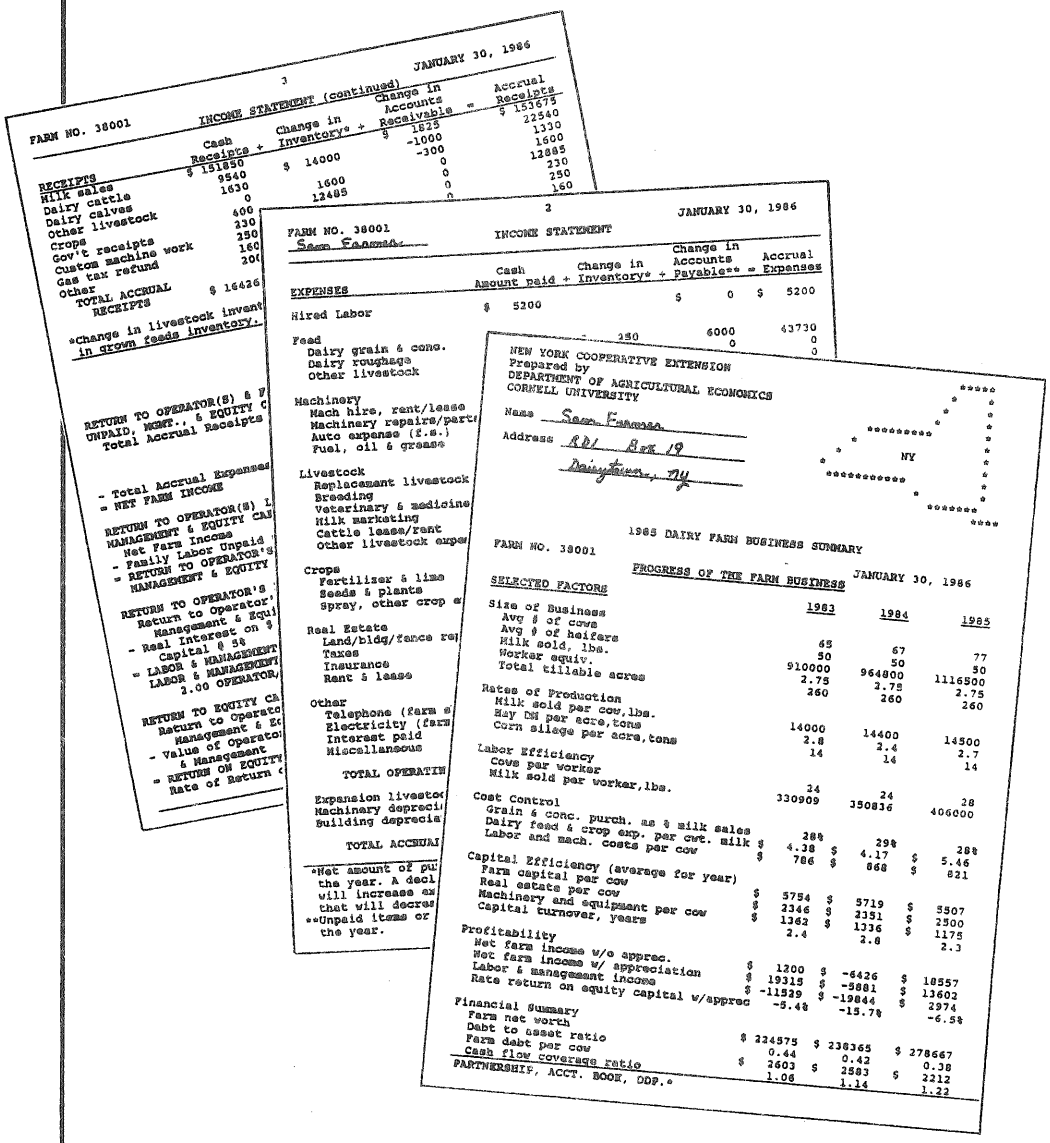
DAIRY FARM BUSINESS SUMMARY

May 1986 A.E. Ext. 86-19

WESTERN PLATEAU REGION 1985



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1985 DAIRY FARM BUSINESS SUMMARY
Western Plateau Region*

Introduction

Dairy farmers throughout the State have been participating in New York Cooperative Extension's farm business summary and analysis program since the early 1950's. Each participating farmer receives a complete summary and analysis of his or her farm business in addition to this publication. The information in this report is compiled by averaging data submitted from the region described at the bottom of this page.

Program Objective

The primary objective of the dairy farm business summary, DFBS, is to help farmers improve their management skills through appropriate use of record data and application of modern farm business management decision-making techniques. In short, DFBS identifies the records farmers need and demonstrates how to use them in making business and financial management decisions.

Program Improvements

The 1985 DFBS report features improved accrual accounting procedures, a new measure of farm profitability, a more indepth balance sheet, an annual cash flow statement, and several major improvements in the business analysis format and the analysis measures used. These and other changes are identified in the body of this report.

The revised format provides one full page for the analysis of the farm cropping program and another for complete analysis of the dairy program. Corn and hay crop related expenses are evaluated separately for farmers who submitted the breakdown of expenses by crop. The cost of producing milk per cow and per hundredweight of milk sold has been compiled. An annual cash flow worksheet has been added to the farmer's individual report. The popular Progress of The Farm Business report has been moved to page one of the farmer's report and added to this publication.

Micro DFBS, which allows Cooperative Extension agents and specialists to calculate and print individual farm business reports in their offices, is now being used by more than 50 percent of our dairy farm management field staff. This innovative program provides faster processing of farm record data and increased use of DFBS in farm management programs.

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*This summary was prepared by George L. Casler, Department of Agricultural Economics, New York State College of Agriculture and Life Sciences, Cornell University, in cooperation with Cooperative Extension Agents Lee Brumback, Andrew Dufresne, Davis Hill, and Joan Petzen. The Western Plateau Region is comprised of Allegany, Cattaraugus, Chautauqua, and Steuben Counties.

SUMMARY OF THE FARM BUSINESS

Business Characteristics

Finding the right management strategies is an important part of farming. 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 farmers reporting these characteristics.

BUSINESS CHARACTERISTICS
69 Western Plateau Region Dairy Farms, 1985

Type of Farm	Number
Dairy	63
Part-time dairy	5
Dairy cash-crop	1
Part-time cash-crop dairy	0

Type of Ownership	Number
Owner	63
Renter	6

Milking System	Number
Bucket & carry	3
Dumping station	12
Pipeline	30
Herringbone parlor	21
Other parlor	3

Dairy Records Service	Number
DHIC	44
O.S.	11

Type of Business	Number
Single proprietorship	56
Partnership	13
Corporation	0
Other	0

Type of Barn	Number
Stanchion	45
Freestall	24
Other	0

Business Record System	Number
CAMIS	5
Account Book	32
Agrifax (mail-in only)	21
On-Farm Computer	2
Other	9

	Number
Other	5
None	9

Milk Diversion Program Participants Number: 11

The averages used in this report were compiled using data from all the participating dairy farms in this region unless noted otherwise. There may be regular dairy farms, part-time farms, dairy cash-crop farms, farm renters, partnerships, and corporations included in the average. These specific classifications are used to separate farms in the State Business Summary.

A part-time farm has less than 12 months of labor from all operators.

A dairy cash-crop farm has income from crop sales that exceed 10 percent of milk sales.

A farm renter owns no farm real estate at the end of the year or owns no tillable land.

Milk Diversion Program Participants are the farmers that were in the 1984-85 federal milk diversion program. These farms have also been included in the regional summary averages.

Income Statement

The revised accrual income statement begins with an accounting of all farm business expenses.

