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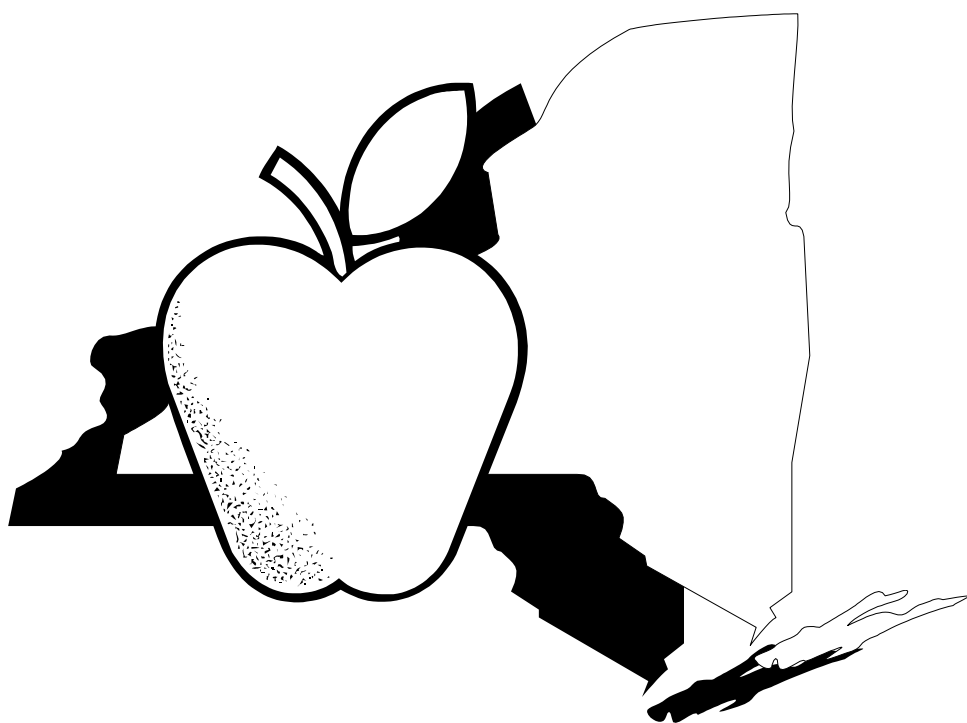
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# **FRUIT FARM BUSINESS SUMMARY**

## **LAKE ONTARIO REGION NEW YORK 2005**



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### **ABSTRACT**

This report is a summary of 2005 farm business data collected from 17 fruit farm businesses located in Western New York State. Apples are the predominant fruit crop. The data are presented as averages for all 17 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.

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**2005 FRUIT FARM BUSINESS SUMMARY  
LAKE ONTARIO REGION**

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# **2005 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 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 2005. The analysis was supported by a grant from the New York Farm Viability Institute, and marks the first comprehensive report since the 1998 crop year.

The primary objective of the fruit farm business summary (FFBS) program is to help farm managers improve the financial management of their businesses through the 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 grant from the New York Farm Viability Institute made possible a new program in Excel for analyzing these fruit farms, with some new measures of financial performance added for 2005.

The farms in this study are primarily apple farms. An average of 53 percent of the accrual receipts in 2005 was from the sale of apples. (This percentage is down from 81 percent in 1998, indicating that fruit farms in western New York are diversifying sources of income.) The data were not obtained from a random sample of all fruit farms in Western New York; however, the analysis is useful for fruit farmers to compare their own farm financial factors with benchmarks from typical farms in 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 farms in this study.

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 Summary of Selected Business Factors.

### **Apple Production, Prices, and Returns in Recent Years**

The 17 farms in this summary produced a total of 2,460,000 bushels, or about 10 percent of the state's total production. (This is up from 8 percent of the state's production in 1998, even though there is one less farm in the 2005 study). The average price of apples (both fresh and processing) for the Fruit Farm Business Summary farms was \$4.72 per bushel. The return on equity was -1.68 %.

