



## 1985 NEW YORK DAIRY-CASH CROP BUSINESS SUMMARY

### INTRODUCTION

Dairy farm business summary projects are an integral part of Cooperative Extension's agriculture program in New York State. The Department of Agricultural Economics of the New York State College of Agriculture and Life Sciences at Cornell University, and County Extension staff, cooperate in sponsoring these projects. In 1985, more than 490 dairy farmers participated. Business records submitted by dairy farmers from 47 counties in the State provide the basis for continued Extension educational programs, data for applied research studies, and for use in the classroom. Regardless of the use of the data, confidentiality of individual farm data is maintained.

Cooperative Extension agents and specialists enrolled the cooperators and collected the records. Regional summary reports were prepared by the college staff. Each cooperator received a summary and analysis of his or her business, and a regional report for making comparisons. These Extension activities enable farmers to develop managerial skills and solve business management problems.

The 1985 Dairy Farm Business Summary 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.

This special Dairy-Cash Crop Summary is an average of 21 dairy farm businesses that have crop sales totaling more than 10 percent of their milk sales. The farm income, financial summary, and business analysis sections of this report include comparisons with average data of 404 owned dairy farms in the State. A more detailed analysis of the 404 dairy farms is contained in Smith, Stuart F., Wayne A. Knoblauch, Linda D. Putnam, Dairy Farm Management Business Summary, New York, 1985, A.E. Res. 86-25, October 1986. This report is prepared in workbook form for farmers to use in the systematic study of their farm business operations.

Business records for 21 farms in Albany, Cayuga, Chautauqua, Columbia, Genesee, Lewis, Niagara, Oneida, Ontario, Orleans, Seneca, Wayne, and Yates Counties are summarized in this publication. Two of the 21 farms participated in the milk diversion program. These farms do NOT represent the "average" for all dairy-cash crop farms in the State. Participation was on a voluntary basis, therefore, not all areas or types of operations were represented.

#### Acknowledgement

The preparation of this report and the processing and organization of the data it contains has been successfully completed by our dedicated support staff, Beverly Carcelli and Cindy Farrell.

## 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, the number of farms reporting these characteristics, and the average level of resources used in production.

## BUSINESS CHARACTERISTICS AND RESOURCES USED

21 New York Dairy-Cash Crop Farms in Comparison to 404 Dairy Farms, 1985

<u>Type of Business</u>	<u>Number of Farms</u>		<u>Type of Barn</u>	<u>Number of Farms</u>	
	<u>21 Dairy-Cash Crop</u>	<u>404 Dairy</u>		<u>21 Dairy-Cash Crop</u>	<u>404 Dairy</u>
Single proprietorship	10	289	Stanchion	12	247
Partnership	9	102	Freestall	7	139
Corporation	2	13	Other	2	18

  

<u>Milking System</u>	<u>Number of Farms</u>		<u>Business Record System</u>	<u>Number of Farms</u>	
	<u>21 Dairy-Cash Crop</u>	<u>404 Dairy</u>		<u>21 Dairy-Cash Crop</u>	<u>404 Dairy</u>
Bucket & carry		4	Account Book	8	182
Dumping station	3	42	Agrifax (mail-in only)	4	88
Pipeline	11	217	CAMIS	4	42
Herringbone parlor	7	122	On-Farm Computer	3	17
Other parlor		19	Other	2	75

  

<u>Dairy Records Service</u>	<u>Number of Farms</u>	
	<u>21 Dairy-Cash Crop</u>	<u>404 Dairy</u>
DHIC	16	289
Owner-Sampler	1	51
Other	3	17
None	1	47

  

<u>Labor Force</u>	<u>Average</u>		<u>Land Use</u>	<u>Average</u>	
	<u>21 Dairy-Cash Crop</u>	<u>404 Dairy</u>		<u>21 Dairy-Cash Crop</u>	<u>404 Dairy</u>
Operator 1.	12	12	Total acres owned	343	341
Operator 2.	5	4	Total tillable acres	449	280
Operator 3.	2	1	<u>Number of Cows</u>		
Operator 4.	1	0	Beg. year (owned)	87	87
Family paid	7	5	End year (owned & leased)	88	92
Family unpaid	1	3	Average for year (owned & leased)	88	89
Hired	14	13			
Total	42	38			

  

<u>Worker Equivalent</u>	<u>Average</u>	
	<u>21 Dairy-Cash Crop</u>	<u>404 Dairy</u>
(total + 12)	3.50	3.17
Operator/Manager Equivalent		
(Oper. mo. + 12)	1.67	1.42

