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SUMMARY FARM S FRUIT S USINE

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LAKE ONTARIO REGION NEW YORK 1992

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ABSTRACT

This report is a summary of 1992 farm business data collected from 22 fruit farm businesses located in Western New York State. Apples are the predominant fruit crop. The data are presented as averages for all 22 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

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1992 FRUIT FARM BUSINESS SUMMARY LAKE ONTARIO REGION

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1992 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 1992.

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 81 percent of the receipts in 1992 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 22 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 27.9 million bushels in 1992. Western New York growers produced 18.1 million bushels or about 65 percent of the total State crop. Statewide, production was up 11 percent and in Western New York it was up about six percent compared to 1991.

Twenty-eight percent of the 1992 apple crop produced in Western New York was sold fresh. This was up from 25 percent of the crop for 1991. The 1992 fresh crop was 5.0 million bushels - up 16 percent from 1991. Processing apple production in Western New York increased two percent from 1991 to 13.1 million bushels for 1992. Seventytwo percent of the Western New York crop was processing apples.

Net Freight-On-Board (F.O.B.) prices received per bushel for fresh apples in Western New York averaged \$6.68 per bushel, 22 percent lower than in 1991. The bulk price for fresh apples was \$4.70 per bushel. Western New York processing apple prices averaged \$2.79 per bushel or 6.6 cents per pound in 1992, 15 percent below 1991.

Statewide, fresh apple prices received by growers averaged \$5.96 per bushel net F.O.B., \$2.48 per bushel lower than the average 1991 price. Processing apples, produced mostly in Western counties, averaged \$2.70 per bushel or 6.5¢ per pound for 1992.

Item	1988	1989	1990	1991	1992
Production		r	nillion bushels	\$	
Fresh Apples Western New York New York State	3.5 9.6	5.2 10.5	5.5 12.4	4.3 10.0	5.0 12.4
Processing Apples Western New York New York State	10.1 12.0	11.0 12.4	9.8 11.2	12.9 15.0	13.1 15.5
All Varieties Western New York New York State	13.6 21.7	16.2 22.9	15.2 23.6	17.1 25.0	18.1 27.9
Average Price Received Per Bushel			dollars		
Fresh Apples Western New York F.O.B. less pkg.,					
stg., etc. Bulk price Fruit Farm Business S	6.09 4.62 Sum. 5.07	6.03 4.83 4.96	8.65 4.83 5.50	8.61 4.90 6.07	6.68 4.70 4.59
New York State F.O.B. less pkg.,					
stg., etc. Bulk price	6.43 4.62	6.22 4.83	7.48 4.83	8.44 4.90	5.96 4.70
Processing Apples Western New York	3.15	2.87	3.25	3.27	2.79

Apple Production and Prices, New York State, 1988-1992 Table 1.

Source: New York Agricultural Statistics Service, FRUIT series, Seasonal releases for July 1989, 1990, 1991, 1992, and 1993 and the annual Fruit Farm Business Summaries.

2.93

2.81

3.02

Fruit Farm Business Sum. 2.86

New York State

3.34

3.15

3.01

3 19

2.88

2.70

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, 22 Western New York Fruit Farms, 1992

Type of Busin	ess <u>Number</u>	Business Record System	Number
Proprietors Partnerships Corporations	6 7 9	Account Book Agrifax (mail-in) On-Farm Computer Other	6 0 16 0
	Business Composition	Number	
	Fruit production only Fruit with storage Fruit & other enterprises Fruit with storage & other ente	8 3 5 rprises 6	

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 22 fruit farm cooperators. It lists the average value of assets and liabilities for December 31, 1991 and December 31, 1992 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.

