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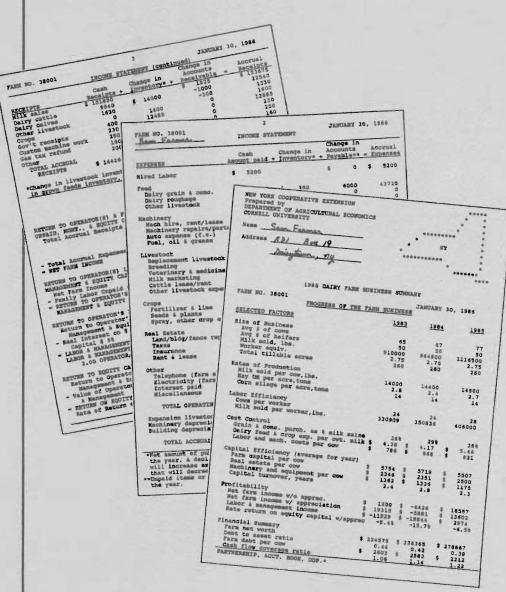
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NEW YORK DAIRY-CASH CROP SUMMARY, 1985



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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, <u>Dairy Farm Management Business Summary</u>, 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

<u>Business Characteristics</u>

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

	Number of	Farms		Number of	Farms
	21 Dairy-	404		21 Dairy-	404
Type of Business	Cash Crop	<u>Dairy</u>	Type of Barn	Cash Crop	<u>Dairy</u>
Single proprietorship	10	289	Stanchion	12	247
Partnership	9	102	Freestall	7	139
Corporation	2	13	Other	2	18
	Number of			Number of	
	21 Dairy-	404		21 Dairy-	404
Milking System	<u>Cash Crop</u>	<u>Dairy</u>	<u>Business</u>	Cash Crop	<u>Dairy</u>
			Record System		
Bucket & carry		4	Account Book	8	182
Dumping station	3	42	Agrifax (mail-	in	
Pipeline	11	217	only)	4	88
Herringbone parlor	7	122	CAMIS	4	42
Other parlor		19	On-Farm Comput	er 3	17
			Other	2	75
	Number of	<u>Farms</u>			
Dairy Records	21 Dairy-	404			
<u>Service</u>	Cash Crop	<u>Dairy</u>			
DHIC	16	289			
Owner-Sampler	1	51			
Other	3	17			
None	1	47			
	A			A	
	Avera 21 Dairy-	404		Avera 21 Dairy-	<u>ge</u> 404
Labor Force	Cash Crop	Dairy	Tand IIaa		
Operator 1.	12	12	<u>Land Use</u> Total acres	Cash Crop	<u>Dairy</u>
Operator 2.	5	4	owned	343	341
Operator 3.	2	ĭ	Total tillable		341
Operator 4.	1	Ō	acres	449	280
Family paid	7	5	acres	747	200
Family unpaid	í	3	Number of Cows		
Hired	14	<u>13</u>	Beg. year (own		87
Total	42 42	38	End year (owne		0/
Iocai	42	50	& leased		0.0
Worker Fauturiant				88	92
Worker Equivalent (total + 12)	3.50	3.17	Average for ye		0.0
•	3.30	3.1/	(owned & lea	sea) oo	89
Operator/Manager Equivalent					
-	1.67	1.42			
(Oper. mo. + 12)	1.0/	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

		-	p rarms, 1965	Accrual
	Cash	Change in	Change in	
Expense Item	Paid +	Inventory	+ Accounts Payable	- Expenses
Hired Labor \$	25,034		\$ -31	\$ 25,003
Feed				
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
Machinery	·			
Mach. hire, rent/lease	3,231		29	3,260
Machinery repairs/parts	11,595	-95	20	11,520
Auto expense (farm share)	-		0	330
Fuel, oil & grease	9,366	24	-48	9,342
Livestock	•			
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
Crops	•			
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
Real Estate				
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	3,168	<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>
TOTAL ACCRUAL EXPENSES				\$214,649

 $\underline{\text{Cash paid}}$ 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