CASH AND ACCRUAL FARM EXPENSES
69 Western Plateau Region Dairy Farms, 1985

Expense Item	Cash Paid +	Change in Inventory* +	Change in Accounts Payable	= Accrual Expenses
Hired Labor	$ 15,101		$ 12	$ 15,113
Feed				
Dairy grain & conc.	35,274	$-207	264	35,331
Dairy roughage	1,274	0	13	1,287
Other livestock	631	-70	-4	557
Machinery				
Mach. hire, rent/lease	1,275		-30	1,245
Machinery repairs/parts	8,516	4	87	8,607
Auto expense (f.s.)	718		14	732
Fuel, oil & grease	6,139	-43	-8	6,088
Livestock				
Replacement livestock	1,065		20	1,085
Breeding	1,895	51	53	1,999
Vet & medicine	3,120	-14	-24	3,082
Milk marketing	7,863		0	7,863
Cattle lease/rent	28		0	28
Other livestock expense	5,899	-30	26	5,895
Crops				
Fertilizer & lime	6,823	-37	114	6,900
Seeds & plants	2,806	-29	16	2,793
Spray, other crop exp.	2,575	2	-3	2,574
Real Estate				
Land/bldg./fence repair	1,756		66	1,822
Taxes	4,051		39	4,090
Insurance	2,661		-35	2,626
Rent & lease	3,530		10	3,540
Other				
Telephone (f.s.)	588		0	588
Electricity (f.s.)	3,800		2	3,802
Interest paid	12,554		68	12,622
Miscellaneous	2,292	-6	-166	2,120
Total Operating	$132,234	$-379	$ 534	$132,389
Expansion livestock	564		0	564
Machinery depreciation				14,212
Building depreciation				6,244
TOTAL ACCRUAL EXPENSES				$153,409

*An increase in inventory is a negative number in this column because it represents inputs that were purchased but not used during the year.

Cash paid is the actual amount of money paid out during the year and does not necessarily represent the cost of goods and services actually used.

Accrual expenses are the costs of inputs actually used in this year's production. The value of feed and supplies used out of inventory are included as are the costs of inputs purchased but not paid for (net increases in accounts payable). Items paid for and not used (net additions to inventory) are excluded from accrual expenses as are payments made on inputs used in a prior year (net decreases in accounts payable).

Worksheets are provided to enable any dairy farmer to compute his or her accrual farm income and compare it with the averages on the previous page.

CASH AND ACCRUAL FARM EXPENSES WORKSHEET

Expense Item	Cash Paid	+	Change in Inventory	+	Change in Accounts Payable	=	Accrual Expenses
Hired Labor	$		$		$		$
Feed							
Dairy grain & conc.							
Dairy roughage							
Other livestock							
Machinery							
Mach. hire, rent/lease							
Machinery repairs/parts							
Auto expense (f.s.)							
Fuel, oil & grease							
Livestock							
Replacement livestock							
Breeding							
Vet & medicine							
Milk marketing							
Cattle lease/rent							
Other livestock expense							
Crops							
Fertilizer & lime							
Seeds & plants							
Spray, other crop exp.							
Real Estate							
Land/bldg./fence repair							
Taxes							
Insurance							
Rent & lease							
Other							
Telephone (f.s.)							
Electricity (f.s.)							
Interest paid							
Miscellaneous							
Total Operating	$		$		$		$
Expansion livestock							
Machinery depreciation							
Building depreciation							
TOTAL ACCRUAL EXPENSES	$		$		$		$

Cash paid is the actual amount of money paid out during the year and does not necessarily represent the cost of goods and services actually used.

Accrual expenses are the costs of inputs actually used in this year's production. Purchased feed and supplies used out of inventory must be included. Beginning of year less end of year purchased feed and supply inventory equals the change in inventory to include in accrual expenses. (An increase in inventory will be a negative number in the change in inventory column.) Feed, supplies, and services used but not paid for must be included by adding the net increase in operating accounts payable. Increases in operating accounts payable are determined by subtracting the balance at the beginning of the year from the end of year balance.

CASH AND ACCRUAL FARM RECEIPTS
69 Western Plateau Region Dairy Farms, 1985

Receipt Item	Cash Receipts	+ Change in Inventory	+ Change in Accounts Receivable	+ Accrual Receipts
Milk sales	$145,477		$ 408	$145,885
Dairy cattle	8,625	$2,924	253	11,802
Dairy calves	2,178		3	2,181
Other livestock	405	-104	29	330
Crops	1,007	-172	12	847
Government receipts	3,155		-905	2,250
Custom machine work	264		6	270
Gas tax refund	132		0	132
Other	4,455		342	4,797
Total Accrual Receipts	$165,698	$2,648	$148	$168,494

Cash receipts includes the gross value of milk checks received during the year plus all other payments received for the sale of farm products, services, and government programs.

Accrual receipts represent the value of all farm commodities produced and services actually provided by the farmer during the year. Increases in livestock inventory caused by herd growth and/or quality, are included as accrual receipts. Decreases in inventory caused by herd reduction are deducted. Changes in inventories of crops grown are accounted for in accrual receipts. Changes in accounts receivable include the January milk check for this December's marketings compared with the previous January's check, and other delayed payments.

CASH AND ACCRUAL FARM RECEIPT WORKSHEET

Receipt Item	Cash Receipts	+ Change in Inventory	+ Change in Accounts Receivable	+ Accrual Receipts
Milk sales	$_____	$_____	$_____	$_____
Dairy cattle	_____	_____	_____	_____
Dairy calves	_____	_____	_____	_____
Other livestock	_____	_____	_____	_____
Crops	_____	_____	_____	_____
Government receipts	_____	_____	_____	_____
Custom machine work	_____	_____	_____	_____
Gas tax refund	_____	_____	_____	_____
Other	_____	_____	_____	_____
Total Accrual Receipts	$_____	$_____	$_____	$_____

To calculate the change in inventory to be included in the above worksheet, subtract the beginning of year values from the end of year values excluding appreciation. The changes in inventories caused by increasing or declining prices must be excluded from the calculation of accrual receipts. Changes in accounts receivable are also determined by subtracting beginning of year balances from end of year balances.

Profitability Analysis

Farm owners or operators contribute labor, management, and capital to their businesses and the best combination of these resources produces optimum profits. Farm profits 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 total combined 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 with and without appreciation. Appreciation represents the change in livestock, machinery, and real estate inventory values caused by changes in prices during the year. Appreciation is a major factor contributing to changes in farm net worth and must be included in the profitability analysis.

NET FARM INCOME
69 Western Plateau Region Dairy Farms, 1985

Item	Average	My Farm
Total accrual receipts	$168,494	$_____
Appreciation: Livestock	-4,409	_____
Machinery	4,929	_____
Real Estate	2,327	_____
Total Including Appreciation	$171,341	$_____
Total accrual expenses	153,409	-_____
Net Farm Income (with appreciation)	$17,932	$_____
Net Farm Income (without appreciation)	$15,085	$_____

Return to operator's labor, management, and equity capital measures the total business profits for the farm operators. It is calculated by deducting a charge for unpaid family labor from net farm income. Operator's labor is not included in unpaid family labor. Return to operator's labor, management, and equity capital has been compiled with and without appreciation. Appreciation is an important part of the return to ownership of farm assets and may be positive or negative.

RETURN TO OPERATOR'S LABOR, MANAGEMENT, AND EQUITY
69 Western Plateau Region Dairy Farms, 1985

	Average		My Farm	
Item	With Apprec.	Without Apprec.	With Apprec.	Without Apprec.
Net farm income	$17,932	$15,085	$_____	$_____
Family labor unpaid @ $550 per month	1,650	1,650	-_____	-_____
Return to operator's labor, management, & equity	$16,282	$13,435	$_____	$_____

Labor and management income is the share of net farm income returned to the operator's labor and management. Appreciation is not included as part of the return to labor and management. Labor and management income is determined by deducting the cost of using equity capital at a real interest rate of five percent from the return to operator's labor, management, and equity capital excluding appreciation. The interest charge reflects the long-term average rate of return that a farmer might expect to earn in comparable risk investments in an economy with no inflation.

Labor and management income per operator measures the return to each operator's labor and management.

LABOR AND MANAGEMENT INCOME
69 Western Plateau Region Dairy Farms, 1985

Item	Average	My Farm
Return to operator's labor, management, & equity without appreciation	$13,435	$_____
Real interest @ 5% on $276,586 equity capital	13,829	-_____
Labor & Management Income	$ -394	$_____
Labor & Management Income per 1.25 Operator	$ -315	$_____

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 or value of operator's 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 end of year farm net worth or equity capital.