Decen	$10er_{31}$, 1	<u>991 & 199</u>	۲ <u>ــــــــــــــــــــــــــــــــــــ</u>		
Farm Assets	1991	1992	Farm Liabilities & Net Worth	1991	1992
Current	\$	\$	<u>Current</u> = < 1 year	\$	\$
Cash, checking, sav. Accounts receivable Prepaid expenses Fruit, other crops Production supplies Packing supplies	175,522 8,329 114,895	14,934 137,885 6,833 92,808 12,016 <u>1,028</u>	Accounts payable Operating debt Short-term Advanced gov't receipts Accrued interest	9,879 59,698 4,860 0 0	96,819
Total Current	332,592	265,504	Total Current	74,437	126, 197
Intermediate			<u>Intermediate</u> = > 1 to < 10	years	
Livestock Livestock leased Equipment owned Equipment leased Farm Credit stock Other stock, cert.	0 0 180,344 10,647 5,430 <u>51,489</u>	0 0 192,698 13,952 6,252 <u>56,680</u>	Structured debt Financial lease-livestock equipment FLB/PCA stock	41,799 10,647 <u>5,430</u>	13,952
Total Intermediate <u>Long-Term</u>	247,910	269,582	Total Intermediate <u>Long-Term</u> = > 10 years	57,876	59,966
Land/Buildings: Owned Structures leased	410,885 0	422,364 0	Structured debt Financial lease - structures	118,492 0	114,595 0
Total Long-Term	410,885	422,364	Total Long-Term Total Farm:	118,492	114,595
Total Farm: Assets	991,387	957,451	Liabilities Net Worth Liabilities & Net Worth	740,582	300,759 656,692 957,451
Table 3a. Nonfa	rm Assets	& Liabiliti	es		
NonFarm Assets	1991	1992	NonFarm Liabilities	1991	1992
Cash, checking, sav. Life inscash value Real estate Auto (pers. share)	5,262 8,665 1,818 1,727	5,536 9,456 1,818 1,591		3,773	3,273

Table 3.Farm Business Balance Sheet, 22 Western New York Fruit Farms,
December 31, 1991 & 1992

1991	1992	NonFarm Liabilities	1991	1992
5,262	5,536		3,773	3,273
1,727	1,591			
11,970	11,827			
909	977			
15,115	8.289			
		Total Nonfarm: Liab.	3,773	3,273
45.566	39,494	Net Worth	41.694	36,221
·	·	Liabilities & Net Worth	45,466	39,494
	Farm	and Nonfarm		
,036,853	996,944	Liabilities	254,577	
		Liabilities & Net Worth	1,036,853	996,944
	5,262 8,665 1,818 1,727 11,970 909 15,115 45,566	5,262 5,536 8,665 9,456 1,818 1,818 1,727 1,591 11,970 11,827 909 977 15,115 8,289 45,566 39,494 Farm 5	5,262 5,536 8,665 9,456 1,818 1,818 1,727 1,591 11,970 11,827 909 977 15,115 8,289 45,566 39,494 Yet Worth Liabilities & Net Worth Farm and Nonfarm	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

Farm Assets	1991	1992	Farm Liabilities & Net Worth	1991	1992
Current	\$	\$	<u>Current</u> = < 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			<u>Intermediate</u> = > 1 to < 10	years	
Livestock			Structured debt		_
Livestock leased					
Equipment owned					. <u> </u>
Equipment leased					
Farm Credit stock					
Other stock, cert.			Financial lease-livestock, equipment		
			Farm Credit stock		_
Total Intermediate			Total Intermediate		
Long-Term			<u>Long-Term</u> = > 10 years		
Land/Buildings:			Structured debt		
Owned			, ,		
Structures leased					
			Fianacial lease-struc.		
Total Long-Term			Total Long-Term		
			Total Farm:		
			Liabilities		
			Net Worth		
Total Farm Assets			Liabilities & Net Worth		

Table 4.Farm Business Balance Sheet, My Farm, December 31, 1991 & 1992

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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.

Item	22 Farms 1992	My Farm
	For the Farm B	usiness Only
Financial Ratios - end of year		
Percent equity	69%	%
Debt to asset ratios: Total debt Long-term Current & intermediate	0.31 0.27 0.35	
Change in Net Worth		
Without appreciation With appreciation	\$(89,406) \$(83,891)	\$ \$
Debt Analysis - end of year		
Percent of total farm debt that is: Long-term Current & intermediate Accounts payable only	38% 62% 7%	% %
Debt Levels - end of year		
Per bearing fruit acre: Total farm debt Long-term Current & intermediate	\$1,290 \$492 \$799	\$ \$ \$

Table 5.Farm Business Balance Sheet Analysis, 22 Western New York Fruit
Farms, December 31, 1992

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).