	Cash		Change in		Change in	Accrual
Expense Item	Paid	+	-	+	Accounts Payable	= Expenses
Hired Labor	\$		\$		\$	\$
Feed	1		*		*	
Dairy grain & conc.						
Dairy roughage						
Other livestock						
Machinery			·			
Mach. hire, rent/lease						
Machinery repairs/parts	**************************************				***************************************	
Auto expense (farm share	<u> </u>	_				
Fuel, oil & grease	· /					
Livestock						
Replacement livestock						
Breeding						
Vet & medicine						***
Milk marketing	-		-			
Cattle lease/rent						
Other livestock expense	-				······································	
Crops	***************************************		***************************************			
Fertilizer & lime						
Seeds & plants	***************************************					<u> </u>
Spray, other crop exp.	W					
Real Estate	······································					
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					<u> </u>	
TOTAL ACCRUAL EXPENSES	\$		\$		\$	\$

<u>Cash paid</u> 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	5,529		<u>-244</u>		5,285
Total Accrual Receipts	\$240,831	\$1,183	\$-117		\$241,897

<u>Cash receipts</u> 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 live-stock 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 +		Accrual Receipts
Milk sales Dairy cattle Dairy calves Other livestock Crops Government receipts Custom machine work Gas tax refund Other	\$	\$xxxxxxx 	\$\$	
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. 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

	21 Dairy-Cash	404 Dairy		
Item	Crop Farms	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	t,		
& 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.

<u>Labor and management income per operator</u> 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, managemen & equity without appreciation	at, \$26,698	\$20,320	\$
- Real interest @ 5% on equity capital	22,202	16,283	_
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 & manageme	ent <u>26,370</u>	22,613	44444
Return on equity capital with appreciati	lon \$ 6,625	\$-4,315	\$
Rate of return on equity capital			
with appreciation	1.5%	-1.3%	<u> </u>
Return on equity capital without apprec	. \$328	\$-2,293	\$
Rate of return without appreciation	0.1%	-0.7%	<u> </u>

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 Liabilities		
Farm Assets J	an. 1	Dec. 31	& Net Worth	<u>Jan. 1</u>	<u>Dec. 31</u>
Current			Current		
Farm cash, checking			Accounts payable	\$ 6,633	\$ 8,490
	4,807	\$ 4,388	Operating debt	7,143	3,843
	7,701	17,709	Short-term	1,043	5,117
	8,180	67,252			
* *	0,688	\$89,349	Total	\$14,819	\$17,450
<u>Intermediate</u>	•	• •	<u>Intermediate</u>	. ,	, ,
Dairy cows:				\$106,024	\$ 95,977
	3,548	\$ 70,492		• •	•
leased	0	0			
Heifers 3	4,925	32,813			
Bulls/other lvstk.	3,969	3,449			
Mach./eq. owned 14	9,338	144,062			
Mach./eq. leased	863	1,691	Financial lease		
Coop stock & cert. 1	6.709	16,638	(cattle/mach.)	<u>863</u>	1,691
Total \$27	9,352	\$269,145	Total	\$106,887	\$ 97,668
Long-Term			Long-Term		
Land/buildings:				\$113,715	\$110,958
owned \$31	8,124	\$311,618			
	<u> 762</u>	<u> 786</u>	Financial lease		
Total \$31	8,886	\$312,404	(structures)	<u>762</u>	78 <u>6</u>
			Total	\$114,477	\$111,744
Total Farm Assets \$68	8,927	\$670,898	Total Farm Liab.	\$236,183	\$226,862
			FARM NET WORTH	\$452,744	\$444,036
/ 11 6					
(Average for 11 farms	report	cing)		, i.	
Namfaan Assatst I	1	Da = 21	Nonfarm Liabiliti		D 01
Nonfarm Assets* J	an, i	Dec. 31	& Net Worth	<u> </u>	Dec. 31
Personal cash, chkg.			Nonfarm Liab.	\$5,786	\$5,064
& savings \$	6,832	\$ 5,779	NONFARM NET WORTH	\$45,033	\$49,202
Cash value life ins.1	3,795	16,287	FARM & NONFARM*	<u>Jan. 1</u>	Dec. 31
Nonfarm real estate 1	1,818	11,818	Total Assets	\$739,746	\$725,164
Auto (personal sh.)	4,364	4,255	Total Liabilities	241,969	231,926
	4,824	6,912			
	8,355	9,082			
All other	831	133			
			TOTAL FARM & NON-		
Total Nonfarm \$5	0,819	\$54,266	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 & NONFARM BALANCE SHEET