Income Statement

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

CASH AND ACCRUAL FARM EXPENSES  
21 New York Dairy-Cash Crop Farms, 1985

<u>Expense Item</u>	Cash Paid +	Change in Inventory +	Change in Accounts Payable +	Accrual Expenses -
<u>Hired Labor</u>	\$ 25,034		\$ -31	\$ 25,003
<u>Feed</u>				
Dairy grain & conc.	21,830	\$ -385	378	21,823
Dairy roughage	2,630	552	-24	3,158
Other livestock	2,251	86	0	2,337
<u>Machinery</u>				
Mach. hire, rent/lease	3,231		29	3,260
Machinery repairs/parts	11,595	-95	20	11,520
Auto expense (farm share)	330		0	330
Fuel, oil & grease	9,366	24	-48	9,342
<u>Livestock</u>				
Replacement livestock	2,371		0	2,371
Breeding	2,575	45	28	2,648
Vet & medicine	3,935	-24	38	3,949
Milk marketing	9,243		0	9,243
Cattle lease/rent	0		0	0
Other livestock expense	6,482	-56	13	6,439
<u>Crops</u>				
Fertilizer & lime	15,615	621	181	16,417
Seeds & plants	6,003	214	555	6,772
Spray, other crop exp.	6,250	21	176	6,447
<u>Real Estate</u>				
Land/bldg./fence repair	1,859		6	1,865
Taxes	5,284		171	5,455
Insurance	3,976		43	4,019
Rent & lease	9,034		166	9,200
<u>Other</u>				
Telephone (farm share)	933		0	933
Electricity (farm share)	4,433		25	4,458
Interest paid	20,938		213	21,151
Miscellaneous	<u>3,168</u>	<u>62</u>	<u>-82</u>	<u>3,148</u>
Total Operating	\$178,366	\$1,065	\$1,857	\$181,288
Expansion livestock	\$ 298		\$ 0	\$ 298
Machinery depreciation				24,627
Building depreciation				<u>8,436</u>
<b>TOTAL ACCRUAL EXPENSES</b>				<b>\$214,649</b>

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
<u>Hired Labor</u>	\$ _____	\$ _____	\$ _____	\$ _____
<u>Feed</u>				
Dairy grain & conc.	_____	_____	_____	_____
Dairy roughage	_____	_____	_____	_____
Other livestock	_____	_____	_____	_____
<u>Machinery</u>				
Mach. hire, rent/lease	_____	_____	_____	_____
Machinery repairs/parts	_____	_____	_____	_____
Auto expense (farm share)	_____	_____	_____	_____
Fuel, oil & grease	_____	_____	_____	_____
<u>Livestock</u>				
Replacement livestock	_____	_____	_____	_____
Breeding	_____	_____	_____	_____
Vet & medicine	_____	_____	_____	_____
Milk marketing	_____	_____	_____	_____
Cattle lease/rent	_____	_____	_____	_____
Other livestock expense	_____	_____	_____	_____
<u>Crops</u>				
Fertilizer & lime	_____	_____	_____	_____
Seeds & plants	_____	_____	_____	_____
Spray, other crop exp.	_____	_____	_____	_____
<u>Real Estate</u>				
Land/bldg./fence repair	_____	_____	_____	_____
Taxes	_____	_____	_____	_____
Insurance	_____	_____	_____	_____
Rent & lease	_____	_____	_____	_____
<u>Other</u>				
Telephone (farm share)	_____	_____	_____	_____
Electricity (farm share)	_____	_____	_____	_____
Interest paid	_____	_____	_____	_____
Miscellaneous	_____	_____	_____	_____
Total Operating	\$ _____	\$ _____	\$ _____	\$ _____
Expansion livestock	_____	_____	_____	_____
Machinery depreciation	_____	_____	_____	_____
Building depreciation	_____	_____	_____	_____
<b>TOTAL ACCRUAL EXPENSES</b>	<b>\$ _____</b>	<b>\$ _____</b>	<b>\$ _____</b>	<b>\$ _____</b>

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. 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  
21 New York Dairy-Cash Crop Farms, 1985

Receipt Item	Cash Receipts	+ Change in Inventory	+ Change in Accounts Receivable	+ Accrual Receipts
Milk sales	\$170,604		\$-435	\$170,169
Dairy cattle	10,826	\$1,450	-28	12,248
Dairy calves	3,346		-10	3,336
Other livestock	4,557	-405	0	4,152
Crops	37,597	138	623	38,358
Government receipts	7,450		0	7,450
Custom machine work	372		0	372
Gas tax refund	550		-23	527
Other	<u>5,529</u>		<u>-244</u>	<u>5,285</u>
<b>Total Accrual Receipts</b>	<b>\$240,831</b>	<b>\$1,183</b>	<b>\$-117</b>	<b>\$241,897</b>