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.

Item	22 Farms 1992	My Farm
	For the Farm B	usiness Only
Financial Ratios - end of year		
Percent equity	69%	%
Debt to asset ratios: Total debt	0.31	
Long-term	0.27	
Current & intermediate	0.35	
Change in Net Worth		
Without appreciation	\$(89,406)	\$
With appreciation	\$(83,891)	\$
Debt Analysis - end of year		
Percent of total farm debt that is:		
Long-term	38%	9
Current & intermediate	62%	0
Accounts payable only	7%	9
<u>Debt Levels</u> - end of year		
Per bearing fruit acre:		
Total farm debt	\$1,290	\$
Long-term Current & intermediate	\$492 \$799	¢

Table 5.Farm Business Balance Sheet Analysis, 22 Western New York Fruit
Farms, December 31, 1992

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).

	22 Fruit Farms		My Farm	
Inventory Balance	Real Estate	Equipment	Real Estate	Equipment
Beginning of year (1)	\$410,885	\$180,344	\$	\$
Purchases	\$20,449 ¹	\$35,319		
+ Noncash transfer to farm	2,786	0		
- Lost capital	2,064	0		
- Sales	2,409	2,378		
- Depreciation	10,241	21,012		
= Net investment (2)	\$8,521	\$11,929		
Appreciation (3 - 1 - 2)	2,958 ²	425		
End of year (3)	\$422,364	\$192,698		

Table 6.Farm Inventory Balance, 22 Western New York Fruit Farms, 1992

¹Purchase includes \$3,612 for land and \$16,837 for buildings. ²Real estate appreciation excludes \$0 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.

Expenses	Cash amount paid +	Change in inventory or prepaid	Change in accounts + payable	Accrual = expenses
Hired Labor				
Wages: regular	\$ 42,270	\$ 0	\$ 0	\$ 42,270
picking	83,628	0	(3)	83,625
other part-time,				
seasonal	35,299	0	0	35,299
Other labor costs	34,155	0	234	34,389
Picker travel	1,198	0	0	1,198
Labor camp expenses	4,249	0	(5)	4,244
Equipment				
Machine hire, rent, lease	14,846	0	(71)	14,776
Repairs & parts	26,100	233	37	26,370
Auto expense - farm share	654	0	0	654
Fuel, oil & grease	13,355	220	25	13,599
Livestock				
All livestock expenses	0	(155)	0	(155)
				· ·
Crops				
Fertilizer & lime	12,729	295	0	13,023
Replacement trees & plants	935	0	0	935
Spray	68,106	(1,865)	727	66,968
Supplies, other prod. expense		(71)	4	12,669
Processing & packing supplies		171	0	1,107
Storage	11,803	0	42	11,845
Marketing, selling expenses	1,022	0	0	1,022
<u>Real Estate</u>				
Repair - land, bldg., fences	6,418	0	0	6,418
Taxes	9,196	0	10	9,206
Rent & lease	12,669	0	(1,704)	10,965
<u>Other Expenses</u> Insurance:				
fire, liability	7,704	(124)	0	7,580
crop	470	0	0	470
Telephone - farm share	1,172	0	1	1,173
Electricity - farm share	5,968	0	20	5,988
Fruit purchased for resale	3,846	0	225	4,071
Interest paid	14,906	0	0	14,906
Miscellaneous	13,038	0	6,279	19,317
	¢420 400	¢(1,000)	¢ = 000	¢ / / 0 0 0 0
TOTAL OPERATING EXP.	\$439,406	\$(1,296) (350)	\$ 5,822 (171)	\$443,932
Expansion orchard	12,247	(359)	(171)	11,718
Depreciation:				21,012
equipment				4,759
buildings bearing trees & vines				4,759 5,482
2				
TOTAL ACCRUAL EXPENSES				\$486,903

 Table 7.
 Income Statement - Farm Expenses, 22 Western New York Fruit Farms, 1992