As a comparison with the last five years that the summary was published (1994-1998), prices for fresh apples on the FFBS ranged from \$2.81 per bushel in 1994 to a high of \$4.29 per bushel in 1996. Return on Equity (with appreciation) was -12.9 % in 1998, the last year the FFBS was published; this had been the second worst year in the previous 20 years.

## **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 1.**

#### **Business Characteristics 17 Western New York Fruit Farms, 2005**

Legal Entity	Number
Proprietors	6
Partnerships	3
Corporations	8
Business Composition	Number
Fruit production only	6
Fruit with storage	3
Fruit and other enterprises	6
Fruit with storage and other enterprises	2

## **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 2 presents the balance sheet data for the 17 fruit farm cooperators. It lists the average value of assets and liabilities for December 31, 2004 and December 31, 2005 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 3 provides a format for the reader to use to develop a balance sheet for an individual farm business.

Table 2.

## Farm Balance Sheet, 17 Western New York Fruit Farms, 2005

<b>Farm Assets</b>	<b>Beginning of Year</b>	<b>End of Year</b>	<b>Farm Liabilities</b>	<b>Beginning of Year</b>	<b>End of Year</b>
<b>Current Assets</b>			<b>Current Liabilities</b>		
Farm cash, checking & savings	45,863	39,046	Accounts payable	41,485	37,371
Notes receivable	21,500	21,127	Operating lines	201,052	217,303
Accounts receivable	324,818	218,901	Other short-term	9,519	7,532
Production and packing supplies	12,247	12,457	Current portion intermediate	2,484	25,509
Fruit & other crops in inventory	164,427	164,427	Current portion long-term	17,410	27,356
Farm market inventory	1,176	1,176			
Other current assets:	5,422	5,872			
<b>Total Current Assets</b>	<b>\$575,454</b>	<b>\$463,008</b>	<b>Total Current Liabilities</b>	<b>\$271,949</b>	<b>\$315,071</b>
<b>Intermediate Assets</b>			<b>Intermediate Liabilities</b>		
Livestock	0	0	Structured debt	86,757	95,338
Livestock leased	0	0	Equipment and capital lines	59,282	54,816
Equipment owned	440,284	459,284	FLB/PCA stock	7,920	8,203
Equipment leased	0	0			
FLB / PCA stock	7,920	8,203			
Co-op delivery stock	14,867	13,754			
Co-op retains	4,068	5,030			
Other stock & investments	46,616	47,557			
Other:	47,179	39,897			
<b>Total Intermediate Assets</b>	<b>\$560,934</b>	<b>\$573,726</b>	<b>Total Intermediate Liabilities</b>	<b>\$153,960</b>	<b>\$158,356</b>
<b>Long term assets</b>			<b>Long Term Liabilities</b>		
Land & buildings:			Mortgage #1	139,516	125,034
Owned	750,825	768,050	Other long term	105,699	97,122
Structures leased	0	0			
Leasehold Improvements	42,377	43,563			
Other:	782	782			
<b>Total Long Term Assets</b>	<b>\$793,985</b>	<b>\$812,396</b>	<b>Total Long Term Liabilities</b>	<b>\$245,215</b>	<b>\$222,156</b>
<b>Total Farm Assets</b>	<b>\$1,930,373</b>	<b>\$1,849,129</b>	<b>Total Farm:</b>		
			<b>Liabilities</b>	<b>\$671,124</b>	<b>\$695,583</b>
			<b>Net Worth</b>	<b>\$1,259,249</b>	<b>\$1,153,546</b>
			<b>Liabilities &amp; Net Worth</b>	<b>\$1,930,373</b>	<b>\$1,849,129</b>
			<b>Percent equity</b>	<b>65.2%</b>	<b>62.4%</b>
			<b>Debt per bearing fruit acre</b>	<b>\$2,764</b>	<b>\$2,865</b>
			<b>Debt per acre operated</b>	<b>\$2,015</b>	<b>\$2,089</b>

Table 3.