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	\$ _____	\$xxxxxxxx	\$ _____	\$ _____
Dairy cattle	_____	_____	_____	_____
Dairy calves	_____	_____	_____	_____
Other livestock	_____	_____	_____	_____
Crops	_____	_____	_____	_____
Government receipts	_____	xxxxxxxx	_____	_____
Custom machine work	_____	xxxxxxxx	_____	_____
Gas tax refund	_____	xxxxxxxx	_____	_____
Other	_____	xxxxxxxx	_____	_____
<b>Total Accrual Receipts</b>	<b>\$ _____</b>	<b>\$ _____</b>	<b>\$ _____</b>	<b>\$ _____</b>

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. Appreciation is included in crop inventory change, but excluded from livestock categories. The changes in inventories caused by 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/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.

Net farm income is the total combined return to the farm operator(s) 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.

Net farm income is computed with and without appreciation. Appreciation represents the change in 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

21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Item	21 Dairy-Cash Crop Farms	404 Dairy Farms	My Farm
Total accrual receipts	\$241,897	\$207,582	\$ _____
Appreciation: Livestock	-6,733	-9,409	_____
Machinery	7,756	2,956	_____
Real Estate	5,274	4,431	_____
Total Including Appreciation	\$248,914	\$205,560	\$ _____
- Total accrual expenses	214,649	185,612	_____
Net Farm Income (with appreciation)	\$ 33,545	\$ 19,948	\$ _____
Net Farm Income (without appreciation)	\$ 27,248	\$ 21,970	\$ _____

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.

#### RETURN TO OPERATOR(S') LABOR, MANAGEMENT, AND EQUITY

21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Item	21 Dairy-Cash Crop Farms	404 Dairy Farms	My Farm
Net farm income (with appreciation)	\$33,545	\$19,948	\$ _____
- Family labor unpaid @ \$550 per month	550	1,650	_____
Return to operator(s') labor, management, & equity (with appreciation)	\$32,995	\$18,298	\$ _____
- Appreciation	6,297	-2,022	_____
Return to operator(s') labor, management, & equity (without appreciation)	\$26,698	\$20,320	\$ _____

Labor and management income is the share of net farm income without appreciation 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 a low inflation economy.

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

LABOR AND MANAGEMENT INCOME  
21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Item	21 Dairy-Cash Crop Farms	404 Dairy Farms	My Farm
Return to operator(s') labor, management, & equity without appreciation	\$26,698	\$20,320	\$ _____
- Real interest @ 5% on equity capital	<u>22,202</u>	<u>16,283</u>	- _____
Labor & Management Income	\$ 4,496	\$ 4,037	\$ _____
Labor & Management Income per Operator	\$ 2,698	\$ 2,850	\$ _____

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  
21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Item	21 Dairy-Cash Crop Farms	404 Dairy Farms	My Farm
Return to operator(s') labor, management, & equity capital with appreciation	\$32,995	\$18,298	\$ _____
- Value of operator(s') labor & management	<u>26,370</u>	<u>22,613</u>	_____
Return on equity capital with appreciation	\$ 6,625	\$-4,315	\$ _____
Rate of return on equity capital with appreciation	1.5%	-1.3%	_____ %
Return on equity capital without apprec.	\$328	\$-2,293	\$ _____
Rate of return without appreciation	0.1%	-0.7%	_____ %

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  
21 New York Dairy-Cash Crop Farms, 1985

Farm Assets	Jan. 1	Dec. 31	Farm Liabilities & Net Worth	Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	\$ 4,807	\$ 4,388	Accounts payable	\$ 6,633	\$ 8,490
Accounts rec.	17,701	17,709	Operating debt	7,143	3,843
Feed & supplies	<u>68,180</u>	<u>67,252</u>	Short-term	<u>1,043</u>	<u>5,117</u>
Total	\$90,688	\$89,349	Total	\$14,819	\$17,450
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows:				\$106,024	\$ 95,977
owned	\$ 73,548	\$ 70,492			
leased	0	0			
Heifers	34,925	32,813			
Bulls/other lvstk.	3,969	3,449			
Mach./eq. owned	149,338	144,062	Financial lease		
Mach./eq. leased	863	1,691	(cattle/mach.)	<u>863</u>	<u>1,691</u>
Coop stock & cert.	<u>16,709</u>	<u>16,638</u>	Total	\$106,887	\$ 97,668
Total	\$279,352	\$269,145			
<u>Long-Term</u>			<u>Long-Term</u>		
Land/buildings:				\$113,715	\$110,958
owned	\$318,124	\$311,618			
leased	<u>762</u>	<u>786</u>	Financial lease		
Total	\$318,886	\$312,404	(structures)	<u>762</u>	<u>786</u>
			Total	\$114,477	\$111,744
Total Farm Assets	\$688,927	\$670,898	Total Farm Liab.	\$236,183	\$226,862
			FARM NET WORTH	\$452,744	\$444,036