Expenses	Cash amount paid +	Change in inventory or prepaid expenses	Change in accounts + payable	Accrual = expenses
			+ payable	- cxpcn3c3
Hired Labor Wages: regular picking other part-time,	\$	\$	\$	\$
seasonal Other labor costs Picker travel				
Labor camp expenses				
<u>Equipment</u> Machine hire, rent, lease Repairs & parts Auto expense - farm share Fuel, oil & grease				
Livestock All livestock expenses				
<u>Crops</u> Fertilizer & lime Replacement trees & plants				
Spray				
Supplies, other prod. expense Processing & packing supplies				
Storage			·	·
Marketing, selling expenses				
<u>Real Estate</u> Repair - land, bldg., fences Taxes Rent & lease				
<u>Other Expenses</u> Insurance: fire, liability				
crop				
Telephone - farm share				
Electricity - farm share Fruit purchased for resale				·
Interest paid				
Miscellaneous				· · · · · · · · · · · · · · · · · · ·
TOTAL OPERATING EXP. Expansion orchard	\$	\$	\$	\$
Depreciation:				
equipment buildings bearing trees & vines				
TOTAL ACCRUAL EXPENSES				\$

 Table 8.
 Income Statement, Farm Expenses, My Farm, 1992

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Receipts	Cash receipts +	Change in inventory ¹	+	Change in accounts receivable	=	Accrual receipts
Apples: fresh	\$206,029	\$(20,375)		\$21,342		\$206,996
processing	219,825	(1,396)		(9,811)		208,619
Cherries: sweet	4,017			0		4,017
tart	43,035			(20,229)		22,806
Grapes	611			27		638
Peaches	5,748			(23)		5,725
Pears	9,053			504		9,556
Plums & prunes	762			990		1,752
All other fruit	3,281	173		0		3,453
Other crops, livestock & prod.	1,254	(489)		Ó		765
Custom work, storage, rent	20,069			2,217		22,286
Other - including government				,		_,
receipts, refunds	13,036	0^{2}		302		13.337
- Non-farm non-cash capital	-,	(430) ³				(430)
TOTAL OPERATING RECEIPTS	\$526,718	\$(22,517)		\$(4,680)		\$499,521

Table 9.	Income Statement,	Farm Receipts.	22 Western New	York Fruit Farms,	1992
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¹Change in crop and livestock products inventory. ²Change in advanced government receipts.

³Gifts 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.

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	(-)		(-)
- Non furni non-casil capital	,	/		· ·
TOTAL OPER. RECEIPTS	\$	\$	\$	\$
	Ψ	Ψ	Ψ	Ψ

Table 10. Income Statement, Farm Receipts, My Farm, 1992

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.

Item	24 Farms 1991	My Farm	
Total accrual receipts	\$499,521	\$	
+ Appreciation:			
Livestock	(489)		
Equipment	425		
Real estate	2,958		
Other - Stocks & certificates	+1.644	+	
- Total accrual receipts with appreciation	\$505,037	\$	
Total accrual expenses	-486,903		
= Net farm income with appreciation	\$18,134	\$	
Net farm income without appreciation	\$12,618	\$	

Table 11.Net Farm Income, 22 Western New York Fruit Farms, 1992

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.

Item	22 Farms 1992	My Farm	
With appreciation: Net farm income	\$18,134	\$	
- Family unpaid labor @ \$1,350 per month	<u>-245</u>	•	
 Return to operators' labor, management, & equity 	\$17,889	\$	
Without appreciation: Net farm income - Family unpaid labor @ \$1,350 per month	\$12,618 245	\$ 	
 Return to operators' labor, management, & equity 	\$12,373	\$	

Table 12.Return to Operators' Labor, Management, and Equity Capital
22 Western New York Fruit Farms, 1992

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, 22 Western New York Fruit Farms, 1992

ltem	22 Farms 1992	My Farm	
Without appreciation:			
Return to operators' labor, management, & equity	\$12,373	\$	
- Real interest @ 5% on average equity capital	<u>-34,932</u>		
= Labor & management income per farm	\$(22,559)	\$	
Labor & management income per operator	\$(12,400)	\$	

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.

