FRUIT FARM BUSINESS SUMMARY

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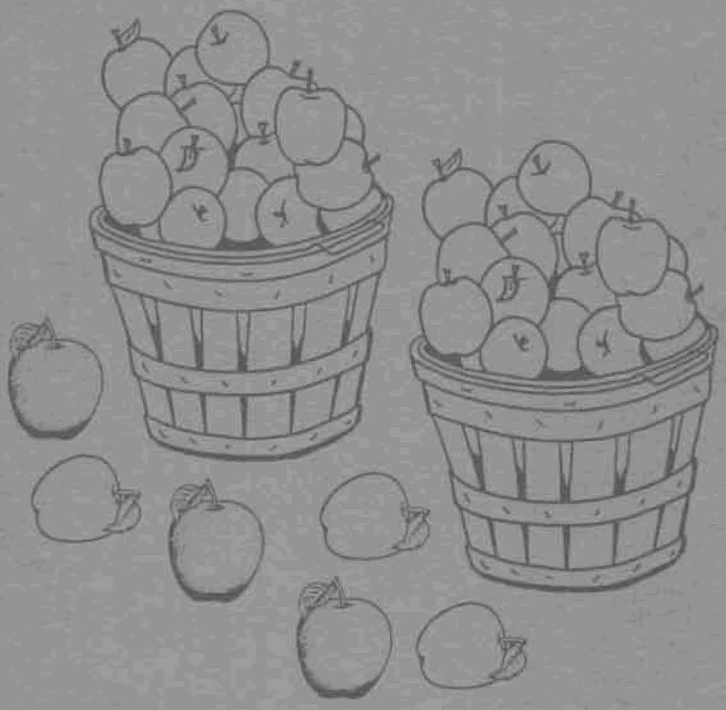
LAKE ONTARIO REGION NEW YORK 1995



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ABSTRACT

This report is a summary of 1995 farm business data collected from 21 fruit farm businesses located in Western New York State. Apples are the predominant fruit crop. The data are presented as averages for all 21 farms. The business analysis includes a balance sheet, income statement, cash flow statement, and several financial and production analyses for the farms. Also included are blank columns for the user to enter his or her own farm data for comparison purposes.

ACKNOWLEDGEMENTS

The authors are Gerald B. White, Professor; Alison M. DeMarree, Regional Fruit Specialist; and Linda D. Putnam, Extension Support Specialist. Appreciation is expressed to the cooperating fruit farmers who provided the data summarized in this report.

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LAKE ONTARIO REGION

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1995 LAKE ONTARIO FRUIT FARM BUSINESS SUMMARY

INTRODUCTION

Western New York fruit farmers, whose major crop is apples, are invited to participate in Cornell Cooperative Extension's fruit farm business summary program each year. Each participating farmer receives a comprehensive business summary and analysis of his or her farm business. This report presents averages for the data submitted by participating farmers for 1995.

The primary objective of the fruit farm business summary (FFBS) program is to help farm managers improve the financial management of their business through appropriate use of historical farm data and the application of modern farm business analysis techniques. The FFBS identifies the business and financial information farmers need and provides a framework for use in identifying and evaluating the strengths and weaknesses of the farm business.

A computer program is used to process the data collected from fruit farmers. This program enables an analysis to be produced on the farm as soon as the farmers' data are entered. This provides rapid processing of the information for timely use in the management of the farm business.

The farms in this study are primarily apple farms. An average of 87 percent of the receipts in 1995 was from the sale of apples. The data were not obtained from a random sample of all fruit farms in Western New York. Therefore, the analysis should not be used to represent the Western New York fruit industry.

Format Features

This report provides a set of tables which comprise a comprehensive analysis of the participating fruit farms. Worksheets are included to give fruit farmers an opportunity to summarize their business. The analysis tables have a blank column or section labeled "My Farm". It may be used to compare an individual farm business with the average performance of the 21 farms.

This report features:

1) A complete Balance Sheet and analysis including financial ratios.

2) An Income Statement including accrual accounting adjustments for farm business expenses and receipts, as well as measures of profitability with and without appreciation.

3) Forms for a Cash Flow Statement and Repayment Analysis Worksheets.

4) Analyses of Capital Efficiency, Equipment, and Labor.

5) A Cropping Program Analysis with Cost Control Factors.

6) A Three Year Comparison of selected business factors.

Apple Production and Prices in Recent Years

Apple production for the State was 26.4 million bushels in 1995. Statewide production was up 1 percent from the previous year, and was the highest since 1992.

The average price of apples (both fresh and processing) on the Fruit Farm Business Summary farms was $4.36 per bushel, the highest price in the most recent five years. The farms in the summary program experienced strong prices for both fresh and processing apples in 1995. With high production and strong prices, total accrual operating receipts were exceptionally high for farms in the summary program this year.

Table 1.

Apple Production and Prices, New York State, 1991-1995

Item	1991	1992	1993	1994	1995
Production			million bushels		
Fresh Apples					
Western New York	4.3	5.0	3.8	5.5	NA
New York State	10.0	12.4	9.5	11.7	11.3
Processing Apples					
Western New York	12.9	13.1	9.3	12.4	NA
New York State	15.0	15.5	11.2	14.5	15.1
All Varieties					
Western New York	17.1	18.1	13.1	17.9	NA
New York State	25.0	27.9	20.7	26.2	26.4
Average Price Received Per Bushel			dollars		
All Apples					
New York State	5.33	4.16	4.87	4.96	5.08
Fruit Farm Business Summary	4.13	3.62	3.77	3.68	4.36
Fresh Apples					
New York State	8.44	5.96	7.31	7.56	7.85
Fruit Farm Business Summary	6.07	4.59	4.94	5.05	5.81
Processing Apples					
New York State	3.21	2.71	2.79	2.83	3.00
Fruit Farm Business Summary	3.04	2.88	3.14	2.81	3.09

NA = Not Available.