(Average for 11 farms reporting)

Nonfarm Assets*	Jan. 1	Dec. 31	Nonfarm Liabilities* & Net Worth	Jan. 1	Dec. 31
Personal cash, chkg. & savings	\$ 6,832	\$ 5,779	Nonfarm Liab.	\$5,786	\$5,064
Cash value life ins.	13,795	16,287	<u>NONFARM NET WORTH</u>	<u>\$45,033</u>	<u>\$49,202</u>
Nonfarm real estate	11,818	11,818	<u>FARM &amp; NONFARM*</u>	<u>Jan. 1</u>	<u>Dec. 31</u>
Auto (personal sh.)	4,364	4,255	Total Assets	\$739,746	\$725,164
Stocks & bonds	4,824	6,912	Total Liabilities	<u>241,969</u>	<u>231,926</u>
Household furn.	8,355	9,082			
All other	<u>831</u>	<u>133</u>			
Total Nonfarm	\$50,819	\$54,266	TOTAL FARM & NON-		
			FARM NET WORTH	\$497,777	\$493,238

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

## 1985 FARM BUSINESS &amp; NONFARM BALANCE SHEET

Farm Assets			Farm Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
<u>Current</u>			<u>Current</u>		
Farm cash, checking & savings	_____	_____	Accounts payable	_____	_____
Accounts rec.	_____	_____	Operating debt	_____	_____
Feed & supplies	_____	_____	Short-term:	_____	_____
Total	_____	_____	Total	_____	_____
<u>Intermediate</u>			<u>Intermediate</u>		
Dairy cows:					
owned	_____	_____			
leased	_____	_____			
Heifers	_____	_____			
Bulls/other lvstk.	_____	_____			
Mach./eq. owned	_____	_____			
Mach./eq. leased	_____	_____	Financial lease		
Coop stock & cert.	_____	_____	(cattle/mach.)	_____	_____
Total	_____	_____	Total	_____	_____
<u>Long-Term</u>			<u>Long-Term</u>		
Land/buildings:					
owned	_____	_____			
leased	_____	_____			
Total	_____	_____	Financial lease		
			(structures)	_____	_____
			Total	_____	_____
Total Farm Assets	_____	_____	Total Farm Liab.	_____	_____
			FARM NET WORTH	_____	_____
<hr/>			<hr/>		
Nonfarm Assets			Nonfarm Liabilities & Net Worth		
	Jan. 1	Dec. 31		Jan. 1	Dec. 31
			<u>Nonfarm Liab.:</u>		
Personal cash, chkg. & savings	_____	_____			
Cash value	_____	_____			
life ins.	_____	_____			
Nonfarm real est.	_____	_____			
Auto (pers. share)	_____	_____	Total Nonfarm		
Stocks & bonds	_____	_____	Liabilities	_____	_____
Household furn.	_____	_____			
All other	_____	_____	Nonfarm		
Total Nonfarm	_____	_____	Net Worth	_____	_____
<hr/>			<hr/>		
<b>TOTAL FARM &amp; NONFARM</b>			<b>Jan. 1</b>	<b>Dec. 31</b>	
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 increase 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

21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Item	21 Dairy-Cash Crop Farms	404 Dairy Farms	My Farm
<u>Financial Ratios - Farm:</u>			
Percent equity	66%	63%	_____ %
Debt/asset ratio: total	0.34	0.37	_____
long-term	0.36	0.45	_____
intermediate/current	0.32	0.30	_____
<u>Financial Ratios - Farm &amp; Nonfarm:</u>			
Percent equity	67%	65%	_____ %
Total debt/asset ratio	0.33	0.35	_____
<u>Farm Debt Analysis:</u>			
Accounts payable as % of total debt	4%	3%	_____ %
Long-term liabilities as a % of total debt	49%	58%	_____ %
Current & inter. liab. as a % of total debt	51%	42%	_____ %
<u>Farm Debt Levels Per Cow:</u>			
Total farm debt	\$2,578	\$2,090	\$ _____
Long-term debt	1,270	1,205	_____
Intermediate & current debt	1,308	885	_____

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 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.