Item	22 Farms 1992	My Farm	
Average equity capital	\$698,637	\$	
Average total capital	\$974,419	\$	
Returns with appreciation:			
Return to operators' labor, management			
& equity capital	\$17,889	\$	
- Value of operators' labor & management	<u>-56,999</u>		
= Return on average equity capital	\$(39,111)	\$	
+ Interest paid	<u>+14,906</u>	+	
= Return on average total capital	\$(24,205)	\$	
Rates of return on:			
Average equity capital	-5.6%	%	
Average total capital	-2.5%	%	
Returns without appreciation:			
Return on average equity capital			
with appreciation	\$(39,111)	\$	
- Total appreciation	<u>-5.515</u>		
= Return on average equity capital	\$(44,626)	\$	
+ Interest paid	<u>14.906</u>	+	
= Return on average total capital	\$(29,721)	\$	
Rates of return on:			
Average equity capital	-6.4%	%	
Average total capital	-3.1%	%	

Table 14.Return on Equity Capital and Return on Total Capital,
22 Western New York Fruit Farms, 1992

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.

Item	22 Farms 1992	My Farm
Cash Inflows		
Beginning farm cash, checking, & savings	\$ 21,973	\$
Cash farm receipts	527,471	
Sale of assets:		
Equipment	2,378	
Real estate	2,306	
Other stocks & certificates	2,327	
Money borrowed:	04.000	
Increase in operating debt	34,030	
Short-term	8,464	
Intermediate	4,778	
Long-term Refinanced debt	10,999	
Non-farm:	0	
Income	1,576	
Capital used in business	9,896	
Money borrowed	9,890 45	
Money borrowed	-10	
Total Cash Inflows	\$626,243	\$
<u>Cash Outflows</u>		
Cash farm expenses (excluding interest paid)	\$424,501	\$
Capital purchases:		
Expansion orchard	12,247	
Equipment	35,319	
Real estate	20,449	
Other stocks & certificates	5,875	
Debt payments:		
Principal payments for -		
Decrease in operating debt	0	
Short-term	2,783	
Intermediate	6,814	
Long-term	14,895	
Refinanced	0	
Interest paid	14,906	···-
Personal withdrawals & family expenditures in non-farm debt payments & crop operator labor		
Ending farm cash, checking & savings	<u> 14.934 </u>	
Total Cash Outflows	\$624,511	\$
Imbalance (error)	\$1,731	\$

Table 15.Annual Cash Flow Statement, 22 Western New York Fruit Farms, 1992

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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, 22 Western New York Fruit Farms, 1992

	22 Planned	Fruit Fari Actual	<u>ms</u> Planned	Planned	My Farm Actual	Planned
Debt Payments	for	Payments in 1992 ²			payments 1992	for 1993
Accts. payable (net reduction) Operating (net reduction) Short-term (principal & int.) Intermediate (principal & int.) Long-term (principal & int.)	\$ 1,864 8,204 1,723 6,188 <u>17,726</u>	0 2,845 9,310	\$ 727 9,090 682 6,507 <u>15,438</u>	\$ 	\$ 	\$
Total debt payments	\$35,704	\$34,152	\$32,444	\$	\$	
Payments as a percent of: Total accrual receipts Total accrual fruit receipts	7% 8%			%	%	
Payments per acre of: bearing fruit all fruit Payments/bushel of apples sole	\$153 \$138 d \$0.29	\$132		\$ \$ \$	\$ \$ \$	

¹If on the Fruit Farm Business Summary the previous year. ²Actual 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 1993. The worksheet provided in Table 18 can be used to estimate repayment ability which can then be compared to planned 1993 debt payments shown in Table 16.

Table 17.Cash Flow Coverage Ratio, 22 Western New York Fruit Farms, 1992

Item	22 Farms 1992	My Farm
Cash farm receipts	\$527,47 1	\$
- Cash farm expenses	439,406	
+ Interest paid	14,906	
- Net personal withdrawals from farm ¹	70,167	
= Amount available for debt service (1)	\$32,803	\$
Debt payments planned (2)	\$35,704	\$
Cash Flow Coverage Ratio (1 ÷ 2)	0.92	