Source: New York Agricultural Statistics Service, FRUIT series, Seasonal releases for July 1992, 1993, 1994, 1995, and 1996 and the annual Fruit Farm Business Summaries.

SUMMARY AND ANALYSIS OF THE FARM BUSINESS

Business Characteristics

Finding the right management strategies is an important part of operating a successful farm business. Various combinations of farm resources, enterprises, business arrangements, and management techniques are used by the fruit farmers in Western New York. The following table shows important farm business characteristics and the number of farmers reporting these characteristics.

Table 2.

Business Characteristics, 21 Western New York Fruit Farms, 1995

Type of Business	Number	Business Record System	Number
Proprietors	6	Account Book	4
Partnerships	7	Agrifax (mail-in)	0
Corporations	8	On-Farm Computer	17
		Other	0

Business Composition	Number
Fruit production only	7
Fruit with storage	5
Fruit & other enterprises	6
Fruit with storage & other enterprises	3

Farm Financial Status

The first step in evaluating the financial status of the farm business is to construct a balance sheet which identifies all the assets and liabilities of the business. The second step is to evaluate the relationships between assets, liabilities, and net worth at the end of the year and the changes that occurred during the year.

Financial lease obligations are included in the balance sheet. The present value of all future payments is listed as a liability since the farmer is committed to make the payments by signing the lease. The present value is also listed as an asset, representing the future value the item has to the business.

Table 3 presents the balance sheet data for the 21 fruit farm cooperators. It lists the average value of assets and liabilities for December 31, 1994 and December 31, 1995 and, therefore, shows the changes that occurred for each category during the year. Asset values that are estimated each year should reflect changes in quantity or quality of the asset and conservative adjustments for price changes. Careful attention to asset values is important for a meaningful calculation of change in net worth, a measure of financial progress.

Table 4 provides a format for the reader to use to develop a balance sheet for an individual farm business.

Table 3.
Farm Business Balance Sheet, 21 Western New York Fruit Farms, December 31, 1994 & 1995

Farm Assets	1994	1995	Farm Liabilities & Net Worth	1994	1995
Current	$	$	Current =<1 year	$	$
Cash, checking, sav.	18,821	19,834	Accounts payable	25,138	22,768
Accounts receivable	106,796	135,124	Operating debt	110,424	135,811
Prepaid expenses	4,085	4,080	Short-term	5,252	2,795
Fruit, other crops	127,150	140,839	Advanced gov't receipts	0	305
Production supplies	9,373	11,147	Accrued interest	941	2,725
Packing supplies	1,201	1,091			
Total Current	$267,427	$312,115	Total Current	$141,754	$164,405
Intermediate			Intermediate =>1 to <10 years		
Livestock	0	429	Structured debt	81,349	79,810
Livestock leased	0	0	Financial lease-livestock		
Equipment owned	213,712	219,987	& equipment	6,006	3,652
Equipment leased	6,006	3,652	Farm Credit stock	9,232	9,540
Farm Credit stock	9,232	9,540			
Other stock, cert.	56,386	66,051			
Total Intermediate	$285,336	$299,658	Total Intermediate	$96,587	$93,002
Long-Term			Long-Term =>10 years		
Land/Buildings:			Structured debt	130,195	130,203
Owned	483,343	491,924	Financial lease -		
Structures leased	0	0	structures	0	0
Total Long-Term	$483,343	$491,924	Total Long-Term	$130,195	$130,203
			Total Farm:		
			Liabilities	368,536	387,611
Total Farm:			Net Worth	667,570	716,087
Assets	$1,036,106	$1,103,697	Liabilities & Net Worth	1,036,106	1,103,697

Table 3a. **Nonfarm Assets & Liabilities**

NonFarm Assets	1994	1995	NonFarm Liabilities	1994	1995
Cash, checking, sav.	1,600	8,160		0	0
Life ins.-cash value	4,372	2,764			
Real estate	0	0			
Auto (pers. share)	238	429			
Stocks & bonds	2,324	2,703			
Household furn.	1,024	1,190			
All other	61	3,678			
Total NonFarm			Total Nonfarm: Liab.	0	0
Assets	9,619	18,923	Net Worth	9,619	18,923
			Liabilities & Net Worth	9,619	18,923
			Farm and Nonfarm		
Assets	1,045,725	1,122,261	Liabilities	368,536	387,611
			Net Worth	677,189	735,010
			Liabilities & Net Worth	1,045,725	1,122,621

Table 4.

Farm Business Balance Sheet, My Farm, December 31, 1994 & 1995

Farm Assets	1994	1995	Farm Liabilities & Net Worth	1994	1995
Current	$	$	Current = < 1 year	$	$
Cash, checking, sav.			Accounts payable		
Accounts receivable			Operating debt		
Prepaid expenses			Short-term		
Fruit, other crops					
Production supplies					
Packing supplies			Advanced gov't receipts		
			Accrual interest		
Total Current			Total Current		
Intermediate			Intermediate = > 1 to < 10 years		
Livestock			Structured debt		
Livestock leased					
Equipment owned					
Equipment leased					
Farm Credit stock					
Other stock, cert.			Financial lease-livestock, equipment		
			Farm Credit stock		
Total Intermediate			Total Intermediate		
Long-Term			Long-Term = > 10 years		
Land/Buildings:			Structured debt		
Owned					
Structures leased					
			Financial lease-struc.		
Total Long-Term			Total Long-Term		
			Total Farm:		
			Liabilities		
			Net Worth		
Total Farm Assets			Liabilities & Net Worth		

The balance sheet analysis involves an examination of financial and debt ratios. Percent equity is calculated by dividing end of year net worth by end of year assets. 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. Debt levels per unit of production include some old standards that are still useful if used with measures of cash flow and repayment ability. The change in farm net worth without appreciation is an excellent indicator of financial progress from operating the business.