## Farm Balance Sheet, My Farm 2005

Farm Assets	Beginning of Year	End of Year	Farm Liabilities	Beginning of Year	End of Year
<b>Current Assets</b>			<b>Current Liabilities</b>		
Farm cash, checking & savings	_____	_____	Accounts payable	_____	_____
Notes receivable	_____	_____	Operating lines	_____	_____
Accounts receivable	_____	_____	Other short-term	_____	_____
Production and packing supplies	_____	_____	Current portion intermediate	_____	_____
Fruit & other crops in inventory	_____	_____	Current portion long-term	_____	_____
Farm market inventory	_____	_____		_____	_____
Other current assets:	_____	_____		_____	_____
	_____	_____		_____	_____
<b>Total Current Assets</b>	_____	_____	<b>Total Current Liabilities</b>	_____	_____
<b>Intermediate Assets</b>			<b>Intermediate Liabilities</b>		
Livestock	_____	_____	Structured debt	_____	_____
Livestock leased	_____	_____	Equipment and capital lines	_____	_____
Equipment owned	_____	_____	FLB/PCA stock	_____	_____
Equipment leased	_____	_____		_____	_____
FLB / PCA stock	_____	_____		_____	_____
Co-op delivery stock	_____	_____		_____	_____
Co-op retains	_____	_____		_____	_____
Other stock & investments	_____	_____		_____	_____
Other:	_____	_____		_____	_____
	_____	_____		_____	_____
<b>Total Intermediate Assets</b>	_____	_____	<b>Total Intermediate Liabilities</b>	_____	_____
<b>Long term assets</b>			<b>Long Term Liabilities</b>		
Land & buildings:	_____	_____	Mortgage #1	_____	_____
Owned	_____	_____	Other long term	_____	_____
Structures leased	_____	_____		_____	_____
Leasehold Improvements	_____	_____		_____	_____
Other:	_____	_____		_____	_____
	_____	_____		_____	_____
<b>Total Long Term Assets</b>	_____	_____	<b>Total Long Term Liabilities</b>	_____	_____
<b>Total Farm Assets</b>	_____	_____	<b>Total Farm Liabilities</b>	_____	_____

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. The change in farm net worth without appreciation is an excellent indicator of financial progress from operating the business.

**Table 4.**

**Farm Business Balance Sheet Analysis  
17 Western New York Fruit Farms, Dec. 31, 2005**

Item	Average 17 Farms	My Farm
<u>Financial Ratios - end of year</u>		
Percent Equity	62.38%	_____ %
Debt to Asset Ratio		
Total Debt	0.38	_____
Long-term	0.12	_____
Current and intermediate	0.26	_____
Intermediate and long-term	0.21	_____
Leverage Ratio	0.19	_____
Current Ratio	1.47	_____
Working Capital as % total expenses	18.44%	_____ %
<u>Change in Net Worth</u>		
With appreciation	\$(105,703)	\$ _____
Without appreciation	\$(112,841)	\$ _____
<u>Debt Analysis</u>		
Percent of total farm debt that is:		
Long term	31.94%	_____ %
Current and intermediate	68.06%	_____ %
Accounts payable only	5.37%	_____ %
<u>Debt Levels</u>		
Per bearing fruit acre		
Total farm debt	\$2,865	\$ _____
Long-term	\$915	\$ _____
Current and intermediate	\$1,950	\$ _____

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 5.**  
**Farm Inventory Balance, 17 Western New York Fruit Farms, 2005**

Inventory Balance	Average 17 Farms		My Farm	
	Real Estate	Equipment	Real Estate	Equipment
Beginning of year (1)	\$750,825	\$440,284	\$_____	\$_____
Purchases	26,127	44,898	_____	_____
+ Noncash transfer to farm	0		_____	_____
- Lost capital	12,043		_____	_____
- Sales	0	1,726	_____	_____
- Depreciation	4,034	30,343	_____	_____
= Net Investment (2)	10,050	12,829	_____	_____
Appreciation (3-1-2)	7,176	6,171	_____	_____
End of year (3)	\$768,050	\$459,284	_____	_____

### 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 (Table 7) is provided to enable any fruit farmer to compare his or her expenses with the group averages in the corresponding table.