RETURN ON EQUITY CAPITAL
69 Western Plateau Region Dairy Farms, 1985

Item	Average	My Farm
Return to operator's labor, management, & equity capital with appreciation	$16,282	$_____
Value of operator's labor & management	19,653	-_____
Return on equity capital with appreciation	$-3,371	$_____
Rate of return on equity capital with appreciation	-1.2%	_____%
Return on equity capital without appreciation	$-6,218	$_____
Rate of return without appreciation	-2.2%	_____%

Farm and Family Financial Status

Evaluating the financial status of the farm business and the farm family is an important part of business analysis. The first step is to recognize all the assets and liabilities that make up the balance sheet. The second step is to analyze your filled out balance sheet by evaluating changes made during the year.

1985 FARM BUSINESS & NONFARM BALANCE SHEET
69 Western Plateau Region Dairy Farms, 1985

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			Current		
Farm cash, checking & savings	$ 2,313	$ 2,386	Accounts payable	$ 8,066	$ 7,997
Accounts rec.	12,857	12,674	Operating debt	824	926
Feed & supplies	30,638	31,011	Short-term	2,140	2,787
Total	$45,808	$46,071	Total	$11,031	$11,710
Intermediate			Intermediate		
Dairy cows:					
owned	$ 60,866	$ 61,637		$58,410	$57,993
leased	0	0			
Heifers	25,808	23,450			
Bulls/other lvstk.	1,225	1,222			
Mach./eq. owned	79,951	79,279			
Mach./eq. leased	1,507	1,213	Financial lease		
Coop stock & cert.	5,901	6,233	(cattle/mach.)	1,507	1,213
Total	$175,258	$173,034	Total	$59,917	$59,206
Long-Term			Long-Term		
Land/buildings:				$74,951	$71,099
owned	$201,346	$199,497			
leased	1,392	899			
Total	$202,738	$200,396	Financial lease		
			(structures)	1,392	899
			Total	$76,343	$71,997
Total Farm Assets	$423,804	$419,500	Total Farm Liab.	$147,291	$142,914
			FARM NET WORTH	$276,514	$276,587

(Avg. for 54 Farms Reporting) Nonfarm Assets	Jan. 1	Dec. 31	Nonfarm Liabilities & Net Worth	Jan. 1	Dec. 31
Personal cash, chkg. & savings	$ 8,576	$ 8,521	Nonfarm Liab.	$ 1,175	$ 1,392
Cash value life ins.	3,676	4,257	NONFARM NET WORTH	$36,193	$37,514
Nonfarm real estate	9,711	9,997	FARM & NONFARM	Jan. 1	Dec. 31
Auto (personal sh.)	2,265	2,519	Total Assets	$461,172	$458,406
Stocks & bonds	2,973	2,663	Total Liabilities	$148,466	$144,306
Household furn.	7,522	7,885			
All other	2,644	3,064	TOTAL FARM & NON-FARM NET WORTH*	$312,706	$314,100
Total Nonfarm	$37,368	$38,906			

*Assumes that the average nonfarm assets and liabilities on the 14 farms that did not report these items were the same as on the farms that did report.

Financial lease obligations are included on the balance sheet. The present values of all future payments on financial lease obligations are listed as liabilities because the farmer (lessee) is committed to make the payments. The present values are also listed as assets.

1985 FARM BUSINESS & NONFARM BALANCE SHEET

My Farm

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
Current			**Current**		
Farm cash, checking & savings			Accounts payable		
Accounts rec.			Operating debt		
Feed & supplies			Short-term:		
Total			Total		
Intermediate			**Intermediate**		
Dairy cows:					
owned					
leased					
Heifers					
Bulls/other lvstk.					
Mach./eq. owned					
Mach./eq. leased			Financial lease		
Coop stock & cert.			(cattle/mach.)		
Total			Total		
Long-Term			**Long-Term**		
Land/buildings:					
owned					
leased					
Total			Financial lease (structures)		
			Total		
Total Farm Assets			Total Farm Liab.		
			FARM NET WORTH		

Nonfarm Assets	Jan. 1	Dec. 31	Nonfarm Liabilities & Net Worth	Jan. 1	Dec. 31
			Nonfarm Liab.:		
Personal cash, chkg. & savings					
Cash value life ins.					
Nonfarm real est.					
Auto (pers. share)			Total Nonfarm Liabilities		
Stocks & bonds					
Household furn.					
All other			Nonfarm Net Worth		
Total Nonfarm					

TOTAL FARM & NONFARM	Jan. 1	Dec. 31
Total Farm & Nonfarm Assets		
Less Total Farm & Nonfarm Liabilities		
Farm & Nonfarm Net Worth		

Balance sheet analysis continues by examining financial and debt ratios and factors measuring levels of debt. Percent equity is calculated by dividing net worth by assets. Equity increases as the value of assets increases more than liabilities. The debt to asset ratio is compiled by dividing liabilities by assets. Low debt to asset ratios reflect strength in solvency and the potential capacity to borrow. The debt analysis ratios show how well the debt is structured and managed. Debt levels per unit of production include some old standards that are still useful if used with measures of cash flow and repayment ability.

BALANCE SHEET ANALYSIS
69 Western Plateau Region Dairy Farms, 1985

Item	Average	My Farm
Financial Ratios - Farm:		
Percent equity	66%	_____%
Debt/asset ratio: total	0.34	_____
long-term	0.36	_____
intermediate/current	0.32	_____
Financial Ratios - Farm & Nonfarm:		
Percent equity	68%	_____%
Total debt/asset ratio	0.32	_____
Farm Debt Analysis:		
Accounts payable as % of total debt	6%	_____%
Long-term liabilities as a % of total debt	50%	_____%
Current & inter. liab. as a % of total debt	50%	_____%

Farm Debt Levels:	Per Cow	Per Tillable Acre Owned	Per Cow	Per Tillable Acre Owned
Total farm debt	$1,856	$812	$_____	$_____
Long-term debt	935	409	_____	_____
Intermediate & current debt	921	403	_____	_____

Balance sheet analysis concludes with a summary of the inventory balancing procedure for farm real estate and machinery and equipment. It is important to account for the value of these assets 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.

FARM INVENTORY BALANCE
69 Western Plateau Region Dairy Farms, 1985

Item	Avg. of Regional Farms		My Farm	
	R.E.	Mach./Eq.	R.E.	Mach./Eq.
Value beg. of year	$201,346	$79,951	$_____	$_____
+ Purchases	7,014*	8,802	$_____	$_____
- Lost capital	1,703		_____	_____
- Sales	3,216	190	_____	_____
- Depreciation	6,244	14,212	_____	_____
= Net investment	-4,176	-5,600	_____	_____
+ Appreciation	2,327	4,929	_____	_____
= Value end of year	$199,497	$79,279	$_____	$_____

* $2,623 land and $4,390 buildings and/or depreciable improvements.

Cash Flow Summary and Analysis

Completing an annual cash flow summary and analysis is important to determine how well the cash generated by the business, plus that brought in from outside, met the annual cash needs of the business and the farm family. 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 in the following table is structured to compare all the cash inflows with all the cash outflows for the year. Cash inflows include all the cash farm receipts, receipts from the sale of farm assets, additional funds borrowed, as well as the amount of cash available at the beginning of the year. Cash outflows include all the cash farm expenses, capital purchases, principal payments, money taken out of the business, and the cash balance left at year's end. When all the cash inflows and outflows are correct, the statement will balance. If there is an imbalance or error, inflows, outflows or both have not been recorded accurately.

ANNUAL CASH FLOW STATEMENT
69 Western Plateau Region Dairy Farms, 1985

Item	Average	My Farm
Cash Inflows		
Beginning farm cash, checking & savings	$ 2,313	$_____
Cash farm receipts	165,698	_____
Sale of assets: Machinery	190	_____
Real estate	3,213	_____
Money borrowed (intermediate & long-term)	13,545	_____
Money borrowed (short-term)	2,360	_____
Increase in operating debt	101	_____
Nonfarm income	4,065	_____
Money borrowed - nonfarm	392	_____
Total	$191,877	$_____
Cash Outflows		
Cash farm expenses	$132,234	$_____
Capital purchases: Expansion livestock	564	_____
Machinery	8,802	_____
Real estate	7,014	_____
Principal payments (intermediate & long-term)	17,814	_____
Principal payments (short-term)	1,713	_____
Decrease in operating debt	0	_____
Nonfarm debt payments	341	_____
Personal withdrawals & family exp.	16,859*	_____
Ending farm cash, checking & savings	2,386	_____
Total	$187,723	$_____
Imbalance (error)	$4,154	$_____

*On many farms this item was estimated.