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

Item		Average 22 Farms	<u>My Fa</u> Total	rm. 1992 Per bear- ing acre	Expected change	
Item						
Average b	earing acres of fruit	233				
Accrual (Operating Receipts	.	.	•	.	•
Apples:	Fresh	\$ 888	\$	\$	\$	\$
All other	Processing	895				
All other	ps, livestock & products	206 3	-,			
	vork, storage & rent	96				
Other - in	cluding government	30				
receints	, refunds	55				
	perating Receipts	\$2,143	\$	\$	\$	\$
Accrual C	Derating Expenses					
Labor:	Wages					
	regular	181				
	picking	359				
	other part-time, season					
	Other labor costs	148				
	Picker travel, labor camp					
Equip:	Machine hire, rent, lease					
	Repairs, parts & auto ex					
	Fuel, oil & grease	58				
	: All livestock expense	(1)			<u> </u>	
Crops:	Fertilizer & lime	56				
	Replacement trees & pla	nts 4				
	Spray	287				
	Supplies, other prod. exp	p. 54		·	<u> </u>	
	Storage	51		·		
	Packing supplies, marke	sting, 9				
Real Fet	selling exp. : Repair - land, bldg., fenc		o			
Real Est.	Taxes	39				
	Rent & lease	47		·		
Other:	Insurance - fire, liab., cr					
outor.	Utilities - phone, elec.	31				
	Resale items - fruit, etc.	17				
	Miscellaneous	83				
Total Ope	erating Expenses					
Excludi	ing Interest	\$1,840	\$	\$	\$	\$
Renavme	ent Analysis					
	al operating income					
exclud	ling interest	\$70,494	\$			\$
	in livestock & crop inv.	(22,517)	\$			·
	in accounts receivable	(4,680)				
+ Change	in crop & supply inv.	(1,296)				
	in accounts payable	· · ·				
	ling interest	5,822				
Net Opera	ating Cash Flow	\$102,217	\$			\$
- Net pers	sonal withdrawals	70,167				
Available	for debt payments, invest	. \$32,051	\$			\$
- Farm de	ebt payments: principal					
& inter		34,152				- <u>+</u>
	for farm investment	\$(2,102)	\$			\$
	urchases	\$73,890	\$ \$ \$			\$ \$
Additiona	al capital needed	\$75,992	\$			\$

Table 18.Annual Cash Flow Worksheet, 1992 and 1993 Projection

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.

	Average Capital Investment						
Item	Per worker equivalent	Per Bear Owned	ing Acre: Operated	Per all fruit acres			
Assets							
Total farm capital	\$86,962	\$6,205	4,180	\$3,768			
Real estate All equipment	37,182 8,670	2,653 n/a	n/a 417	1,611 376			
All equipment	0,070		417	570			
Capital turnover, years 1.93							
My Farm:							
Total farm capital	\$	\$	\$	\$			
Real estate All equipment							
An equipment							
Capital turnover, years							

Table 19.Capital Efficiency Analysis, 22 Western New York Fruit Farms, 1992

Equipment Analysis

Equipment costs comprise nearly 20 percent of the cost of fruit production. Total equipment expenses include the major fixed costs (interest and depreciation) as well as the accrual operating costs.

Table 20.Accrual Equipment Expenses, 22 Western New York Fruit Farms, 1992

	Average 22 Fruit Farms			My Farm		
ltem	Total equip. cost	fruit acre	nt cost per <u>operated</u> : All fruit	Total equip. cost	Equipment fruit acre of Bearing	perated:
Annual Accrual Cost						
Machine hire, equip.						
rent, lease	\$14,776	\$ 63	\$ 57	\$	\$	\$
Repair & parts	26,370	113	102			
Auto exp farm share	654	3	3			
Fuel, oil & grease	13,599	58	53			
Interest - avg. cap. @5%	9,326	40	36			
Depreciation	21.012	<u> 90</u>	<u> 81 </u>			
Total Equipment Cost	\$85,737	\$368	\$332	\$	\$	\$

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.