			Farm Liabilities		
Farm Assets	Jan. 1	Dec. 31	& Net Worth	Jan, 1	<u>Dec. 31</u>
<u>Surrent</u>			<u>Current</u>		
Farm cash, checking	ı •		Accounts payable		
& savings			Operating debt		
Accounts rec.			Short-term:		
Feed & supplies				<u> </u>	
Total			Total	***************************************	
<u>Intermediate</u> Dairy cows:			Intermediate		
owned					
leased Heifers					

Bulls/other lvstk.	-				
Mach./eq. owned			794		
Mach./eq. leased			Financial lease		
Coop stock & cert.			(cattle/mach.)		
Total			Total		
<u>Long-Term</u> Land/buildings:			Long-Term		
owned					
leased			-		***************************************
reased				-	
Total			Financial lease		1000
Iocal			(structures)		
			Total		
Total Farm Assets			Total Farm Liab.		
Total raim Assets			FARM NET WORTH	-	
M	T 1	D 21	Nonfarm Liabilitie		n. 21
Nonfarm Assets	Jan, 1	Dec. 31	& Net Worth	Jan. 1	Dec. 31
			Nonfarm Liab.:		
Personal cash, chkg	ξ.				
& savings				-	
Cash value					
life ins.				*	
Nonfarm real est.			m . 1		
Auto (pers. share)			Total Nonfarm		
Stocks & bonds			Liabilities		
Household furn.					
All other			Nonfarm		
Total Nonfarm			Net Worth		
TOTAL FARM & NONFAR	W.		Jan1	Dec	. 31
Total Farm & Nonfar	m Assets			_	
Less Total Farm & N	Nonfarm Li	abilities			
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

	21 Dairy-Cash	404 Dairy	
<u>Item</u>	Crop Farms	Farms	My Farm
Financial Ratios - Farm:			
Percent equity	66%	63%	8
Debt/asset ratio: total	0.34	0.37	
long-term	0.36	0.45	***************************************
intermediate/current	0.32	0.30	
Financial Ratios - Farm & Nonfarm:			
Percent equity	67%	¹ 65%	*
Total debt/asset ratio	0.33	0.35	
Farm Debt Analysis:			
Accounts payable as % of total debt	4%	3%	8
Long-term liabilities as a % of total d	ebt 49%	58%	
Current & inter. liab. as a % of total	debt 51%	42%	
Farm Debt Levels Per Cow:			
Total farm debt	\$2,578	\$2,090	ŝ
Long-term debt	1,270	1,205	Υ
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

<u>Item</u>	A	verage		My Farm	
	<u>R.E.</u>	Mach./Eq.		R.E.	Mach./Eq.
Value beg. of year	\$318,1	.24 \$149	, 338	\$	\$
Purchases	\$ 5,767*	\$11,920	\$		\$
- Lost capital	1,363		_		-
- Sales	7,748	325	-		-
- Depreciation	8,436	24,627	-		46
= Net investment	\$-11,7	80 \$-13	,032	-+	-+
+ A preciation	5,2	7.	756	+	+
Valu end of year	\$311,6	\$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 <u>Annual Cash Flow Statement</u> 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

	21 Dairy-Cash	404 Dairy	
Item	Crop Farms	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	714	323	- Photographic Pho
Total	\$289,505	\$238,425	\$
Cash Outflows			
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	4,388	3,449	
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

		Average			My Fari	n
	1985 Pay	ments	Planned	1985 Pa	yments	Planned
Debt Payments	Planned	Made	1986	Planned	Made	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	<u>1,379</u>	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 <u>Cash Flow Coverage Ratio</u> 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

T.	Same 19 Dairy-	Same 307	
Item	Cash Crop Farms	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			<u> </u>
from farm*	22,760	13,248	
(A) - Amount Available for			
Debt Service	\$60,895	\$47,990	\$
(B) = Debt Payments Planned for 198	5 \$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