## FARM MACHINERY AND EQUIPMENT INVENTORY BALANCE

21 New York Dairy-Cash Crop Farms, 1985

Item	Average		My Farm	
	R.E.	Mach./Eq.	R.E.	Mach./Eq.
Value beg. of year	\$318,124	\$149,338	\$ _____	\$ _____
Purchases	\$ 5,767*	\$11,920	\$ _____	\$ _____
- Lost capital	1,363	--	_____	_____
- Sales	7,748	325	_____	_____
- Depreciation	<u>8,436</u>	<u>24,627</u>	_____	_____
= Net investment	\$-11,780	\$-13,032	+= _____	+= _____
+ Appreciation	<u>5,274</u>	<u>7,756</u>	+ _____	+ _____
Value end of year	\$311,618	\$144,062	\$ _____	\$ _____

\*\$2,007 land and \$3,760 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 the imbalance (error) amount is positive, recorded cash inflows exceed outflows by this amount. If it is negative, cash outflows are too high in relation to inflows.

ANNUAL CASH FLOW STATEMENT  
21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

<u>Item</u>	21 Dairy-Cash Crop Farms	404 Dairy Farms	My Farm
<u>Cash Inflows</u>			
Beginning farm cash, checking & savings	\$ 4,807	\$ 3,325	\$ _____
Cash farm receipts	240,831	202,388	_____
Sale of assets: Machinery	325	411	_____
Real estate	6,350	1,837	_____
Money borrowed (inter. & long-term)	29,181	22,966	_____
Money borrowed (short-term)	4,767	2,847	_____
Increase in operating debt	0	438	_____
Nonfarm income	2,530	3,891	_____
Money borrowed - nonfarm	<u>714</u>	<u>323</u>	_____
Total	\$289,505	\$238,425	\$ _____
<u>Cash Outflows</u>			
Cash farm expenses	\$178,366	\$161,157	\$ _____
Capital purchases: Expansion livestock	298	1,670	_____
Machinery	11,920	12,997	_____
Real estate	5,767	10,164	_____
Principal payments (inter. & long-term)	41,985	21,412	_____
Principal payments (short-term)	693	2,086	_____
Decrease in operating debt	3,299	0	_____
Nonfarm debt payments	1,399	259	_____
Personal withdrawals & family exp.	25,572	16,723	_____
Ending farm cash, checking & savings	<u>4,388</u>	<u>3,449</u>	_____
Total	\$273,688	\$229,915	\$ _____
Imbalance (error)	\$15,817	\$8,510	\$ _____

Repayment Analysis

The second step of cash flow planning is to compare and evaluate debt payments planned and made last year, 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  
Same 19 New York Dairy-Cash Crop Farms, 1985

Debt Payments	Average		Planned 1986	My Farm		
	1985 Payments Planned	Made		1985 Payments Planned	Made	Planned 1986
Long-term	\$16,086	\$24,944	\$16,579	\$ _____	\$ _____	\$ _____
Intermediate-term	26,335	37,523	23,757	_____	_____	_____
Short-term	4,847	860	4,432	_____	_____	_____
Operating (net reduction)	0	3,647	3,284	_____	_____	_____
Accounts payable (net reduction)	3,237	1,379	282	_____	_____	_____
Total	\$50,505	\$68,352	\$48,335	\$ _____	\$ _____	\$ _____
Per cow	\$587	\$795		\$ _____	\$ _____	
Per cwt. 1985 milk	\$3.76	\$5.09		\$ _____	\$ _____	
Percent of total 1985 receipts	21%	29%		_____	_____	
Percent of 1985 milk receipts	30%	41%		_____	_____	

\*Farms that completed Dairy Farm Business Summaries for both 1984 and 1985.

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 last year's available cash flow. Farmers that did not participate in DFBS last year will find in their report a cash flow coverage ratio based on this year's planned debt payments.