Table 5.
Farm Business Balance Sheet Analysis, 21 Western New York Fruit Farms, December 31, 1995

Item	21 Farms 1995	My Farm
	------ For the Farm Business Only ------	
Financial Ratios - end of year		
Percent equity	65%	_____ %
Debt to asset ratios:		
Total debt	0.35	_____
Long-term	0.26	_____
Current & intermediate	0.42	_____
Change in Net Worth		
Without appreciation	$ 15,504	$ _____
With Appreciation	$ 48,517	$ _____
Debt Analysis - end of year		
Percent of total farm debt that is:		_____ %
Long-term	34%	_____ %
Current & intermediate	66%	_____ %
Accounts payable only	6%	
Debt Levels - end of year		
Per bearing fruit acre:		
Total farm debt	$ 1,772	$ _____
Long-term	$ 595	$ _____
Current & intermediate	$ 1,177	$ _____

The farm inventory balance is an accounting of the value of assets used on the balance sheet and the changes that occur from the beginning to end of year. Net investment indicates whether the capital stock is being expanded (positive) or depleted (negative).

Table 6.

Farm Inventory Balance, 21 Western New York Fruit Farms, 1995

	21 Fruit Farm		My Farm	
Inventory Balance	Real Estate	Equipment	Real Estate	Equipment
Beginning of year (1)	$ 483,343	$ 213,712	$_____	$ _____
Purchases	$ 9,224[1]	$ 21,183	_____	_____
+ Noncash transfer to farm	0	0	_____	_____
- Lost capital	1,136	--	_____	_____
- Sales	0	1,675	_____	_____
- Depreciation	12,559	25,094	_____	_____
= Net investment (2)	$ (4,472)	$ (5,586)	_____	_____
Appreciation (3-1-2)	13,053[2]	11,861	_____	_____
End of year (3)	$ 491,924	$ 219,987	_____	_____

[1]Purchase includes $4,155 for land and $5,068 for buildings.
[2]Real estate appreciation excludes $1,166 of appreciation on assets sold during the year.

Income Statement

On the following pages the accrual adjusted income statement begins with an accounting of all farm business 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.

Change in Inventory: An increase in inventory is subtracted in computing accrual expenses; it represents inputs that were purchased but not actually used during the year. A decrease in inventory is added to expenses because it represents the cost of inputs purchased in a prior year and used this year.

Changes in Prepaid Expenses apply to non-inventory categories. Included are expenses that have been paid in advance of their use, for example, next year's rent paid this year. An increase in a prepaid expense is an amount paid this year that is an expense for a future year and, thus, is subtracted from expenses; a decrease in a prepaid expense indicates an amount paid in a prior year that is an expense for this year and added to cash expenses.

Change in Accounts Payable: An increase in payables is an expense chargeable to this year but not paid by the end of the year. A decrease in payables is an expense for a previous year that was paid this year.

Accrual Expenses are the costs of inputs actually used for this year's production.

The worksheet on page 9 is provided to enable any fruit farmer to compare his or her expenses with the group averages in the corresponding table.

Table 7.
Income Statement - Farm Expenses, 21 Western New York Fruit Farms, 1995

Expenses	Cash amount paid	+ Change in inventory or prepaid expenses	+ Change in accounts payable	= Accrual expenses
Hired Labor				
Wages: regular	$52,026	$0	$0	$52,026
picking	77,630	0	0	77,630
other part-time seas.	36,851	0	0	36,851
Other labor costs	39,271	0	97	39,368
Picker travel	1,340	0	0	1,340
Labor camp expenses	2,415	0	0	2,415
Equipment				
Machine hire, rent, lease	12,087	0	1,036	13,123
Repairs & parts	23,385	(43)	(700)	22,642
Auto expense - farm share	373	0	0	373
Fuel, oil & grease	13,139	37	(224)	12,951
Livestock				
All livestock expenses	257	0	0	257
Crops				
Fertilizer & lime	13,938	121	(1,409)	12,651
Replacement trees & plants	1,286	0	0	1,286
Spray	66,972	(1,758)	(3,162)	62,052
Supplies, other production exp.	12,683	(90)	0	12,593
Processing and packing supplies	2,513	109	190	2,813
Storage	18,907	(124)	1,062	19,845
Marketing, selling expenses	1,439	0	0	1,439
Real Estate				
Repair - land, building, fences	3,088	0	(23)	3,065
Taxes	12,055	0	0	12,055
Rent & lease	9,895	0	1,543	11,437
Other Expenses				
Insurance: Fire, liability	7,996	0	(385)	7,612
Crop	152	0	0	152
Telephone - farm share	1,958	0	0	1,959
Electricity - farm share	6,681	0	(524)	6,157
Fruit purchased for resale	7,130	0	3,548	10,677
Interest paid	25,785	0	5,457	31,242
Miscellaneous	9,876	(40)	195	10,030
TOTAL OPERATING EXPENSES	$461,128	$(1,788)	$6,701	$466,041
Expansion orchard	$12,831	(224)	920	13,527
Depreciation: Equipment				25,094
Buildings				5,699
Bearing trees & vines				6,861
TOTAL ACCRUAL EXPENSES				$517,222

Table 8.