**Table 6.**  
**Income Statement - Farm Expenses, 17 Western New York Fruit Farms, 2005**

Expenses	Cash amount paid	Change in inventory or prepaid expenses	Change in accounts payable	Accrual Expenses
<u>Hired Labor</u>				
Wages:				
Regular	\$156,566	0	709	\$157,275
Picking	111,922	0	(440)	111,483
Other part-time, seasonal	22,332	(158)	0	22,174
Other labor costs	61,928	587	(735)	61,780
Picker travel	2,225	0	(471)	1,754
Labor camp expenses	2,200	0	0	2,200
<u>Equipment</u>				
Machine hire, rent, lease	5,686	0	849	6,535
Repairs and parts	42,520	0	(87)	42,433
Trucking expense	9,594	0	171	9,764
Fuel, oil, and grease	34,077	(131)	(1,283)	32,663
<u>Livestock</u>				
All livestock expense	0	0	0	0
<u>Crops</u>				
Fertilizer and lime	11,814	328	1,602	13,744
Replace trees and plants	2,220	(156)	265	2,328
Spray	100,769	(920)	(1,875)	97,974
Supplies, other	15,643	(54)	(904)	14,685
Processing package supplies	5,254	284	0	5,538
Storage	40,645	0	(641)	40,004
Marketing, selling expenses	3,429	0	0	3,429
<u>Real Estate</u>				
Repair-land, building, fence	5,647	0	0	5,647
Taxes	15,017	0	(1,139)	13,878
Rent & lease	14,839	(102)	(1,907)	12,829
<u>Other Expenses</u>				
Fire, liability expenses	17,016	0	0	17,016
Crop and revenue Insurance	6,624	0	230	6,854
All utilities	15,853	0	(993)	14,860
Legal/office expense	8,572	0	0	8,572
Fruit purchased for resale	22,454	0	675	23,129
Interest paid	33,003	0	593	33,596
Miscellaneous	8,505	(177)	(638)	7,691
<b>Total Operating Expenses</b>	<b>\$776,354</b>	<b>(499)</b>	<b>(6,019)</b>	<b>\$769,836</b>
Depreciation:				
Equipment				30,343
Buildings				4,034
Bearing trees and vines				2,941
<b>Total Accrual Expenses</b>				<b>\$807,154</b>

Table 7.

## Income Statement - Farm Expenses, My Farm, 2005

Expenses	Cash amount paid	Change in inventory or prepaid expenses	Change in accounts payable	Accrual Expenses
<u>Hired Labor</u>				
Wages:				
Regular	\$ _____	\$ _____	\$ _____	\$ _____
Harvest	_____	_____	_____	_____
Other part-time, seasonal	_____	_____	_____	_____
Other labor costs	_____	_____	_____	_____
Picker travel	_____	_____	_____	_____
Labor camp expenses	_____	_____	_____	_____
<u>Equipment</u>				
Machine hire, rent, lease	_____	_____	_____	_____
Repairs and parts	_____	_____	_____	_____
Trucking expense	_____	_____	_____	_____
Fuel, oil, and grease	_____	_____	_____	_____
<u>Livestock</u>				
All livestock expense	_____	_____	_____	_____
<u>Crops</u>				
Fertilizer and lime	_____	_____	_____	_____
Replace trees and plants	_____	_____	_____	_____
Spray	_____	_____	_____	_____
Supplies, other	_____	_____	_____	_____
Processing package supplies	_____	_____	_____	_____
Storage	_____	_____	_____	_____
Marketing, selling expenses	_____	_____	_____	_____
<u>Real Estate</u>				
Repair-Land, building, fence	_____	_____	_____	_____
Taxes	_____	_____	_____	_____
Rent & lease	_____	_____	_____	_____
<u>Other Expenses</u>				
Fire, liability expenses	_____	_____	_____	_____
Crop and revenue Insurance	_____	_____	_____	_____
All utilities	_____	_____	_____	_____
Legal/office expense	_____	_____	_____	_____
Fruit purchased for resale	_____	_____	_____	_____
Interest paid	_____	_____	_____	_____
Miscellaneous	_____	_____	_____	_____
<b>Total Operating Expenses</b>	_____	_____	_____	_____
Depreciation:				
Equipment				_____
Buildings				_____
Bearing trees and vines				_____
<b>Total Accrual Expenses</b>				_____