Repayment Analysis

The second step of cash flow planning is to compare and evaluate debt payments planned and made in 1985, and estimate the payments required in the current year. It is helpful to compare and evaluate by using debt payments per unit of production and receipt/debt payment ratios.

FARM DEBT PAYMENTS PLANNED
50 Western Plateau Region Dairy Farms, 1985 and 1986
(These 50 farms were also in the 1984 DFBS)

	Average			My Farm		
	1985 Payments		Planned	1985 Payments		Planned
Debt Payments	Planned	Made	1986	Planned	Made	1986
Long-term	$11,172	$12,054	$12,874	$_____	$_____	$_____
Intermediate-term	16,688	15,409	14,329	_____	_____	_____
Short-term	3,658	2,350	2,660	_____	_____	_____
Operating (net reduction)	0	0	120	_____	_____	_____
Accounts payable (net reduction)	2,747	1,707	1,607	_____	_____	_____
Total	$34,265	$31,520	$31,590	$_____	$_____	$_____
Per cow	$443	$408		$_____	$_____	
Per cwt. 1985 milk	$2.87	$2.64		$_____	$_____	
Percent of total 1985 receipts	19%	18%		_____	_____	
Percent of 1985 milk receipts	22%	21%		_____	_____	

The Cash Flow Coverage Ratio measures the ability of the farm business to meet its planned debt payment schedule. The ratio shows the percentage of planned payments that could have been made with 1985's available cash flow. Farmers that did not participate in DFBS in 1985 will find in their report a cash flow coverage ratio based on planned debt payments for 1986.

CASH FLOW COVERAGE RATIO
50 Western Plateau Region Dairy Farms, 1985

Item	Average	My Farm
Cash farm receipts	$173,031	$_____
- Cash farm expenses	138,346	_____
+ Interest paid	12,967	_____
- Net personal withdrawals from farm*	13,120	_____
(A) = Amount Available for Debt Service	34,532	$_____
(B) = Debt Payments Planned for 1985	34,265	$_____
(A ÷ B) = Cash Flow Coverage Ratio for 1985	1.01	_____

*Personal withdrawals and family expenditures less nonfarm income. If family withdrawals are excluded the cash flow coverage ratio will be incorrect.

ANALYSIS OF THE FARM BUSINESS

The farm business has been divided into three parts to allow a more indepth analysis of the cropping program, the dairy program, and the factors affecting capital and labor efficiency.

Cropping Program Analysis

The cropping program is an important part of the dairy farm business and sometimes it is overlooked and neglected. A complete evaluation of available land resources, how they are being used, how well crops are producing and what it costs to produce them, is required to evaluate alternative cropping and feed purchasing choices.

LAND RESOURCES AND CROP PRODUCTION
69 Western Plateau Region Dairy Farms, 1985

Item	Average			My Farm		
Land	Owned	Rented	Total	Owned	Rented	Total
Tillable	176	96	273			
Nontillable	43	17	60			
Other nontillable	139	20	158			
Total	358	133	491			

	Farms Reporting		All Farms		My Farm	
Crop Yields	Farms	Acres	Acres	Prod/Acre	Acres	Prod/Acre
Hay crop	68	145	143	2.4 tn DM		tn DM
Corn silage	64	64	60	13.2 tn		tn
				4.5 tn DM		tn DM
Other forage	11	23	4	1.7 tn DM		tn DM
Total forage	68	209	206	3.0 tn DM		tn DM
Corn grain	41	37	22	86 bu		bu
Oats	21	47	14	70 bu		bu
Wheat	1	10	*	70 bu		bu
Other crops	10	23	3			
Til. pasture	22	50	16			
Idle	25	31	11			
Total Tillable Acres			273			

*Less than one acre.

Average crop acres and yields compiled for the region are for all farms. The number of farms reporting each crop and the average acres on farms reporting each crop are also shown. 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 measures of crop management measure how efficiently the land resource is being used and how well total forage requirements are being met.

CROP MANAGEMENT FACTORS
69 Western Plateau Region Dairy Farms, 1985

Item	Average	My Farm
Total tillable acres per cow	3.64	
Total forage acres per cow	2.75	
Harvested forage dry matter, tons per cow	8.23	

Cropping Program Analysis (continued)

A substantial number of cooperators allocated crop expenses to hay crop, corn, and other crop production. These additional data have been compiled to show the crop expenses per acre and per production unit for these crops. Corn production has been converted to corn silage equivalent using a conversion factor of 5.88 bushels of dry shelled corn per ton of corn silage as fed.

CROP RELATED ACCRUAL EXPENSES
69 Western Plateau Region Dairy Farms, 1985

Expense	Total Per Till. Acre	Hay Crop Per Acre	Hay Crop Per Ton DM	Corn Per Acre	Per Ton Corn Silage Equiv.	Other Crops Per Acre
Fertilizer & lime	$26	$11	$4.71	$30	$2.19	$27
Seeds & plants	10	4	1.58	12	0.90	14
Spray & other crop expense	9	2	0.93	15	1.09	9
Total	$45	$17	$7.22	$57	$4.17	$50
My Farm:						
Fertilizer & lime	$_____	$_____	$_____	$_____	$_____	$_____
Seeds & plants	_____	_____	_____	_____	_____	_____
Spray & other crop expense	_____	_____	_____	_____	_____	_____
Total	$_____	$_____	$_____	$_____	$_____	$_____

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

ACCRUAL MACHINERY EXPENSES
69 Western Plateau Region Dairy Farms, 1985

Machinery Expense Item	Average Total Expenses	Average Per Til. Acre	My Farm Total Expenses	My Farm Per Til. Acre
Fuel, oil & grease	$ 6,088	$ 22	$_____	$_____
Machinery repairs & parts	8,607	31	_____	_____
Machine hire, rent & lease	1,245	5	_____	_____
Auto expense (farm share)	732	3	_____	_____
Interest (5%)	3,981	15	_____	_____
Depreciation	14,212	52	_____	_____
Total	$34,865	$128	$_____	$_____

Dairy Program Analysis

Analysis of the dairy enterprise can tell a great deal about the strengths and weaknesses of the dairy farm business. Changes in dairy herd size and market values that occurred 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. This increase in inventory has been included as an accrual farm receipt on page 5.

DAIRY HERD INVENTORY
69 Western Plateau Region Dairy Farms, 1985

Item	Dairy Cows		Heifers	
	Number	Value	Number	Value
Beginning of year (owned)	73	$60,866	63	$25,808
+ Change without appreciation		3,127		-203
+ Appreciation		-2,356		-2,155
End of year (owned)	77	$61,637	63	$23,450
End including leased	77			
Average number	75		63	
My Farm:				
Beginning of year (owned)	_____	$_____	_____	$_____
+ Change without appreciation	_____	_____	_____	_____
+ Appreciation	_____	_____	_____	_____
End of year (owned)	_____	_____	_____	_____
End including leased	_____	_____	_____	_____
Average number	_____	$_____	_____	$_____

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

MILK PRODUCTION
69 Western Plateau Region Dairy Farms, 1985

Item	Average	My Farm
Total milk sold, lbs.	1,143,880	_____
Milk sold per cow, lbs.	15,275	_____
Average milk plant test, percent butterfat	3.68%	_____
Average price per cwt.	$12.75	$_____

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. Total costs of producing milk include the operating costs plus expansion livestock purchased, depreciation on machinery and buildings, the value of operator's labor and management, and the interest charge for using equity capital. Note that the cost of labor, management, and equity capital has been excluded in the intermediate compilation.