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Farms, 1992				
Labor Force	Full-time months	Age, years	Years of Education	Value of labor/mgmt.
Average:				
Operator -				
number 1	11.0	45	15	\$28,934
number 2	5.9	41	13	15,064
number 3	4.3	38	14	10,833
number 4	0.7	46	15	2,169
Family unpaid	0.2			otal \$57,000
Family paid	2.4			per. \$26,125
Hired -				
regular	28.2			
picking	50.5			
other part-time, seasonal	31.4			
	0111			
Total	134.5 n		1.21 worker e 82 oper./ma	
My Farm:				
Total	n	no./12 =	worker eq	uivalent
Operators	n	no./12 =	oper./mai	nager equiv.
•				0 1
	Av	erage	My	Farm
Labor Efficiency	Total	Per Worker	Total	Per worker
Paaring fruit aarea	233.1	20.8		
Bearing fruit, acres	258.6	20.8 23.1		
Total fruit, acres				
Apples sold, bushels	114,655	10,232	<u>e</u>	-
Accrual receipts		44,580	\$	- <u>\$</u>
Accrual fruit receipts	463,562	41,370		_
Labor Cost or Value		Annual Acc	rual Cost	
	Average 22	Farms	Mv I	Farm
	Per	Per		Per Per
	worke	• •		orker bearing
Туре	Total equiv		Total eq	juiv. acre
Value of anomator (-) labor @				
Value of operator(s) labor @	¢ 00 470 \$10 00	ο ¢ 100	ф 4	
\$1,350/mo.	\$ 29,473 \$16,20		ক \$	\$\$
Family unpaid @ \$1,350/mo.	245 16,20		<u> </u>	
Family paid (excl. operator)	4,029 20,06	9 17		
Hired -	51 0EA 01 0A	0 000		
regular (excluding operator)	51,250 21,80			
picking	104,785 24,91			
other part-time, seasonal	<u>41.235</u> <u>15.77</u> \$231,018 \$20,61		\$ \$	<u> </u>
All labor (incl. non-cash)	φ201,010 φ20,01	1 4 221	ΦΦ	<u>م</u>

Table 21.	Labor Force Inventory and Analysis, 22 Western New York Fruit
	Farms, 1992

All equipment cost Total labor & equip. cost	<u>85,737 7,652 368</u> \$316,755 \$28,269 \$1,359	\$

\$

\$

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, 22 Western New York Fruit
Farms, 1992

Item	Average 22 Farms Owned Rented Total		<u>My Farm</u> Owned Rented Total		
Land Class (end of year) Bearing fruit, acres Non-bearing fruit, acres Other crops, open, acres Non-tillable pasture, acres Other non-tillable, acres Total land operated	35 244	6.6 6. 9 5. 4 0. 7 11.	7 31.7 5 7.9		
Crop Production		Average		Total acres	Yield per acre
Bearing Fruit: Apples - fresh processing all apples Cherries sweet tart Grapes Peaches Pears Plums, prunes Other fruit Total bearing fruit	22 22 22 7 12 2 9 12 7 4 22	89.599.9189.48.448.97.89.512.15.96.5233.1	501 bu. 765 bu. 640 bu. 2,300 lb. 7,330 lb. 4.6 tn. 194 bu. 279 bu. 124 bu.		bu. bu. lb. lb. lb. bu. bu. bu.
Non-Bearing Fruit: Apples fresh processing Cherries sweet tart Other non-bearing Total non-bearing fruit acres Other Crops, Open: Other	20 1 3 2 7 22 16	22.6 50.0 7.2 7.9 2.9 25.4 43.5			

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.

Farms, 1992				
	Cost Per Fruit Acre Operated			
Item	Bearing acres	All fruit acres		
All labor - including operators' labor	\$991	\$893		
Picking labor	449	405		
Other hired labor	414	3 73		
All equipment cost	368	332		
Spray	287	259		

Table 23.Cost Control Factors, 22 Western New York Fruit
Farms, 1992

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.