Income Statement, Farm Expenses, My Farm, 1995

Expenses	Cash amount paid	+	Change in inventory or prepaid expenses	+	Change in accounts payable	=	Accrual expenses
Hired Labor							
Wages: regular	$		$		$		$
picking							
other part-time seas.							
Other labor costs							
Picker travel							
Labor camp expenses							
Equipment							
Machine hire, rent, lease							
Repairs & parts							
Auto expense - farm share							
Fuel, oil & grease							
Livestock							
All livestock expenses							
Crops							
Fertilizer & lime							
Replacement trees & plants							
Spray							
Supplies, other production exp.							
Processing and packing supplies							
Storage							
Marketing, selling expenses							
Real Estate							
Repair - land, building, fences							
Taxes							
Rent & lease							
Other Expenses							
Insurance: Fire, liability							
Crop							
Telephone - farm share							
Electricity - farm share							
Fruit purchased for resale							
Interest paid							
Miscellaneous							
TOTAL OPERATING EXPENSES	$		$		$		$
Expansion orchard							
Depreciation: Equipment							
Buildings							
Bearing trees & vines							
TOTAL ACCRUAL EXPENSES							$

Table 9.

Income Statement, Farm Receipts
21 Western New York Fruit Farms, 1995

Receipts	Cash Receipts	+ Change in inventory[1]	+ Change in accounts receivable	= Accrual receipts
Apples: fresh	$ 266,472	$ 13,573	$ (1,261)	$ 278,784
processing	192,034	117	28,745	220,895
Cherries: sweet	13,458		1,633	15,092
tart	6,114		(137)	5,977
Grapes	433		(52)	381
Peaches	4,582		697	5,278
Pears	3,540		14	3,554
Plums & prunes	305		0	305
All other fruit	2,711	0	5,357	8,068
Other crops, livestock & prod.	845	0	0	845
Custom work, storage, rent	23,411		1,032	24,442
Other - including government receipts, refunds	11,648	(305)[2]	161	11,505
- Non-farm non-cash capital		0[3]		
TOTAL OPERATING RECEIPTS	$ 525,552	$ 13,385	$ 36,189	$ 575,127

[1]Change in crop and livestock products inventory.
[2]Change in advanced government receipts.
[3]Gifts and inheritances of livestock and crops to the farm business.

Cash Receipts include the amount received during the year from the sale of farm products and services, and government programs.

Changes in Inventory are calculated by subtracting beginning of year values from end of year values excluding appreciation. Changes in crop and livestock inventories are calculated. Changes in advanced government receipts are calculated by subtracting the end of year balance from the beginning year balance.

Changes in Accounts Receivable are calculated by subtracting beginning year balances from end year balances.

Accrual Receipts represent the value of all farm commodities and services generated by the farm business during the year.

Table 10.

Income Statement, Farm Receipts
My Farm, 1995

Receipts	Cash receipts +	Change in inventory	+	Change in accounts receivable	=	Accrual receipts
Apples: fresh	$	$		$		$
processing						
Cherries: sweet						
tart						
Grapes						
Peaches						
Pears						
Plums & prunes						
All other fruit						
Other crops, livestock & prod.						
Custom work, storage, rent						
Other - including government receipts, refunds						
- Non-farm non-cash capital		(-)				(-)
TOTAL OPER. RECEIPTS	$	$		$		$

Profitability Analysis

Farm owner-operators contribute labor, management, and capital to their businesses and the best combination of these resources maximizes profits. Farm profitability can be measured as the return to all family resources or as the return to one or more individual resources such as labor and management.

Net Farm Income is the 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 annual net 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 measured later in this report.

Net farm income is computed both with and without appreciation. Appreciation represents the change in values caused by annual changes in prices of livestock, equipment, real estate inventory, and stocks and certificates (other than Farm Credit). Appreciation is a major factor contributing to changes in farm net worth and must be included for a complete profitability analysis.

Table 11.

Net Farm Income
21Western New York Fruit Farms, 1995

Item	21 Farms 1995	My Farm
Total accrual receipts	$575,127	$ _____
+ Appreciation:		
Livestock	0	_____
Equipment	11,861	_____
Real estate	14,219	_____
Other - Stocks & certificates	+6,933	+ _____
= Total accrual receipts with appreciation	$608,140	$ _____
- Total accrual expenses	-517,222	- _____
= Net farm income with appreciation	$ 90,918	$ _____
Net farm income without appreciation	$ 57,905	$ _____

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

Table 12.

Return to Operators' Labor, Management, and Equity Capital
21 Western New York Fruit Farms, 1995

Item	21 Farms 1995	My Farm
With appreciation:		
Net farm income	$ 90,918	$ _____
- Family unpaid labor @ $1,450 per month	-676	- _____
= Return to operators' labor, management, & equity	$ 90,242	$ _____
Without appreciation:		
Net farm income	$ 57,905	$ _____
- Family unpaid labor @ $1,450 per month	-676	- _____
= Return to operators' labor, management, & equity	$ 57,229	$ _____

Labor and Management Income is the return which farm operators receive for their labor and management used in operating the farm business. Appreciation is not included as part of the return to labor and management because it results from ownership of assets rather than management of the farm business. Labor and management income is calculated by deducting the opportunity cost of using equity capital, at a real interest rate of five percent, from the return to operators' labor, management, and equity capital excluding appreciation. The interest charge of five percent reflects the long-term average rate of return above inflation that a farmer might expect to earn in an investment of comparable risk.