ACCRUAL RECEIPTS FROM DAIRY AND COST OF PRODUCING MILK
69 Western Plateau Region Dairy Farms, 1985

Item	Average			My Farm		
	Total	Per Cow	Per Cwt.	Total	Per Cow	Per Cwt.
Accrual Milk Receipts	$145,885	$1,948	$12.75	$_____	$_____	$_____
Accrual Costs of Producing Milk						
Operating costs	$132,389			$_____		
- Receipts other than milk	22,609			_____		
Net Oper. Costs	$109,780	$1,463	$ 9.60	$_____	$_____	$_____
Total costs without oper's labor, mgmt. & capital	132,389	1,765	11.57	_____	_____	_____
Total Costs	$165,871	$2,212	$14.50	$_____	$_____	$_____

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

DAIRY RELATED ACCRUAL EXPENSES
69 Western Plateau Region Dairy Farms, 1985

Item	Average		My Farm	
	Per Cow	Per Cwt.	Per Cow	Per Cwt.
Purchased dairy grain & concentrates	$472	$3.09	$_____	$_____
Purchased dairy roughage	15	0.10	_____	_____
Total Purchased Dairy Feed	$487	$3.19	$_____	$_____
Purchased grain & conc. as % of milk receipts	24%		____%	
Purchased feed & crop exp.	$651	$4.26	$_____	$_____
Purchased feed & crop exp. as % of milk receipts	33%		____%	
Breeding	$27	$0.17	$_____	$_____
Veterinary & medicine	41	0.27	_____	_____
Milk marketing	105	0.69	_____	_____
Other livestock expense	79	0.52	_____	_____

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.

CAPITAL EFFICIENCY
69 Western Plateau Region Dairy Farms, 1985

Item	Per Worker	Per Cow	Per Tillable Acre	Per Tillable Acre Owned
Farm capital	$148,818	$5,631	$1,547	$2,396
Real estate		2,692		1,145
Machinery & equipment	28,579	1,081	297	
Capital turnover, years	2.50			
My Farm:				
Farm capital	$_____	$_____	$_____	$_____
Real estate	_____	_____	_____	_____
Machinery & equipment	_____	_____	_____	_____
Capital turnover, years	_____			

LABOR FORCE INVENTORY AND ANALYSIS
69 Western Plateau Region Dairy Farms, 1985

Labor Force	Months	Age	Years of of Educ.	Value of Labor & Mgmt.
Operator number 1	12	45	13	$16,043
Operator number 2	2	39	14	13,061
Operator number 3	1	24	14	13,333
Family paid	4			
Family unpaid	3			
Hired	12			
Total	34	÷ 12 = 2.83 Worker Equivalent		
		1.25 Operator/Manager Equiv.		
My Farm: Total	____	÷ 12 = _____ Worker Equivalent		
Operator's	____	÷ 12 = _____ Operator/Manager Equiv.		

Labor Efficiency	Average Total	Average Per Worker	My Farm Total	My Farm Per Worker
Cows, average number	75	26	_____	_____
Milk sold, pounds	1,143,880	403,722	_____	_____
Tillable acres	273	96	_____	_____
Work units	818	289	_____	_____

Labor Costs	Average Total	Average Per Cow	Average Per Til. Acre	My Farm Total	My Farm Per Cow	My Farm Per Til. Acre
Value of operator(s) labor ($800/month)	$12,000	$160	$44	$_____	$_____	$_____
Family unpd. ($550/mo.)	1,650	22	6	_____	_____	_____
Hired	15,113	202	55	_____	_____	_____
Total Labor	$28,763	$384	$105	$_____	$_____	$_____
Machinery Cost	$34,865	$466	$128	$_____	$_____	$_____
Total Labor & Mach.	$63,628	$850	$233	$_____	$_____	$_____

ANNUAL CASH FLOW WORKSHEEET

Item	Regional Average (per cow)	My Farm Total	My Farm Per Cow	Expected Change	1986 Projection
Average number of cows	75	_____	_____		_____
Accrual Oper. Receipts					
Milk	$1,948	$_____	$_____	_____	$_____
Dairy cattle	158	_____	_____	_____	_____
Dairy calves	29	_____	_____	_____	_____
Other livestock	4	_____	_____	_____	_____
Crops	11	_____	_____	_____	_____
Misc. receipts	99	_____	_____	_____	_____
Total	$2,250	$_____	$_____	_____	$_____
Accrual Oper. Expenses					
Hired labor	$ 202	$_____	$_____	_____	$_____
Dairy grain & conc.	472	_____	_____	_____	_____
Dairy roughage	15	_____	_____	_____	_____
Other lvstk. feed	7	_____	_____	_____	_____
Mach. hire/rent/lease	17	_____	_____	_____	_____
Mach. rpr./parts & auto	125	_____	_____	_____	_____
Fuel, oil & grease	81	_____	_____	_____	_____
Replacement lvstk.	14	_____	_____	_____	_____
Breeding	27	_____	_____	_____	_____
Vet & medicine	41	_____	_____	_____	_____
Milk marketing	105	_____	_____	_____	_____
Cattle lease	<1	_____	_____	_____	_____
Other lvstk. exp.	79	_____	_____	_____	_____
Fertilizer & lime	92	_____	_____	_____	_____
Seeds & plants	37	_____	_____	_____	_____
Spray/other crop exp.	34	_____	_____	_____	_____
Land, bldg.,fence repair	24	_____	_____	_____	_____
Taxes	55	_____	_____	_____	_____
Insurance	35	_____	_____	_____	_____
Real est. rent/lease	47	_____	_____	_____	_____
Utilities	59	_____	_____	_____	_____
Miscellaneous	28	_____	_____	_____	_____
Total Less Int. Paid	$1,597	_____	_____	_____	$_____
Net Accrual Operating Income (without interest paid)	(total) $48,727	(total) $_____			$_____
- Change in lvstk./crop inv.	2,648	_____		_____	_____
- Change in accts. rec.	148	_____		_____	_____
+ Change in feed/supply inv.	-379	_____		_____	_____
+ Change in accts. payable	534	_____		_____	_____
NET CASH FLOW	$45,917	$_____			$_____
- Personal withdrawals & family expenditures	16,859	_____		_____	_____
Available for Debt Payments, Investments & Savings	$29,058	$_____			$_____
- Farm Debt Payments	33,484	_____		_____	_____
Available for Investment & Savings	$-4,426	$_____			$_____
- Capital Purchases: cattle, machinery & improvements	16,380	_____		_____	_____
Additional Capital Needed		$_____			$_____

PROGRESS OF THE FARM BUSINESS

Comparing your business with average data from regional DFBS cooperators that participated in both of the last two years is one part of a business checkup. It is equally important for you to determine the progress your business has made over the past two or three years and to set targets or goals for the future.

PROGRESS OF THE FARM BUSINESS
Same 50 Western Plateau Region Dairy Farms, 1984 and 1985

	Average		My Farm		
Selected Factors	1984	1985	1984	1985	Goal
Size of Business					
Average number of cows	75	77			
Average number of heifers	63	65			
Milk sold, lbs.	1,138,498	1,192,796			
Worker equivalent	2.90	2.92			
Total tillable acres	251	262			
Rates of Production					
Milk sold per cow, lbs.	15,083	15,431			
Hay DM per acre, tons	2.6	2.6			
Corn silage per acre, tons	13	14			
Labor Efficiency					
Cows per worker	26	27			
Milk sold per worker, lbs.	391,910	408,959			
Cost Control					
Grain & conc. purchased as % of milk sales	25%	24%			
Dairy feed & crop exp. per cwt. milk	$4.65	$4.27	$	$	$
Labor & mach. costs/cow	$833	$845	$	$	$
Capital Efficiency*					
Farm capital per cow	$5,541	$5,394	$	$	$
Real estate per cow	$2,592	$2,544	$	$	$
Mach. & equip. per cow	$1,026	$1,003	$	$	$
Capital turnover, years	2.4	2.3			
Profitability					
Net farm inc. w/o apprec.	$13,643	$17,496	$	$	$
Net farm inc. w/apprec.	$18,286	$20,195	$	$	$
Labor & mgmt. income	$-1,762	$2,300	$	$	$
Rate of return on eq. capital w/apprec.	-1.4%	-0.3%			
Financial Summary					
Farm net worth	$271,703	$270,921	$	$	$
Debt to asset ratio	0.35	0.35			
Farm debt per cow	$1,904	$1,834	$	$	$

*Average for the year.