Farms, 1990-1992			
Selected Factors	1990	1991	1992
Number of farms	22	24	22
Size of Business			
All cropland including fruit, acres	257	257	290
All fruit including non-bearing, acres	222	233	259
Bearing fruit, acres	199	209	233
Bearing apples, acres	163 47%	171 48%	189
Fresh - percent of all apple acres Apples produced, bushels	80,510	98,244	47% 121,305
Apples sold, bushels	77,045	99,713	114,655
Worker equivalent	8.50	9.42	11.21
Total accrual operating receipts	\$409,840	\$557,217	449,521
Rates of Production			
All apples, bushels per bearing acre	495	575	640
Fresh - percent of apples harvested	43%	37%	_37%
Cherries - tart, pounds per bearing acre	3,987 259	8,867	7,330
Pears, bushels per bearing acre Non-bearing to bearing acre ratio	11%	237 11%	279 11%
Non-bearing to bearing acte fatto	11/0	1170	1170
Labor Efficiency			
Bearing fruit, acres per worker	23	22	21
All fruit, acres per worker	26	25 \$59,125	23
Accrual receipts per worker	\$48,231	Ф 09,120	\$44,580
Cost Control - Accrual			
Cost per bearing acre:	4		
All labor	\$756	\$888	\$991
All equipment	\$288 \$230	\$351 \$272	\$368
Spray Hired labor as percent of operating expenses	41%	42%	\$287 45%
Three labor us percent of operating expenses	11/0	4270	4070
Capital Efficiency - Average for the Year	40 - 0 <i>-</i>	±	
Total farm capital per bearing acre	\$3,735	\$4,009	\$4,180
Total farm capital per fruit acre Capital turnover, years	\$3,350 1.7	\$3,596 1.4	\$3,768 1.9
Capital turnover, years	1.7	1.4	1.9
Profitability			
Net farm income:			
Without appreciation	\$81,153	\$148,708	\$12,618
With appreciation Labor & management income per operator	\$97,817 \$30,349	\$168,666 \$70,454	\$18,134 \$(12,400)
Rate of return to average capital with apprecia		φ70,4 <u>5</u> 4	φ(12,400)
Equity capital	10.0%	19.4%	-5.6%
Total capital	9.4%	16.2%	-2.5%
Financial Summary - End of Year			
Farm:			
Net worth	\$538,101	\$672,684	\$656,692
Debt to asset ratio	0.31	0.25	0.31
Debt per bearing acre	\$1,220	\$1,059	\$1,290
Cash flow coverage ratio	0.93	1.91	0.92

Table 24.Progress of the Fruit Farm Business, Western New York Fruit
Farms, 1990-1992

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Average per Farm, Same 16 Farms in:				
1990	1991	1992		
301	308	325		
		287		
		260		
		213		
		46%		
		137,367		
		130,135		
		12.48		
\$495,330	\$681,921	\$568,537		
501		644		
43%	38%	37%		
4,151	8,912	6,992		
279	233	257		
12%	12%	11%		
0.4	0.0	0.1		
		21		
		23		
\$49,693	\$62,976	\$45,571		
\$743	\$875	\$975		
		\$372		
		\$279		
		45%		
4270	4170	4070		
407 40	#1.01 C	# 4 000		
		\$4,298		
		\$3,887		
1.7	1.5	1.9		
#100 0 7 0	\$100.000	#00 110		
		\$26,118		
		\$30,772		
\$36,700	\$76,963	\$-7,334		
tion:				
11.5%		-3.9%		
10.4%	16.8%	-1.2%		
\$657,736	\$830,241	\$751,563		
0.31	0.25	0.31		
	$ \begin{array}{r} 1990 \\ 301 \\ 268 \\ 241 \\ 197 \\ 45% \\ 98,353 \\ 95,410 \\ 9.97 \\ $495,330 \\ 501 \\ 43\% \\ 4,151 \\ 279 \\ 12\% \\ 24 \\ 27 \\ $495,693 \\ $743 \\ $286 \\ $234 \\ 42\% \\ $3,742 \\ $3,355 \\ 1.7 \\ $100,973 \\ $121,621 \\ $36,700 \\ tion: \\ 11.5\% \\ $	1990199130130826827924124919720745%45%98,353121,24695,410124,5959.9710.83\$495,330\$681,921 501 58543%38%4,1518,91227923312%12% 24 2327923312%12% 24 23\$49,693\$62,976\$49,693\$62,976\$286\$367\$286\$367\$234\$26642%41%\$3,742\$4,246\$3,355\$3,7891.71.5\$100,973\$182,830\$121,621\$207,817\$36,700\$76,963ttion:11.5%20,1%		

Table 25.Progress of the Fruit Farm Business, Same Summary Farms,
Western New York, 1990-1992

Table 26.Progress of the Fruit Farm Business, My Farm, 1990-1992

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Selected Factors	1990	1991	1992	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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