Table 13.

Labor & Management Income
21 Western New York Fruit Farms, 1995

Item	21 Farms 1995	My Farm
Without appreciation:		
Return to operators' labor, management, & equity	$ 57,229	$ _____
- Real interest @ 5% on average equity capital	-34,591	_____
= Labor & management income per farm	$ 22,637	$ _____
Labor & management income per operator	$ 13,267	$ _____

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-operators' labor and management. The earnings or amount of net farm income allocated to labor and management is the opportunity cost of operators' labor and management estimated by the cooperators. Return on equity capital is calculated with and without appreciation. The rate of return on equity capital is determined by dividing the amount returned by the average farm net worth or equity capital.

Table 14.

Return on Equity Capital and Return on Total Capital,
21 Western New York Fruit Farms, 1995

Item	21 Farms 1995	My Farm
Average equity capital	$691,828	$_____
Average total capital	$1,069,901	$_____
Returns with appreciation:		
Return to operators' labor, management & equity capital	$ 90,242	$_____
- Value of operators' labor & management	-56,692	-_____
= Return on average equity capital	$ 33,550	$_____
+ Interest paid	+31,242	+_____
= Return on average total capital	$ 64,792	$_____
Rates of return (with appreciation) on:		
Average equity capital	4.8%	_____%
Average total capital	6.1%	_____%
Returns without appreciation:		
Return on average equity capital with appreciation	$ 33,550	$_____
- Total appreciation	-33,013	-_____
= Return on average equity capital	$ 537	$_____
+ Interest paid	+31,242	+_____
= Return on average total capital	$ 31,779	$_____
Rates of return (without appreciation) on:		
Average equity capital	0.1%	_____%
Average total capital	3.0%	_____%

Cash Flow Statement

Completing an annual cash flow statement is an important step in understanding the sources and uses of funds for the business. Understanding last year's cash flow is the first step toward planning and managing cash flow for the current and future years.

The **Annual Cash Flow Statement** is structured to compare all the cash inflows with all the cash outflows for the year. A complete list of cash inflows and cash outflows is included in Table 15. By definition, total cash inflows must equal total cash outflows when beginning and end balances are included. Any imbalance is, therefore, the error from incorrect accounting of cash inflows and cash outflows.

Table 15.

Annual Cash Flow Statement, 21 Western New York Fruit Farms, 1995

Item	21 Farms 1995	My Farm
Cash Inflows		
Beginning farm cash, checking, & savings	$ 18,821	$ _____
Cash farm receipts	532,562	_____
Sale of assets:		
Equipment	1,675	_____
Real estate	737	_____
Other stocks & certificates	311	_____
Money borrowed:		
Increase in operating debt	25,387	_____
Short-term	57	_____
Intermediate	10,677	_____
Long-term	9,484	_____
Refinanced debt	0	_____
Non-farm:		
Income	1,544	_____
Capital used in business	315	_____
Money borrowed	0	_____
Total Cash Inflows	$601,570	$ _____
Cash Outflows		
Cash farm expenses (excluding interest paid)	$435,343	$ _____
Capital purchases:		
Expansion orchard	12,831	_____
Equipment	21,183	_____
Real estate	9,224	_____
Other stocks & certificates	3,042	_____
Debt payments:		
Principal payments for -		
Decrease in operating debt	0	_____
Short-term	2,514	_____
Intermediate	12,215	_____
Long-term	9,476	_____
Refinanced debt	0	_____
Interest paid	25,785	_____
Personal withdrawals & family expenditures including non-farm debt payments & corporate operator labor costs	49,914	_____
Ending farm cash, checking & savings	19,834	_____
Total Cash Outflows	$601,360	$ _____
Imbalance (error)	$210	$ _____

Repayment Analysis

The second step in cash flow analysis is to compare the debt payments planned for this year with the amount actually paid. The measures listed below provide a number of different perspectives on the repayment performance of the business.

Table 16.

Farm Debt Payments Planned
21 Western New York Fruit Farms, 1995

	21 Fruit Farms			My Farm		
Debt Payments	Planned for 1995[1]	Actual Payments in 1995[2]	Planned for 1995	Planned for 1995	Actual payments 1995	Planned for 1995
Accts. payable (net reduction)	$ 0	$ 2,369	$ 0	$ _____	$ _____	$ _____
Operating (net reduction)	246	0	2,868	_____	_____	_____
Short-term (principal & int.)	1,143	2,745	1,053	_____	_____	_____
Intermediate (principal & int.)	15,598	19,076	15,860	_____	_____	_____
Long-term (principal & int.)	15,093	19,256	17,561	_____	_____	_____
Total debt payments	$32,080	$43,446	$35,340	$ _____	$ _____	$ _____
Payments as a percent of:						
Total accrual receipts	6%	8%		_____%	_____%	
Total accrual fruit receipts	6%	8%				
Payments per acre of:						
bearing fruit	$ 147	$ 199		$ _____	$ _____	
all fruit	$ 129	$ 174		$ _____	$ _____	
Payments/bushel of apples sold	$0.27	$0.37		$ _____	$ _____	

[1]If on the Fruit Farm Business Summary the previous year.
[2]Actual payments excluding refinanced debt.

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 this year's available cash flow. However, the critical question to many farmers and lenders is whether planned payments can be made in 1996. The worksheet provided in Table 18 can be used to estimate repayment ability which can then be compared to planned 1996 debt payments shown in Table 16.