CASH FLOW COVERAGE RATIO  
New York Dairy-Cash Crop Farms and New York Dairy Farms, 1985

Item	Same 19 Dairy- Cash Crop Farms	Same 307 Dairy Farms	My Farm
Cash farm receipts	\$237,870	\$212,395	\$ _____
- Cash farm expenses	175,935	169,513	_____
+ Interest paid	21,720	18,356	_____
- Net personal withdrawals from farm*	22,760	13,248	_____
(A) - Amount Available for Debt Service	\$60,895	\$47,990	\$ _____
(B) - Debt Payments Planned for 1985	\$50,505	\$43,401	\$ _____
(A + B) - Cash Flow Coverage Ratio for 1985	1.21	1.11	_____

\*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  
21 New York Dairy-Cash Crop Farms, 1985

Item	Average of Farms Reporting			My Farm	
	Farms	Acres	Prod/Acre*	Acres	Prod/Acre
<u>Crop Yields</u>					
Hay crop	21	126	3.0 tn DM	_____	_____ tn DM
Corn silage	19	49	16.0 tn 5.5 tn DM	_____	_____ tn _____ tn DM
Other forage	0	0	-- tn DM	_____	_____ tn DM
Total forage	21	170	3.7 tn DM	_____	_____ tn DM
Corn grain	20	177	97.6 bu	_____	_____ bu
Oats	15	43	89.2 bu	_____	_____ bu
Wheat	15	41	58.8 bu	_____	_____ bu
Other crops	7	46		_____	
Tillable pasture	7	27		_____	
Idle	12	44		_____	
Total Tillable Acres	21	449		_____	

\*1985 average yields for 404 dairy farms in New York included: all hay crops, 2.7 tons dry matter per acre; corn silage, 14.3 tons per acre; corn grain, 92.4 bushels per acre.

Average crop acres and yields compiled for the region are for the number of 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 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  
21 New York Dairy Cash-Crop Farms and 404 New York Dairy Farms, 1985

Item	21 Dairy-Cash	404 Dairy	My Farm
	Crop Farms	Farms	
Total tillable acres per cow	5.1	3.1	_____
Total forage acres per cow	2.0	2.4	_____
Harvested forage dry matter, tons per cow	7.1	8.1	_____

Cropping Program Analysis (continued)

A number of cooperators have allocated crop expenses to hay crop, corn, and other crop production. This data has been compiled to show crop expenses per acre and per production unit for these crops. Corn production has been converted to corn silage equivalent using 5.88 bushels of dry shell equivalent to equal one ton of corn silage as fed.

## CROP RELATED ACCRUAL EXPENSES

21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Expense	Total/ Till. Acre	Hay Crop		Corn Per Acre	Per Ton Corn Sil. Equiv.	Other Crops Per Acre
		Per Acre	Per Ton DM			
<u>21 Dairy-Cash Crop Farms:</u> ----- Average of 16 farms reporting data -----						
Fertilizer & lime	\$36.56	\$19.66	\$ 6.27	\$ 57.82	\$3.47	\$32.97
Seeds & plants	15.08	8.28	2.64	21.71	1.30	14.85
Spray & other crop expense	<u>14.36</u>	<u>3.76</u>	<u>1.20</u>	<u>25.05</u>	<u>1.50</u>	<u>13.99</u>
Total	\$66.00	\$31.70	\$10.11	\$104.58	\$6.27	\$61.82
<u>404 Dairy Farms:</u> ----- Average of 257 farms reporting data -----						
Fertilizer & lime	\$31.65	\$19.55	\$ 7.51	\$53.17	\$3.66	\$28.78
Seeds & plants	11.73	5.61	2.16	20.21	1.39	19.37
Spray & other crop expense	<u>11.20</u>	<u>2.70</u>	<u>1.04</u>	<u>24.31</u>	<u>1.67</u>	<u>12.03</u>
Total	\$54.58	\$27.86	\$10.71	\$97.69	\$6.72	\$60.18
<u>My Farm:</u>						
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.

## ACCRUAL MACHINERY EXPENSES

21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Item	Average Per Tillable Acre		My Farm	
	21 Dairy-Cash Crop Farms	404 Dairy Farms	Total Expenses	Per Til. Acres
Fuel, oil & grease	\$ 20.80	\$ 23.84	\$_____	\$_____
Machinery repairs & parts	25.65	33.62	_____	_____
Machine hire, rent & lease	7.26	5.47	_____	_____
Auto expense (farm share)	0.73	1.67	_____	_____
Interest (5%)	16.33	17.11	_____	_____
Depreciation	<u>54.84</u>	<u>53.99</u>	_____	_____
Total	\$125.61	\$135.70	\$_____	\$_____

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 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. This real increase in inventory has been included as an accrual farm receipt on page 5.