Farm Business Chart

The Farm Business Chart is a tool which can be used in analyzing a business by drawing a line through the figure in each column which represents the current level of management performance. The figure at the top of each column is the average of the top 10 percent of the 458 farms for that factor. The other figures in each column are the average for the second 10 percent, third 10 percent, etc. Each column of the chart is independent of the others. The farms which are in the top 10 percent for one factor would not necessarily be the same farms which make up the top 10 percent for any other factor.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS
458 New York Dairy Farms, 1984

Size of Business			Rates of Production			Labor Efficiency	
Worker Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crop DM/Acre	Tons Corn Silage Per Acre	Cows Per Worker	Pounds Milk Sold Per Worker
6.8	255	4,211,900	18,800	4.7	20	45	697,300
4.3	138	2,118,100	17,300	3.7	18	36	560,900
3.6	100	1,551,500	16,500	3.3	16	33	503,900
3.1	83	1,287,200	15,900	2.9	15	30	456,100
2.8	72	1,090,400	15,300	2.7	14	28	423,300
2.5	63	950,300	14,800	2.5	13	26	392,200
2.2	56	818,600	14,200	2.3	12	25	361,400
2.0	49	691,500	13,400	2.0	12	23	328,000
1.7	43	577,800	12,200	1.7	10	20	275,500
1.4	33	395,200	10,000	1.3	8	16	191,300

Feed Bought Per Cow	% Feed is of Milk Receipts	Machinery Costs Per Cow	Labor & Machinery Costs Per Cow	Feed & Crop Expenses Per Cwt. Milk
$214	11%	$205	$ 511	$2.75
306	16	286	610	3.47
369	19	337	662	3.87
432	22	379	713	4.21
474	25	408	771	4.45
523	27	445	818	4.68
574	28	481	873	4.97
624	31	519	928	5.31
685	33	580	1,004	5.72
809	40	765	1,201	6.73

The cost control factors are ranked from low to high, but the lowest cost is not necessarily the most profitable. In some cases, the "best" management position is somewhere near the middle or average. Many things affect the level of costs, and must be taken into account when analyzing the factors.

Financial Analysis Chart

The farm financial analysis chart is designed just like the Farm Business Chart and may be used to measure the financial health of the farm business. Most of the financial measures used in the chart are presented on pages 7, 10, 12, and 17 of this publication.

FINANCIAL ANALYSIS CHART
458 New York Dairy Farms, 1984

Liquidity (Repayment)				
Debt Payments Per Cow	Available for Debt Service Per Cow	Cash Flow Coverage Ratio	Debt Payments as Percent of Milk Sales	Debt Per Cow
$ 36	$909	7.67	2	$ 104
176	640	2.16	9	638
277	537	1.41	14	1,142
362	469	1.10	19	1,625
438	411	.91	22	1,930
500	357	.75	26	2,377
571	279	.58	30	2,688
656	216	.46	35	3,161
752	126	.28	40	3,770
971	-95	-.56	52	5,072

Solvency				Efficiency & Profitability		
		Debt/Asset Ratio		Capital	Rate of Return on	
Leverage Ratio[1]	Percent Equity	Long Term	Intermediate & Current	Turnover (years)	Equity	Investment[2]
.02	99	.00	.00	1.60	18%	13%
.12	90	.02	.04	1.90	8	9
.24	81	.14	.11	2.06	5	7
.37	73	.30	.16	2.20	3	6
.51	67	.41	.23	2.34	1	4
.70	60	.51	.29	2.51	-1	3
.94	53	.62	.37	2.66	-3	1
1.22	46	.73	.45	2.95	-6	0
1.72	38	.85	.55	3.25	-11	-3
5.04	20	1.27	.80	4.54	-37	-8

[1]Dollars of debt per dollar of equity, computed by dividing total liabilities by total equity.

[2]Return on all farm capital (no deduction for interest paid) divided by total farm assets.

FARM BUSINESS SUMMARY BY HERD SIZE
458 New York Dairy Farms, 1984

Item — Farms with:	Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Capital Investment (end of year)				
Livestock	$ 39,803	$ 58,991	$ 81,180	$100,136
Feed & supplies	11,239	17,653	26,056	34,432
Machinery & equipment	40,402	53,984	76,669	97,951
Land & buildings	120,967	142,160	193,710	225,287
TOTAL INVESTMENT	$212,411	$272,788	$377,615	$457,806
Receipts				
Milk sales	$ 58,562	$ 89,405	$123,086	$155,027
Dairy cattle sold	4,531	5,287	8,630	10,295
Other livestock sales	1,004	1,626	2,110	1,890
Crop sales	425	738	1,411	2,271
Miscellaneous receipts	3,791	3,991	5,448	5,640
Total Cash Receipts	$ 68,313	$101,047	$140,685	$175,123
Increase in livestock	-589	687	889	3,018
Increase in feed & supplies	501	10	2,085	435
Appreciation	1,609	3,371	6,243	5,188
TOTAL FARM RECEIPTS	$ 69,834	$105,115	$149,902	$183,764
TOTAL FARM REC. EXCL. APPREC.	$ 68,225	$101,744	$143,659	$178,576
Expenses				
Hired labor	$ 2,503	$ 5,326	$ 8,539	$ 13,584
Dairy grain & concentrate	16,993	23,274	30,095	36,692
Other feed	1,632	1,422	2,227	1,486
Machine hire	764	949	1,494	1,501
Machinery repair	3,072	4,013	5,929	7,527
Auto expense (farm share)	446	415	502	485
Gas & oil	2,072	3,157	4,494	6,131
Replacement animals	549	766	1,692	1,116
Breeding fees	875	1,238	2,062	2,548
Veterinary & medicine	1,072	1,617	2,641	3,098
Milk marketing	4,893	7,345	9,676	12,223
Cattle lease	0	55	87	125
Other livestock expense	2,362	3,650	5,511	6,278
Fertilizer & lime	2,355	3,446	6,291	8,000
Seeds & plants	697	1,081	1,933	2,602
Spray & other crop expense	693	813	1,438	1,988
Land, bldg., fence repair	936	1,190	1,971	2,339
Taxes & insurance	3,292	4,120	5,922	7,203
Elec. & phone (farm share)	2,018	2,879	3,875	4,700
Interest paid	5,789	9,300	12,660	14,845
Misc. expenses (incl. rent)	1,441	3,088	4,125	5,609
Total Cash Expenses	$ 54,454	$ 79,144	$113,164	$140,080
Expansion livestock	60	238	702	1,062
Machinery depreciation	6,475	7,623	11,531	15,287
Building depreciation	2,001	3,166	5,605	5,742
Unpaid family labor	1,844	1,750	1,821	1,805
Interest on equity @ 5%	7,433	9,162	12,678	15,771
TOTAL FARM EXPENSES	$ 72,267	$101,083	$145,501	$179,747
Financial Summary				
NET CASH FARM INCOME	$13,859	$21,903	$27,521	$35,043
Labor & Management Income	$-4,042	$661	$-1,842	$-1,171
Number of Operators	1.07	1.18	1.32	1.34
LABOR & MGT. INCOME/OPER.	$-3,778	$560	$-1,395	$-874
LABOR, MGT. & OWNSHP. INC./OPER.	$4,673	$11,181	$12,939	$14,767