Table 17.

Cash Flow Coverage Ratio
21 Western New York Fruit Farms, 1995

Item	21 Farms 1995	My Farm
Cash farm receipts	$525,552	$ _____
- Cash farm expenses	461,128	_____
+ Interest paid	25,785	_____
- Net personal withdrawals from farm[1]	48,370	_____
= Amount available for debt service (1)	$41,839	$ _____
Debt payments planned (2)	$32,080	$ _____
Cash Flow Coverage Ratio (1 ÷ 2)	1.30	_____

[1]Personal withdrawals and family expenditures less non-farm income and non-farm money borrowed.

Table 18.

Annual Cash Flow Worksheet, 1995 and 1996 Projection

Item		Average 21 Farms	My Farm, 1995 Total	Per bearing acre	Expected change	1995 projection
Average bearing acres of fruit		219				
Accrual Operating Receipts (per bearing acre)						
Apples:	Fresh	$1,274	$	$	$	$
	Processing	1,010				
All other fruit		177				
Other crops, livestock & products		4				
Custom work, storage & rent		112				
Other - including government receipts, refunds		53				
Total Operating Receipts		$2,629	$	$	$	$
Accrual Operating Expenses (per bearing acre)						
Labor:	Wages					
	regular	$ 238				
	picking	355				
	other part-time, seasonal	168				
	Other labor costs	180				
	Picker travel, labor camp exp.	17				
Equip:	Machine hire, rent, lease	60				
	Repairs, parts & auto exp.	105				
	Fuel, oil & grease	59				
Livestock:	All livestock expense	1				
Crops:	Fertilizer & lime	58				
	Replacement trees & plants	6				
	Spray	284				
	Supplies, other prod. exp.	58				
	Storage	91				
	Packing supplies, marketing, selling exp.	19				
Real Est.:	Repair - land, bldg., fences	14				
	Taxes	55				
	Rent & lease	52				
Other:	Insurance - fire, liability crop	35				
	Utilities - phone, electricity	37				
	Resale items - fruit, etc.	49				
	Miscellaneous	46				
Total Operating Expenses Excluding Interest		$1,987	$	$	$	$
Repayment Analysis (Total)						
Net accrual operating income exc. interest		$140,327	$			$
- Change in livestock & crop inv.		13,385				
- Change in accounts receivable		36,189				
+Change in crop & supply inv.		(1,788)				
+Change in accounts payable exc. interest		1,244				
Net Operating Cash Flow		$90,209	$			$
- Net personal withdrawals		48,370				
Available for debt payments, invest.		$41,839	$			$
- Farm debt payments: principal & interest		43,446				
Available for farm investment		$(1,607)	$			$
Capital purchases		$46,280	$			$
Additional capital needed		$47,887	$			$

Capital Efficiency Analysis

Capital efficiency factors measure how intensively capital is being used in the farm business. As capital needs grow, capital management becomes more important.

Capital turnover is a measure of capital efficiency as it shows the number of years of farm receipts required to equal or "turnover" the capital investment. It is computed by dividing the average farm asset value by the year's total farm accrual receipts and appreciation.

Table 19.

Capital Efficiency Analysis
21 Western New York Fruit Farms, 1995

Item	Average Capital Investment			
	Per worker equivalent	Per Bearing Acre: Owned	Per Bearing Acre: Operated	Per all fruit acres
Assets				
Total farm capital	$90,306	$6,562	$4,891	$4,292
Real estate	41,159	2,991	N/A	1,956
All equipment	9,173	N/A	497	436
Capital turnover, years 1.76				
My Farm:				
Total farm capital	$_____	$_____	$_____	$_____
Real estate	_____	_____	_____	_____
All equipment	_____	_____	_____	_____
Capital turnover, years _____				

Equipment Analysis

Equipment costs comprised nearly 18 percent of the cost of fruit production in 1995. Total equipment expenses include the major fixed costs (interest and depreciation) as well as the accrual operating costs.

Table 20.

Accrual Equipment Expenses
21Western New York Fruit Farms, 1995

Item	Average 21 Fruit Farms: Total equip. cost	Equipment cost per fruit acre operated: Bearing	All fruit	My Farm: Total equip. cost	Equipment cost per fruit acre operated: Bearing	All fruit
Annual Accrual Cost						
Machine hire, equip. rent, lease	$13,123	$ 60	$ 53	$ _____	$ _____	$ _____
Repair & parts	22,642	103	91	_____	_____	_____
Auto exp. - farm share	373	2	1	_____	_____	_____
Fuel, oil & grease	12,951	59	52	_____	_____	_____
Interest - avg. cap. @5%	10,842	50	43	_____	_____	_____
Depreciation	25,094	115	101	_____	_____	_____
Total Equipment Cost	$85,025	$389	$341	$ _____	$ _____	$ _____

Labor Analysis

The efficient use of labor is closely related to farm profitability. Measures of labor efficiency or productivity are key indicators of management's success. Labor is the largest single cost category on fruit farms.

Table 21.
Labor Force Inventory and Analysis, 21 Western New York Fruit Farms, 1995

Labor Force	Full-time months	Age, years	Years of Education	Value of labor/mgmt.
Average:				
Operator -				
number 1	9.8	48	15	$27,816
number 2	5.8	43	14	16,325
number 3	3.9	40	14	9,997
number 4	0.9	41	16	2,555
Family unpaid	0.5		Total	$56,693
Family paid	6.5		Avg./oper.	$33,154
Hired -				
regular	27.1			
picking	63.8			
other part-time, seasonal	23.8			
Total	142.2	mo./12 =	11.85 worker equivalent 1.71 oper./manager equiv.	
My Farm:				
Total	_____	mo./12 =	____ worker equivalent	
Operators	_____	mo./12 =	____ oper./manager equiv.	