**Table 8.**  
**Income Statement - Farm Receipts, 17 Western New York Fruit Farms 2005**

Receipts	Cash Receipts	Change in inventory	Change in accounts receivable	Accrual Receipts
<u>Apples:</u>				
Fresh	\$462,915	\$67,416	\$(65,056)	\$465,275
Peelers	196,636	9,106	(21,921)	183,821
Juice	23,820	1,706	1,390	26,915
<u>Cherries:</u>				
Sweet	39,481	0	(4,238)	35,243
Tart	15,135	0	(3,272)	11,862
Grapes	0	0	0	0
Peaches	27,039	0	352	27,391
Plums and prunes	1,246	0	0	1,246
Pears	6,342	(235)	(18)	6,089
Berries and other crops	5,857	0	0	5,857
Custom work, storage, rent	47,519	0	(1,213)	46,306
Other	80,156	0	(11,941)	68,215
<b>Total Operating Receipts</b>	<b>\$906,145</b>	<b>\$77,993</b>	<b>\$(105,916)</b>	<b>\$878,222</b>

**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 9.****Income Statement - Farm Receipts, My Farm 2005**

Receipts	Cash Receipts	Change in inventory	Change in accounts receivable	Accrual Receipts
<u>Apples:</u>				
Fresh	\$_____	\$_____	\$_____	\$_____
Peelers	_____	_____	_____	_____
Juice	_____	_____	_____	_____
<u>Cherries:</u>				
Sweet	_____	_____	_____	_____
Tart	_____	_____	_____	_____
Grapes	_____	_____	_____	_____
Peaches	_____	_____	_____	_____
Plums and prunes	_____	_____	_____	_____
Pears	_____	_____	_____	_____
Berries and other crops	_____	_____	_____	_____
Custom work, storage, rent	_____	_____	_____	_____
Other	_____	_____	_____	_____
<b>Total Operating Receipts</b>	_____	_____	_____	_____

**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 10.****Net Farm Income, 17 Western New York Fruit Farms, 2005**

Item	Average 17 Farms	My Farm
Total Accrual Receipts	\$878,222	\$_____
+ Appreciation:		
Livestock	0	_____
Equipment	6,171	_____
Real estate	7,176	_____
Other stocks and certificates	(6,208)	_____
= Total Accrual Receipts with Appreciation	\$885,360	_____
- Total Accrual Expenses	\$807,154	_____
= Net Farm Income		
with appreciation	\$78,206	_____
without appreciation	\$71,068	_____

**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 11.****Return to Operators' Labor, Management, and Equity Capital  
17 Western New York Fruit Farms, 2005**

Item	Average 17 Farms	My Farm
With appreciation:		
Net farm income	\$78,206	\$_____
- Family unpaid labor @ \$2400/mo	1,214	_____
= Return to operators' labor management and equity	\$76,992	_____
Without appreciation:		
Net farm income	\$71,068	_____
- Family unpaid labor @ \$2400/mo	1,214	_____
= Return to operators' labor management and equity	\$69,854	_____

**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 12.**

**Labor & Management Income  
17 Western New York Fruit Farms, 2005**

Item	Average	My Farm
Net Farm Income with Appreciation	\$78,206	\$ _____
Net Farm Income without Appreciation	71,068	_____
- Family Labor @ 2400 per month	1,214	_____
- Real interest @ 5% on Equity Capital	<u>57,677</u>	_____
= Labor and management income with appreciation (1.87 operators)	19,315	_____
Labor and management income with appreciation per Operator	10,342	_____
= Labor and management income without appreciation (1.87 operators)	12,177	_____
Labor and management income without appreciation per operator	\$6,520	_____