DAIRY HERD INVENTORY  
21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Item	Dairy Cows		Heifers	
	Number	Value	Number	Value
<u>21 Dairy-Cash Crop Farms:</u>				
Beginning of year (owned)	87	\$73,548	72	\$34,925
+ Change without appreciation		1,218		232
+ Appreciation		<u>-4,274</u>		<u>-2,344</u>
End of year (owned)	88	\$70,492	74	\$32,813
End including leased	88			
Average number	88		72	
<u>404 Dairy Farms:</u>				
Beginning of year (owned)	87	\$76,945	74	\$33,380
+ Change without appreciation		4,349		-69
+ Appreciation		<u>-6,260</u>		<u>-3,159</u>
End of year (owned)	92	\$75,034	75	\$30,152
End including leased	92			
Average number	89		73	
<u>My Farm:</u>				
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  
21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Item	21 Dairy-Cash Crop Farms	404 Dairy Farms	My Farm
Total milk sold, lbs.	1,360,818	1,400,063	_____
Milk sold per cow, lbs.	15,548	15,679	_____
Average milk plant test, percent butterfat	3.63	3.61	_____

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 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  
21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Item	21 Dairy-Cash Crop		404 Dairy		My Farm	
	Total	Per Cwt.	Total	Per Cwt.	Total	Per Cwt.
Milk	\$170,169	\$12.50	\$180,609	\$12.90	\$ _____	\$ _____
Dairy cattle	12,248	0.90	15,679	1.12	_____	_____
Dairy calves	<u>3,337</u>	<u>0.25</u>	<u>2,183</u>	<u>0.16</u>	_____	_____
Total	\$185,754	\$13.65	\$198,471	\$14.18	\$ _____	\$ _____
<u>Accrual Costs of Producing Milk</u>						
Operating costs	\$109,560	\$ 8.05	\$134,046	\$ 9.57	\$ _____	\$ _____
Total costs without op(s') labor, mgmt. & capital	\$143,471	\$10.54	\$160,290	\$11.45	\$ _____	\$ _____
Total Costs	\$192,043	\$14.11	\$199,186	\$14.23	\$ _____	\$ _____

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  
21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Item	Average Per Cwt. Milk		My Farm Per Cwt.
	21 Dairy-Cash Crop	404 Dairy	
Purchased dairy grain & conc.	\$1.60	\$2.95	\$ _____
Purchased dairy roughage	<u>0.23</u>	<u>0.09</u>	_____
Total Purchased Dairy Feed	\$1.83	\$3.04	\$ _____
Purchased grain & conc. as % of milk receipts	13%	23%	_____ %
Purchased feed & crop exp.	\$4.01	\$4.13	\$ _____
Purchased feed & crop exp. as % of milk receipts	32%	32%	_____ %
Breeding	\$0.19	\$0.20	\$ _____
Veterinary & medicine	0.29	0.27	_____
Milk marketing	0.68	0.80	_____
Cattle lease	--	--	_____
Other livestock expense	0.47	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

21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Item	Per Worker	Per Cow	Per Tillable Acre
<u>21 Dairy-Cash Crop Farms:</u>			
Farm capital	\$194,261	\$7,768	\$1,514
Real estate		3,606	
Machinery & equipment	42,279	1,691	330
Capital turnover, years	2.81		
<u>404 Dairy Farms:</u>			
Farm capital	\$163,577	\$5,801	\$1,848
Real estate		2,726	
Machinery & equipment	30,543	1,083	345
Capital turnover, years	2.50		
<u>My Farm:</u>			
Farm capital	\$ _____	\$ _____	\$ _____
Real estate	_____	_____	_____
Machinery & equipment	_____	_____	_____
Capital turnover, years	_____	_____	_____

## LABOR FORCE ANALYSIS

21 New York Dairy-Cash Crop Farms and 404 New York Dairy Farms, 1985

Efficiency	21 Dairy-Cash Crop		404 Dairy		My Farm	
	Total	Per Worker	Total	Per Worker	Total	Per Worker
Cows, average number	88	25	89	28	_____	_____
Milk sold, pounds	1,360,818	388,805	1,400,063	442,125	_____	_____
Tillable acres	449	128	280	89	_____	_____
Work units	1,056	302	956	302	_____	_____
-----						
Labor Costs	Total	Per Cow	Total	Per Cow	Total	Per Cow
Value of operator(s)						
labor (\$800/month)	\$16,000	\$183	\$13,600	\$152	\$ _____	\$ _____
Family unpd. (\$550/mo.)	550	6	1,650	18	_____	_____
Hired	25,003	286	19,341	217	_____	_____
Total Labor	\$41,553	\$475	\$34,591	\$387	\$ _____	\$ _____
Machinery Cost	\$56,415	\$645	\$38,027	\$426	\$ _____	\$ _____
Total Labor & Mach.	\$97,968	\$1,119	\$72,618	\$813	\$ _____	\$ _____