FARM BUSINESS SUMMARY BY HERD SIZE
458 New York Dairy Farms, 1984

Item — Farms with:	85 to 99 Cows	100 to 149 Cows	150 to 199 Cows	200 to 249 Cows	250 or More Cows
Capital Investment (end of year)					
Livestock	$124,747	$166,776	$223,343	$ 317,993	$ 470,722
Feed & supplies	41,199	60,934	81,393	113,736	189,321
Machinery & equipment	111,838	134,403	183,205	190,946	259,528
Land & buildings	242,050	348,070	415,970	581,058	879,980
TOTAL INVESTMENT	$519,834	$710,183	$903,911	$1,203,733	$1,799,551
Receipts					
Milk sales	$189,618	$256,245	$343,599	$505,975	$ 838,467
Dairy cattle sold	12,783	16,560	24,102	37,420	48,329
Other livestock sales	2,448	3,855	5,448	8,275	9,101
Crop sales	1,066	2,528	5,851	4,013	14,125
Miscellaneous receipts	4,509	9,564	18,177	19,824	11,764
Total Cash Receipts	$210,424	$288,752	$397,177	$575,507	$ 921,786
Increase in livestock	5,264	2,971	7,534	4,471	51,943
Increase in feed & supplies	281	7,022	6,856	4,218	14,687
Appreciation	2,746	10,566	11,658	24,903	12,861
TOTAL FARM RECEIPTS	$218,715	$309,311	$423,225	$609,099	$1,001,277
TOTAL FARM REC. EXCL. APPR.	$215,969	$298,745	$411,567	$584,196	$988,416
Expenses					
Hired labor	$ 16,688	$ 27,852	$ 46,503	$ 77,411	$117,236
Dairy grain & concentrate	49,523	61,297	78,388	115,416	201,481
Other feed	1,616	3,305	3,705	4,065	10,626
Machine hire	1,049	1,539	2,704	3,679	4,676
Machinery repair	10,347	14,395	20,231	27,963	38,467
Auto expense (farm share)	608	307	534	696	329
Gas & oil	7,220	10,651	13,739	19,720	24,792
Replacement animals	1,045	1,673	4,834	1,189	1,354
Breeding fees	2,715	3,811	5,028	8,061	12,013
Veterinary & medicine	3,776	5,339	6,729	12,980	20,847
Milk marketing	15,285	19,404	26,629	39,971	52,277
Cattle lease	150	104	0	0	732
Other livestock expense	8,091	9,643	15,299	17,745	32,245
Fertilizer & lime	9,363	13,360	21,445	26,273	32,100
Seeds & plants	3,122	4,101	7,169	9,889	12,436
Spray & other crop expense	2,126	4,726	7,328	6,131	15,530
Land, bldg., fence repair	2,697	3,860	3,746	6,384	9,185
Taxes & insurance	7,346	10,300	13,188	16,264	18,689
Elec. & phone (farm share)	5,464	6,851	8,877	11,927	15,604
Interest paid	19,120	27,319	39,003	50,300	87,833
Misc. expenses (incl. rent)	5,312	8,375	10,210	20,000	23,600
Total Cash Expenses	$172,663	$238,212	$335,289	$476,064	$732,052
Expansion livestock	1,040	729	3,596	7,173	20,888
Machinery depreciation	16,720	21,513	29,514	32,577	48,605
Building depreciation	7,497	10,826	11,453	22,077	31,860
Unpaid family labor	1,698	1,348	760	938	1,433
Interest on equity @ 5%	16,884	22,692	29,569	38,653	59,533
TOTAL FARM EXPENSES	$216,502	$295,320	$410,181	$577,482	$894,371
Financial Summary					
NET CASH FARM INCOME	$37,761	$50,540	$61,888	$99,443	$189,734
Labor & Management Income	$-533	$3,425	$1,386	$6,714	$94,045
Number of Operators	1.37	1.41	1.52	1.44	1.80
LABOR & MGT. INCOME/OPER.	$-389	$2,429	$912	$4,663	$52,247
LABOR,MGT. & OWNSHP. INC./OP.	$13,939	$26,016	$28,035	$48,799	$92,466

SELECTED BUSINESS FACTORS BY HERD SIZE
458 New York Dairy Farms, 1984

Item — Farms with:	Less Than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	45	100	94	64
Size of Business				
Number of cows	33	47	61	77
Number of heifers	27	38	52	67
Pounds of milk sold	443,000	664,700	919,900	1,159,400
Worker equivalent	1.75	2.08	2.50	2.92
Total work units	366	526	694	870
Total tillable acres	112	164	213	271
(Tillable acres rented)*	(26)	(50)	(71)	(80)
Rates of Production				
Milk sold per cow	13,424	14,143	15,080	15,057
Tons hay crop dry matter per acre	2.2	2.3	2.4	2.7
Tons corn silage per acre	12.9	13.0	12.8	12.9
Bushels of oats per acre	39.8	51.7	56.8	49.5
Labor Efficiency				
Cows per worker	19	23	24	26
Pounds milk sold per worker	253,143	319,567	367,960	397,055
Work units per worker	209	253	278	298
Feed Costs				
Feed purchased per cow	$515	$495	$493	$477
Crop expense per cow	$113	$114	$158	$164
Feed cost per cwt. milk	$3.84	$3.50	$3.27	$3.16
Feed & crop exp. per cwt. milk	$5.05	$4.52	$4.56	$4.38
% feed is of milk receipts	29%	26%	24%	24%
Tons forage dry matter per cow	7.6	7.7	7.8	8.0
Tillable acres per cow	3.4	3.5	3.5	3.5
Fertilizer & lime per crop acre	$21	$21	$30	$30
Machinery & Labor Costs				
Total machinery costs	$14,820	$18,829	$27,749	$35,813
Machinery cost per cow	$449	$401	$455	$465
Machinery cost per cwt. milk	$3.35	$2.83	$3.02	$3.09
Labor cost per cow	$425	$376	$364	$358
Labor cost per cwt. milk	$3.17	$2.66	$2.42	$2.38
Capital Efficiency				
Investment per worker	$121,378	$131,148	$151,046	$156,783
Investment per cow	$6,247	$5,683	$6,190	$5,795
Investment per cwt. milk	$48	$41	$41	$39
Land & buildings per cow	$3,558	$2,962	$3,176	$2,852
Machinery investment per cow	$1,188	$1,125	$1,257	$1,240
Capital turnover	3.0	2.6	2.5	2.5
Other				
Price per cwt. milk sold	$13.22	$13.45	$13.38	$13.37
Acres hay crops*	77	104	125	140
Acres corn silage*	17	28	41	53

*Average of all farms.

SELECTED BUSINESS FACTORS BY HERD SIZE
458 New York Dairy Farms, 1984

Item — Farms with:	85 to 99 Cows	100 to 149 Cows	150 to 199 Cows	200 to 249 Cows	250 or More Cows
Number of farms	43	56	25	16	15
Size of Business					
Number of cows	91	124	170	229	359
Number of heifers	83	111	134	200	285
Pounds of milk sold	1,399,400	1,878,500	2,553,000	3,692,600	6,247,600
Worker equivalent	3.08	3.92	4.67	6.17	8.58
Total work units	1,030	1,398	1,907	2,541	3,801
Total tillable acres	290	383	549	622	790
(Tillable acres rented)*	(101)	(136)	(220)	(222)	(260)
Rates of Production					
Milk sold per cow	15,378	15,149	15,018	16,125	17,403
Tons hay crop dry matter/acre	2.7	2.9	3.0	3.3	4.0
Tons corn silage per acre	13.4	13.8	14.4	15.4	16.3
Bushels of oats per acre	53.0	45.8	50.1	57.1	80.0
Labor Efficiency					
Cows per worker	30	32	36	37	42
Pounds milk sold/worker	454,351	479,209	546,681	598,476	728,159
Work units per worker	334	357	408	412	443
Feed Costs					
Feed purchased per cow	$544	$494	$461	$504	$561
Crop expense per cow	$161	$179	$211	$185	$167
Feed cost per cwt. milk	$3.54	$3.26	$3.07	$3.13	$3.22
Feed & crop exp./cwt. milk	$4.70	$4.62	$4.62	$4.38	$4.36
% feed is of milk receipts	26%	24%	23%	23%	24%
Tons forage dry matter/cow	8.1	8.0	8.7	8.5	8.0
Tillable acres per cow	3.2	3.1	3.2	2.7	2.2
Fertilizer & lime/crop acre	$32	$35	$39	$42	$41
Machinery & Labor Costs					
Total machinery costs	$41,499	$54,991	$75,651	$94,090	$129,309
Machinery cost per cow	$456	$443	$445	$411	$360
Machinery cost per cwt. milk	$2.97	$2.93	$2.96	$2.55	$2.07
Labor cost per cow	$337	$338	$360	$399	$375
Labor cost per cwt. milk	$2.19	$2.23	$2.39	$2.47	$2.15
Capital Efficiency					
Investment per worker	$168,777	$181,169	$193,557	$195,094	$209,738
Investment per cow	$5,590	$5,636	$5,165	$5,144	$4,699
Investment per cwt. milk	$37	$38	$35	$33	$29
Land & buildings per cow	$2,603	$2,762	$2,377	$2,483	$2,298
Machinery investment per cow	$1,203	$1,067	$1,047	$816	$678
Capital turnover	2.4	2.3	2.1	2.0	1.8
Other					
Price per cwt. milk sold	$13.55	$13.64	$13.46	$13.70	$13.42
Acres hay crops*	154	176	258	237	245
Acres corn silage*	71	102	144	235	326

*Average of all farms.