**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 13.**

**Return on Equity Capital and Return on Total Capital  
17 Western New York Fruit Farms, 2005**

Item	Average 17 Farms	My Farm
Net farm income with appreciation	\$78,206	\$ _____
- Unpaid family labor @ 2400 per month	1,214	_____
- Values of operator labor and management	<u>96,421</u>	_____
= Return to equity capital with appreciation	(19,429)	_____
+ Interest Paid	<u>32,215</u>	_____
= Return to all capital with appreciation	12,786	_____
Return to equity capital without appreciation	\$(26,567)	_____
Return to all capital without appreciation	\$5,648	_____
Rate of return on average equity capital with appreciation	-1.68%	_____ %
without appreciation	-2.30%	_____ %
Rate of return on all capital with appreciation	0.69%	_____ %
without appreciation	0.31%	_____ %
Net farm income from operations ratio	0.08	_____

### 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 14. By definition, total cash inflows must equal total cash outflows when beginning and ending balances are included. Any imbalance is, therefore, the error from incorrect accounting of cash inflows and cash outflows. A cash flow sheet is available for growers to use to reconcile cash flow on their own operations (Table 15).

**Table 14.**  
**Annual Cash Flow Statement, 17 Western New York Fruit Farms, 2005**

Item	Average 17 Farms	
<b>Cash Flow from Operating Activities</b>		
Cash farm receipts	\$906,145	
- Cash farm expenses	772,417	
= Net Cash Farm Income		133,728
Personal Withdrawals & family expenses including nonfarm debt payments	75,952	
- Nonfarm income	1,205	
- Net cash withdrawals from farm		74,746
<b>= Net Provided by Operating Activities</b>		<b>\$58,982</b>
<b>Cash Flow from Investing Activities</b>		
Sale of assets: machinery	\$1,726	
real estate	0	
other stock & certificates	2,118	
= Total asset sales		3,844
Capital Purchases: expansion orchard	25,289	
+ machinery	44,898	
+ real estate	26,127	
+ other stock & certificates	0	
- Total invested in farm assets		96,315
<b>+ Net Provided by Investment</b>		<b>\$(92,471)</b>
<b>Cash Flow From Financing Activities</b>		
Money borrowed (intermediate & long term)	\$32,814	
+ Money borrowed (short term)	0	
+ Increase in operating debt	40,182	
+ Cash from nonfarm capital used in business	0	
+ Money borrowed - nonfarm	0	
= Cash flow from financing		72,997
Principal payments (intermediate & long term)	18,788	
+ Principal payments (short term)	1,988	
+ Decrease in operating debt	23,931	
- Cash outflow for financing		44,706
<b>= Net Provided by Financing Activities</b>		<b>\$28,290</b>
<b>Cash Flow from Reserves</b>		
Beginning farm cash, checking & savings		\$45,863
- Ending farm cash, checking & savings		39,046
<b>= Net Provided from Reserves</b>		<b>\$6,817</b>
<b>Imbalance (error)</b>		<b>\$1,618</b>

Table 15.

## Annual Cash Flow Statement, My Farm, 2005

Item	
<b>Cash Flow from Operating Activities</b>	
Cash farm receipts	\$ _____
- Cash farm expenses	_____
= Net Cash Farm Income	_____
Personal Withdrawals & family expenses including nonfarm debt payments	_____
- Nonfarm income	_____
- Net cash withdrawals from farm	_____
<b>= Net Provided by Operating Activities</b>	_____
<b>Cash Flow from Investing Activities</b>	
Sale of assets: machinery	_____
real estate	_____
other stock & certificates	_____
= Total asset sales	_____
Capital Purchases: expansion orchard	_____
+ machinery	_____
+ real estate	_____
+ other stock & certificates	_____
- Total invested in farm assets	_____
<b>+ Net Provided by Investment</b>	_____
<b>Cash Flow From Financing Activities</b>	
Money borrowed (intermediate & long term)	_____
+ Money borrowed (short term)	_____
+ Increase in operating debt	_____
+ Cash from nonfarm capital used in business	_____
+ Money borrowed - nonfarm	_____
= Cash flow from financing	_____
Principal payments (intermediate & long term)	_____
+ Principal payments (short term)	_____
+ Decrease in operating debt	_____
- Cash outflow for financing	_____
<b>= Net Provided by Financing Activities</b>	_____
<b>Cash Flow from Reserves</b>	
Beginning farm cash, checking & savings	_____
- Ending farm cash, checking & savings	_____
<b>= Net Provided from Reserves</b>	_____
<b>Imbalance (error)</b>	_____