Labor Efficiency	Average Total	Average Per Worker	My Farm Total	My Farm Per Worker
Bearing fruit, acres	218.8	18.5	_____	_____
Total fruit, acres	249.3	21.0	_____	_____
Apples sold, bushels	114,492	9,664	_____	_____
Accrual receipts	$575,127	$48,544	$_____	$_____
Accrual fruit receipts	$538,334	$45,439	$_____	$_____

Labor Cost or Value

Type	Annual Accrual Cost: Average 21 Farms Total	Average 21 Farms Per worker equiv.	Average 21 Farms Per bearing acre	My Farm Total	My Farm Per worker equiv.	My Farm Per bearing acre
Value of operator(s) labor @ $1,450/mo.	$ 29,690	$ 2,505	$ 136	$ _____	$ _____	$ _____
Family unpaid @ $1,450/mo.	676	57	3	_____	_____	_____
Family paid (excl. operator)	11,781	994	54	_____	_____	_____
Hired -						
regular (excluding operator)	58,697	4,953	268	_____	_____	_____
picking	96,415	8,136	441	_____	_____	_____
other part-time, seasonal	42,979	3,627	196	_____	_____	_____
All labor (incl. non-cash)	$240,239	$20,272	$1,098	$ _____	$ _____	$ _____
All equipment cost	85,025	7,175	389	_____	_____	_____
Total labor & equip. cost	$325,264	$27,497	$1,487	$ _____	$ _____	$ _____

Cropping Program Analysis

The cropping program is the central part of a fruit farm business. 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 choices. In the table below, average crop acres and yields are presented for the number of farms reporting each crop.

Table 22.
Land Resources and Crop Production, 21 Western New York Fruit Farms, 1995

Item	Average 21 Farms Owned	Rented	Total	My Farm Owned	Rented	Total
Land Class (end of year)						
Bearing fruit, acres	163.0	55.7	218.8			
Non-bearing fruit, acres	25.8	4.7	30.5			
Other crops, open, acres	30.3	4.7	35.1			
Non-tillable pasture, acres	3.3	0.0	3.3			
Other non-tillable, acres	29.4	4.7	34.1			
Total land operated	251.9	69.8	321.7			

Crop Production	For farms having the fruit: No. of farms	Average acres	Yield per acre	Total acres	Yield per acre
Bearing Fruit:					
Apples - fresh	21	93.1	495 bu.		bu.
processing	21	92.3	774 bu.		bu.
all apples	21	185.4	634 bu.		bu.
Cherries - sweet	8	10.3	6,254 lb.		lb.
tart	11	35.4	7,213 lb.		lb.
Grapes	1	7.8	9.1 tn.		tn.
Peaches	7	10.8	116 bu.		bu.
Pears	10	10.4	213 bu.		bu.
Plums, prunes	6	2.8	170 bu.		bu.
Other fruit	3	7.9			
Total bearing fruit	21	218.8			
Non-Bearing Fruit:					
Apples - fresh	19	26.3			
processing	3	33.3			
Cherries- sweet	4	2.9			
tart	1	11.2			
Other non-bearing	6	2.6			
Total non-bearing fruit acres	21	30.5			
Other Crops, Open:					
Other	18	40.9			

Cost Control Factors

The control of costs is an important factor in the success of modern commercial fruit farm businesses. But before they can be controlled, they must be known. A major reason for farm business analysis is to identify the most significant cost items so cost control decisions can be encouraged as warranted. However, the optimum level of input items used to obtain the greatest net return is difficult to determine.

Farm managers have substituted power and equipment for labor to a large degree. With labor and equipment costs in excess of 50 percent of total production costs on fruit farms, it is important to know and control these and other costs on a production unit basis.

Table 23.

Cost Control Factors
21 Western New York Fruit Farms, 1995

Item	Cost Per Fruit Acre Operated	
	Bearing acres	All fruit acres
All labor - including operators' labor	$1,098	$964
Picking labor	441	387
Other hired labor	519	455
All equipment cost	389	341
Spray	284	249

PROGRESS OF THE FARM BUSINESS

Comparing your business with average data from other fruit farms can be a helpful part of a business checkup. While a wide variation in business size and composition exists in this group of fruit farms, many of the factors will provide a meaningful indication of how you compare with other fruit farms. It is, perhaps, even more important for you to determine the progress your business has made over the past two or three years and to set goals for the future.

The tables on the following pages provide the opportunity for you to compare your business factors with averages for the participating farms for the past three years. It also encourages you to set some goals toward which to strive as you measure the progress of your farm business over the years.

Table 24.