<u>Item</u>	Average of Farms Reporting			My Farm	
Crop Yields	<u>Farms</u>	Acres	Prod/Acre*	<u>Acres</u>	Prod/Acre
Hay crop	21	126	3.0 tn DM		tn DM
Corn silage	19	49	16.0 tn		tn
•			5,5 tn DM		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 Crop Farms	404 Dairy Farms	My Farm
Total tillable acres per cow	5.1	3.1	
Total forage acres per cow	2.0	2.4	
Harvested forage dry matter, tons per co	w 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

	Total/	Hav	Crop	Corn	Per Ton	Other
	Till.	Per	Per	Per	Corn Sil.	
Expense	Acre	Acre	Ton DM	Acre	Equiv.	-
21 Dairy-Cash Crop	Farms:		Average of	16 farms	reporting	data
Fertilizer & lime		\$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>	3.76	<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
			_			
404 Dairy Farms:						data
Fertilizer & lime	\$31.65	\$19.55	•	\$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>	2.70	-1.04	<u>24.31</u>		<u>12,03</u>
Total	\$54.58	\$27.86	\$10.71	\$97.69	\$6.72	\$60.18
My Farm:						
Fertilizer & lime	Ś	Ś	\$	Ś	\$	Ś
Seeds & plants	T	T	T	τ	T	Υ
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

	<u>Average Per Ti</u>	My Farm		
	21 Dairy-Cash	404 Dairy	Total	Per Til.
Item	Crop Farms	Farms	Expenses	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	54.84	53,99		
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

	Dair	y Cows	He	<u>ifers</u>
Item	Number	Value	Number	Value
21 Dairy-Cash Crop Farms:				
Beginning of year (owned)	87	\$73,548	72	\$34,925
+ Change without appreciation		1,218		232
+ Appreciation		4,274		-2,344
End of year (owned)	88	\$70,492	74	\$32,813
End including leased	88			
Average number	88		72	
404 Dairy Farms:				
Beginning of year (owned)	87	\$ 76,945	74	\$33,380
+ Change without appreciation		4,349		-69
+ Appreciation		-6,260		-3,159
End of year (owned)	92	\$75,034	75	\$30,152
End including leased	92			
Average number	89		73	
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
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
Total milk sold, lbs.	1,360,818	1,400,063	
Milk sold per cow, lbs.	15,548	15,679	
Average milk plant test, percent but	terfat 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

	21 Dairy-	Cash Crop	404 D	airy	My F	arm
Item	Total	Per Cwt.	Total	Per Cwt.	Total	Per Cwt.
Milk Dairy cattle	\$170,169 12,248	\$12.50 0.90	\$180,609 15,679	\$12.90 1.12	\$	\$
Dairy calves Total	$\frac{3,337}{$185,754}$		$\frac{2,183}{$198,471}$		\$	\$
Accrual Costs of Producing Milk Operating costs Total costs with-	\$109,560	\$ 8.05	\$134,046	\$ 9.57	\$	\$
<pre>out op(s') labor, mgmt. & capital Total Costs</pre>	\$143,471 \$192,043	\$10.54 \$14.11	\$160,290 \$199,186	\$11.45 \$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

	Average Per Cwt	. Milk	_ My Farm	
<u>Item</u>	21 Dairy-Cash Crop	404 Dairy	Per Cwt.	
Purchased dairy grain & conc.	\$1.60	\$2.95	\$	
Purchased dairy roughage	0.23	0.09	• •	
Total Purchased Dairy Feed	\$1.83	\$3.04	\$	
Purchased grain & conc.		·	<u> </u>	
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			<u></u>	
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

	Per	Per	Per Tillable	
<u> Item</u>	Worker	Cow	Acre	
21 Dairy-Cash Crop Farms:				
Farm capital	\$194,261	\$7,768	\$1,514	
Real estate		3,606		
Machinery & equipment	42,279	1,691	330	
Capital turnover, years	2.	81		
404 Dairy Farms:				
Farm capital	\$163,577	\$5,801	\$1,848	
Real estate		2,726		
Machinery & equipment	30,543	1,083	345	
Capital turnover, years	2.	50		
My Farm:				
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