## ANNUAL CASH FLOW WORKSHEET

Item	21 Dairy-Cash		My Farm		Expected Change	1986 Projection
	Crop Farms	(per cow)	Total	Per Cow		
Average number of cows		88				
<u>Accrual Oper. Receipts</u>						
Milk	\$1,944		\$	\$		\$
Dairy cattle	140					
Dairy calves	38					
Other livestock	48					
Crops	438					
Misc. receipts	156					
Total	\$2,764		\$	\$		\$
<u>Accrual Oper. Expenses</u>						
Hired labor	\$ 286		\$	\$		\$
Dairy grain & conc.	249					
Dairy roughage	36					
Other lvstk. feed	27					
Mach. hire/rent/lease	37					
Mach. repair/parts & auto	135					
Fuel, oil & grease	107					
Replacement lvstk.	27					
Breeding	30					
Vet & medicine	45					
Milk marketing	106					
Cattle lease	--					
Other lvstk. exp.	74					
Fertilizer & lime	188					
Seeds & plants	77					
Spray/other crop exp.	74					
Land, bldg., fence repair	21					
Taxes	62					
Insurance	46					
Real est. rent/lease	105					
Utilities	62					
Miscellaneous	36					
Total Less Int. Paid	\$1,830					\$
<u>Net Accrual Operating Income</u> (total)						
(without interest paid)	\$81,761		\$			\$
- Change in lvstk./crop inv.	1,183					
- Change in accts. rec.	-117					
+ Change in feed/supply inv.	1,065					
+ Change in accts. payable	1,857					
NET CASH FLOW	\$83,618		\$			\$
- Personal withdrawals & family expenditures	25,572					
Available for Debt Payments, Investments & Savings	\$58,046		\$			\$
- Farm Debt Payments	66,702					
Available for Investment & Savings	\$-8,656		\$			\$
- Capital Purchases: cattle, machinery & improvements	\$17,985					
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 19 New York Dairy-Cash Crop Farms, 1984 and 1985

Selected Factors	Average		My Farm		Goal
	1984	1985	1984	1985	
<u>Size of Business</u>					
Average number of cows	84	86	_____	_____	_____
Average number of heifers	77	76	_____	_____	_____
Milk sold, lbs.	1,309,111	1,341,962	_____	_____	_____
Worker equivalent	3.34	3.50	_____	_____	_____
Total tillable acres	437	451	_____	_____	_____
<u>Rates of Production</u>					
Milk sold per cow, lbs.	15,565	15,604	_____	_____	_____
Hay DM per acre, tons	3.1	3.0	_____	_____	_____
Corn silage per acre, tons	15	16	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	25	25	_____	_____	_____
Milk sold per worker, lbs.	392,217	383,418	_____	_____	_____
<u>Cost Control</u>					
Grain & conc. purchased as % of milk sales	14%	13%	_____ %	_____ %	_____ %
Dairy feed & crop exp. per cwt. milk	\$4.30	\$3.99	\$ _____	\$ _____	\$ _____
Labor & mach. costs/cow	\$1,139	\$1,147	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency*</u>					
Farm capital per cow	\$8,230	\$8,164	\$ _____	\$ _____	\$ _____
Real estate per cow	\$4,043	\$3,965	\$ _____	\$ _____	\$ _____
Mach. & equip. per cow	\$1,653	\$1,694	\$ _____	\$ _____	\$ _____
Capital turnover, years	2.9	2.9	_____	_____	_____
<u>Profitability</u>					
Net farm inc. w/o apprec.	\$27,246	\$25,922	\$ _____	\$ _____	\$ _____
Net farm inc. w/apprec.	\$40,331	\$33,604	\$ _____	\$ _____	\$ _____
Labor & mgmt. income	\$4,066	\$2,609	\$ _____	\$ _____	\$ _____
Rate of return on eq. capital w/apprec.	3.2%	1.7%	_____ %	_____ %	_____ %
<u>Financial Summary</u>					
Farm net worth	\$454,132	\$455,262	\$ _____	\$ _____	\$ _____
Debt to asset ratio	0.35	0.34	_____	_____	_____
Farm debt per cow	\$2,846	\$2,732	\$ _____	\$ _____	\$ _____

\*Average for the year.