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
458 New York Dairy Farms, January 1, 1985

Item — Farms with:	Less Than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows	85 to 99 Cows
Number of farms	45	100	94	64	43
Assets					
Livestock (includes	$ 39,803	$ 59,013	$ 81,180	$100,161	$124,747
discounted lease payments)	(0)	(22)	(0)	(25)	(0)
Feed & supplies	11,239	17,653	26,056	34,432	41,199
Machinery & equip (includes	40,617	55,212	77,650	98,722	112,637
discounted lease payments)	(215)	(1,228)	(981)	(771)	(799)
Land & buildings (includes	121,757	144,453	194,790	227,936	246,366
discounted lease payments)	(608)	(2,293)	(1,080)	(2,649)	(4,316)
Co-op investment	950	2,842	3,971	4,747	7,902
Accounts receivable	5,903	8,170	11,281	14,229	17,314
Cash & checking accounts	1,084	1,664	2,028	3,492	2,463
Total Farm Assets	$221,171	$289,007	$396,956	$483,719	$552,628
Savings accounts	2,892	3,025	2,751	4,773	3,694
Cash value life insurance	2,071	2,119	3,115	2,670	1,908
Stocks & bonds	990	2,082	2,195	3,755	2,155
Nonfarm real estate	3,853	2,905	8,897	5,656	3,616
Auto (personal share)	1,464	1,903	2,005	1,806	1,979
All other	7,871	9,212	6,298	6,887	5,231
Total Nonfarm Assets	$ 19,141	$ 21,246	$ 25,261	$ 25,547	$ 18,583
TOTAL ASSETS	$240,312	$310,253	$422,217	$509,266	$571,211
Liabilities					
Long-term	$ 48,126	$ 61,437	$ 80,274	$ 97,144	$130,575
Intermediate	20,644	35,075	54,202	59,859	68,539
Financial lease	823	3,543	2,061	3,445	5,115
Short-term	500	2,191	2,547	2,059	5,511
Other farm accounts	2,414	3,526	4,311	5,789	5,209
Total Farm Liabilities	$ 72,507	$105,772	$143,395	$168,296	$214,949
Total Nonfarm Liabilities	190	830	856	1,816	570
TOTAL LIABILITIES	$ 72,697	$106,602	$144,251	$170,112	$215,519
Farm Net Worth (Eq. Cap.)	$148,664	$183,235	$253,561	$315,423	$337,679
FAMILY NET WORTH	$167,615	$203,651	$277,966	$339,154	$355,692
Financial Measures					
Percent equity	70%	66%	66%	67%	62%
Farm debt per cow	$2,133	$2,204	$2,351	$2,130	$2,311
Available for debt service					
& living	$22,264	$33,907	$43,287	$50,678	$57,557
Scheduled annual debt pymt.	$13,695	$21,704	$29,930	$35,772	$45,664
Scheduled debt pymts./cow	$398	$447	$486	$450	$487
Payment as % of milk check	23%	24%	24%	23%	24%
Debt/Asset ratio - long-term	0.40	0.43	0.41	0.43	0.53
Debt/Asset ratio - intermediate					
& short-term	0.22	0.28	0.29	0.26	0.26
Cash flow coverage ratio	0.57	0.78	0.78	0.81	0.75

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
458 New York Dairy Farms, January 1, 1985

Item — Farms with:	100 to 149 Cows	150 to 199 Cows	200 to 249 Cows	250 or More Cows
Number of farms	56	25	16	15
Assets				
Livestock (includes	$166,776	$ 223,343	$ 317,993	$ 470,722
discounted lease payments)	(0)	(0)	(0)	(0)
Feed & supplies	60,934	81,393	113,736	189,321
Machinery & equip (includes	135,106	184,455	196,961	260,222
discounted lease payments)	(703)	(1,250)	(6,015)	(694)
Land & buildings (includes	348,754	415,970	581,058	879,980
discounted lease payments)	(684)	(0)	(0)	(0)
Co-op investment	14,180	28,568	32,536	41,442
Accounts receivable	23,033	31,420	50,181	76,619
Cash & checking accounts	5,401	4,236	9,117	6,807
Total Farm Assets	$754,184	$ 969,385	$1,301,582	$1,925,113
Savings accounts	3,921	8,721	3,796	9,126
Cash value life insurance	3,560	6,789	3,796	9,126
Stocks & bonds	5,664	8,108	2,455	4,079
Nonfarm real estate	7,632	13,880	0	6,867
Auto (personal share)	1,817	3,173	1,063	667
All other	8,148	7,340	7,019	4,411
Total Nonfarm Assets	$ 30,742	$ 48,000	$ 16,029	$ 27,500
TOTAL ASSETS	$784,926	$1,017,385	$1,317,611	$1,9523,613
Liabilities				
Long-term	$164,375	$218,110	$272,541	$399,185
Intermediate	116,134	135,883	228,449	298,210
Financial lease	1,387	1,250	6,015	694
Short-term	7,550	10,275	5,801	13,752
Other farm accounts	10,893	12,494	15,708	22,605
Total Farm Liabilities	$300,339	$378,012	$528,514	$734,446
Total Nonfarm Liabilities	742	1,578	250	400
TOTAL LIABILITIES	$301,081	$379,590	$528,764	$734,846
Farm Net Worth (Eq. Cap.)	$453,845	$591,373	$773,068	$1,190,667
FAMILY NET WORTH	$483,845	$637,795	$788,847	$1,217,767
Financial Measures				
Percent equity	62%	63%	60%	62%
Farm debt per cow	$2,384	$2,160	$2,259	$1,918
Available for debt service				
& living	$79,761	$103,180	$150,134	$277,674
Scheduled annual debt pymt.	$67,136	$92,504	$118,968	$186,887
Scheduled debt pymts./cow	$531	$526	$508	$488
Payment as % of milk check	26%	27%	34%	22%
Debt/Asset ratio - long-term	0.47	0.52	0.47	0.45
Debt/Asset ratio - intermediate				
& short-term	0.31	0.27	0.33	0.30
Cash flow coverage ratio	0.78	0.76	0.94	1.18

MEASURE YOUR PERFORMANCE

After you have entered your farm business data on the pages of this workbook, categorize your farm business performance into three groups. List the strong points, those which indicate average performance, and those areas which need improvement. Your business factors that exceed the regional average should be listed as strong points, factors that are close to the regional average should be identified as average, and factors that are below average should be listed under need improvement.

The Farm Business Chart on page 20 and the Financial Analysis Chart on page 21 can be used to identify strengths and weaknesses by comparing your business with a large number of New York dairy farms summarized for the previous year. It is recommended that you use more than one standard for comparison when analyzing the farm business.

STRONG POINTS:

_____

_____

_____

_____

AVERAGE:

_____

_____

_____

_____

NEED IMPROVEMENT:

_____

_____

_____

After identifying opportunities for improvement, consider alternative ways of solving each problem. List each alternative and analyze the consequences in detail. Cooperative Extension conducts many schools, meetings, and provides many printed materials that should be of assistance. Local agribusinesses often provide helpful information and assistance. Seek out information related to the problem under consideration.

Another way to measure your management performance is to compare your current business factors with those from previous years. Page 19 is provided for this purpose. Answering the following questions may also help evaluate your farm business progress.

1. Do livestock number, labor force, and crop acres make up a well balanced unit of resources?

2. Have rates of production shown a steady increase?

3. When will milk output per worker reach 700,000 pounds?

4. Have some costs of production declined over the last two years?

5. Is net farm income improving fast enough to meet your needs?

6. Is growth in net worth keeping up with increased capital investment?

7. Have you reached the business goals set for 1985 and have you set new goals for 1986?