	21 Dairy-0	21 Dairy-Cash Crop		404 Dairy		My Farm	
	•	Per		Per	<u>-</u>	Per	
<u>Efficiency</u>	Total	Worker	Total	Worker	<u>Total</u>	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			
		Per		Per		Per	
Labor Costs	Total	Cow	Total	Cow	Total	Cow	
Value of operator(s)							
labor (\$800/month)	\$16,000	\$183	\$13,600	\$152	\$	\$	
Family unpd. (\$550/mo		, 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	•	\$72,618	\$813	Ś	Ś	

ANNUAL CASH FLOW WORKSHEEET

	Dairy-Ca	ashN	y Farm	Expected	1 1986
	rop Farm		al Per (ow Change	Projection
	(per cow				
Average number of cows	88				
Accrual Oper, Receipts					
Milk	\$1,944	\$	\$		\$
Dairy cattle	140				
Dairy calves	38				
Other livestock	48				
Crops	438				
Misc. receipts	156				
Total	\$2,764	\$	\$		\$
Accrual Oper. Expenses					
Hired labor	\$ 286	\$	\$		\$
Dairy grain & conc.	249	Υ	Y		_ Y
Dairy roughage	36				
Other lvstk. feed	27				
	37				
Mach. hire/rent/lease	135				
Mach. repair/parts & auto					-
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				_ \$
Net Accrual Operating Incom	ne (total)			
(without interest paid)		81,761	\$		Ś
- Change in lvstk./crop inv	_	1,183	*		
- Change in accts. rec.	•	-117			
+ Change in feed/supply inv	7 .	1,065			
+ Change in accts. payable	•	1,857			
NET CASH FLOW	\$	83,618	- \$		- s
- Personal withdrawals &	Y	05,010	Υ		Υ
family expenditures		25,572			
Available for Debt Payments		20,012	·		
Investments & Savings	•	58,046	\$		è
		-	٧		٩
- Farm Debt Payments	-	66.702		***************************************	
Available for Investment	^	0 657	ć		٨
& Savings		-8,656	\$		₹
- Capital Purchases: cattle		17 000			
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

	Average		My Farm		
Selected Factors	1984	1985	1984	1985	Goal
Size of Business					
Average number of cows	84	86			
Average number of heifers	77	76			w
		1,341,962			
Worker equivalent	3,34	3.50	******	A	
Total tillable acres			***	***************************************	
lotal tillable acres	437	451	***************************************		-
Rates of Production					
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		****	
Labor Efficiency					
Cows per worker	25	25			
Milk sold per worker, lbs.					
The bold per weller, 155.	5,2,22,	505,420			
Cost Control					
Grain & conc. purchased					
as % of milk sales	149	13%	₹		
Dairy feed & crop exp.					
per cwt. milk	\$4.30	•	\$	\$	\$
Labor & mach. costs/cow	\$1,139	\$1,147	\$	\$	\$
Capital Efficiency*					
Farm capital per cow	\$8,230	\$8,164	\$	\$	\$
Real estate per cow	\$4,043		\$	Ś	Ś
Mach. & equip. per cow	\$1,653		\$	Ś	Ś
Capital turnover, years	2.9	2.9	•	•	· · · · · · · · · · · · · · · · · · ·
- ·		,			
Profitability	A07 016	A05 000	٨	^	
Net farm inc. w/o apprec.	\$27,246		Ş	Ş	\$
Net farm inc. w/apprec.	\$40,331		Ş	\$	\$
Labor & mgmt, income	\$4,066	\$2,609	\$	\$	\$
Rate of return on eq.		_			
capital w/apprec.	3.29	1.7%		€	
Financial Summary					
Farm net worth	\$454,132	\$455,262	Ś	\$	\$
Debt to asset ratio	0.35		7	т	, т
Farm debt per cow	\$2,846		Ś	\$	\$
I II II WOOD PUL OUN	Y2,040	Y2,732	Υ	٧	. ~

^{*}Average for the year.