Progress of the Fruit Farm Business, Western New York Fruit Farms, 1993-1995

Selected Factors	1993	1994	1995
Number of farms	20	20	21
Size of Business			
All cropland including fruit, acres	295	278	284
All fruit including non-bearing, acres	270	243	249
Bearing fruit, acres	237	213	219
Bearing apples, acres	195	179	185
Fresh - percent of all apple acres	50%	50%	50%
Apples produced, bushels	89,046	103,644	117,553
Apples sold, bushels	94,019	106,355	114,492
Worker equivalent	10.62	10.64	11.85
Total accrual operating receipts	$435,358	$480,820	$575,127
Rates of Production			
All apples, bushels per bearing acre	456	581	634
Fresh - percent of apples harvested	41%	39%	39%
Cherries - tart, pounds per bearing acre	4,340	8,041	7,213
Pears, bushels per bearing acre	221	279	213
Non-bearing to bearing acre ratio	14%	14%	14%
Labor Efficiency			
Bearing fruit, acres per worker	22	20	18
All fruit, acres per worker	25	23	21
Accrual receipts per worker	$40,988	$45,184	$48,544
Cost Control - Accrual			
Cost per bearing acre:			
All labor	$875	$992	$1,098
All equipment	$354	$359	$389
Spray	$253	$273	$284
Hired labor as percent of operating expenses	42%	46%	45%
Capital Efficiency - Average for the Year			
Total farm capital per bearing acre	$3,884	$4,020	$4,891
Total farm capital per fruit acre	$3,406	$3,528	$4,292
Capital turnover, years	2.0	1.7	1.8
Profitability			
Net farm income:			
Without appreciation	$(41,595)	$38,941	$57,905
With appreciation	$(26,753)	$63,080	$90,918
Labor & management income per operator	$(39,067)	$8,836	$13,267
Rate of return to average capital with appreciation:			
Equity capital	-13.8%	2.8%	4.8%
Total capital	-7.2%	4.8%	6.1%
Financial Summary - End of Year			
Farm:			
Net worth	$574,704	$512,543	$716,087
Debt to asset ratio	0.37	0.42	0.35
Debt per bearing acre	$1,426	$1,723	$1,772
Cash flow coverage ratio	0.18	1.49	1.52

Table 25.
Progress of the Fruit Farm Business, Same Summary Farms, Western New York, 1993-1995

Selected Factors	Average per Farm, Same 16 Farms in: 1993	1994	1995
Size of Business			
All cropland including fruit, acres	281	290	293
All fruit including non-bearing, acres	258	256	256
Bearing fruit, acres	227	223	222
Bearing apples, acres	182	183	183
Fresh - percent of all apple acres	45%	45%	45%
Apples produced, bushels	82,161	108,120	115,125
Apples sold, bushels	90,892	111,497	109,755
Worker equivalent	10.58	11.07	12.02
Total accrual operating receipts	$421,572	$503,362	$567,376
Rates of Production			
All apples, bushels per bearing acre	452	592	628
Fresh - percent of apples harvested	38%	37%	37%
Cherries - tart, pounds per bearing acre	4,324	7,730	6,998
Pears, bushels per bearing acre	221	282	222
Non-bearing to bearing acre ratio	14%	15%	15%
Labor Efficiency			
Bearing fruit, acres per worker	21	20	18
All fruit, acres per worker	24	23	21
Accrual receipts per worker	$39,833	$45,458	$47,183
Cost Control - Accrual			
Cost per bearing acre:			
All labor	$846	$955	$1,057
All equipment	$346	$367	$386
Spray	$242	$268	$281
Hired labor as percent of operating expenses	41%	45%	45%
Capital Efficiency - Average for the Year			
Total farm capital per bearing acre	$3,892	$4,024	$4,460
Total farm capital per fruit acre	$3,422	$3,504	$3,877
Capital turnover, years	2.0	1.7	1.7
Profitability			
Net farm income:			
Without appreciation	$(20,709)	$45,174	$54,806
With appreciation	$(10,574)	$69,693	$83,096
Labor & management income per operator	$(25,488)	$12,253	$14,897
Rate of return to average capital with appreciation:			
Equity capital	-13.1%	3.8%	4.4%
Total capital	-5.7%	5.4%	5.8%
Financial Summary - End of Year			
Farm:			
Net worth	$515,366	$542,002	$618,589
Debt to asset ratio	0.41	0.41	0.40
Debt per bearing acre	$1,601	$1,711	$1,834
Cash flow coverage ratio	0.33	1.69	1.28

Table 26.

Progress of the Fruit Farm Business, My Farm, 1993-1995

Selected Factors	1993	1994	1995	Goal
Size of Business				
All cropland incl. fruit, acres				
All fruit incl. non-bearing, acres				
Bearing fruit, acres				
Bearing apples, acres				
Fresh - % of all apple acres	%	%	%	%
Apples produced, bushels				
Apples sold, bushels				
Worker equivalents				
Total accrual oper. receipts	$	$	$	$
Rates of Production				
All apples, bushels/bearing acre				
Fresh - % of apples harvested	%	%	%	%
Cherries - tart, lbs./bearing acre				
Pears, bushels/bearing acre				
Non-bearing to bearing acre ratio	%	%	%	%
Labor Efficiency				
Bearing fruit, acres/worker				
All fruit, acres/worker				
Accrual receipts/worker	$	$	$	$
Cost Control - Accrual				
Cost/bearing acre:	$	$	$	$
All labor	$	$	$	$
All equipment	$	$	$	$
Spray	$	$	$	$
Hired labor as % of oper. exp.	%	%	%	%
Capital Efficiency - Average for the Year				
Total farm capital/bearing acre	$	$	$	$
Total farm capital/fruit acre	$	$	$	$
Capital turnover, years				
Profitability				
Net farm income:				
Without appreciation	$	$	$	$
With appreciation	$	$	$	$
Labor & mgmt. income/oper.	$	$	$	$
Rate of return to average capital w/apprec.:				
Equity capital	%	%	%	%
Total capital	%	%	%	%
Financial Summary - End of Year				
Farm:				
Net worth	$	$	$	$
Debt to asset ratio				
Debt/bearing acre	$	$	$	$
Cash flow coverage ratio				

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