## 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 17 Western New York Fruit Farms, 2005

Item	Average 17 Farms	
	Actual Payments 2005	Planned Payments 2006
Current/Short Term (net reduction)	\$(10,150)	\$11,422
Intermediate Term (net reduction)	(27,140)	24,059
Long Term (net reduction)	13,113	27,356
<b>Total Debt Payments</b>	<b>(24,177)</b>	<b>62,837</b>
Payments as a percent of:		
Total accrual receipts	-2.75%	7.16%
Total accrual fruit receipts	-3.19%	8.29%
Payments per bearing fruit acre	\$(100)	\$259
Payments per acre operated	\$(73)	\$189
Payments per bushel of apples sold	\$(0)	\$0

Item	My Farm	
	Actual Payments 2005	Planned Payments 2006
Current/Short Term (net reduction)	\$ _____	\$ _____
Intermediate Term (net reduction)	_____	_____
Long Term (net reduction)	_____	_____
<b>Total Debt Payments</b>	<b>_____</b>	<b>_____</b>
Payments as a percent of:		
Total accrual receipts	_____%	_____%
Total accrual fruit receipts	_____%	_____%
Payments per bearing fruit acre	\$ _____	\$ _____
Payments per acre operated	_____	_____
Payments per bushel of apples sold	_____	_____

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 for many farmers and lenders is whether planned payments can be made in 2006. The worksheet provided in Table 18 can be used to estimate repayment ability which can then be compared to planned 2006 debt payments shown in Table 16.

**Table 17.**

**Cash Flow Coverage Ratio  
17 Western New York Fruit Farms, 2005**

Item	Average	My Farm
Cash Farm Receipts	\$906,145	\$_____
- Cash Farm Expenses	776,354	_____
+ Interest Paid	<u>33,003</u>	_____
 = Amount Available for debt service (1)	 \$162,794	 _____
 Debt Payments Planned (2)	 \$62,837	 _____
 Cash Flow Coverage Ratio (1 ÷ 2)	 2.59	 _____

**Table 18.**

**Annual Cash Flow Worksheet- Receipts  
17 Western New York Fruit Farms, 2005**

Item	Average 17 Farms	My Farm Total	My Farm per bearing acre
Average Bearing Acres and Bearing Fruit Acres	243	_____	_____
<b>Accrual Operating Receipts</b> (per fruit bearing acre)			
Apples:			
Fresh	\$1,916	\$ _____	\$ _____
Peelers	757	_____	_____
Juice	111	_____	_____
Cherries:			
Sweet	145	_____	_____
Tart	49	_____	_____
Grapes	0	_____	_____
Peaches	113	_____	_____
Plums and prunes	5	_____	_____
Pears	25	_____	_____
Berries and other crops	24	_____	_____
Custom work, storage, rent	191	_____	_____
Other	281	_____	_____
Total Operating Receipts	\$3,617	_____	_____

**Table 19.**

**Annual Cash Flow Worksheet- Expenses  
17 Western New York Fruit Farms, 2005**

Item	Average 17 Farms	My Farm Total	My Farm per bearing acre
Average Bearing Acres and Bearing Fruit Acres	243	_____	_____
<b>Accrual Operating Expenses</b> (per bearing fruit acre)			
Wages:			
Regular	\$648	\$ _____	\$ _____
Harvest	461	_____	_____
Other part-time seasonal	91	_____	_____
Other labor costs	254	_____	_____
Picker travel	7	_____	_____
Labor camp expenses	9	_____	_____
Machine rent, hire, lease	27	_____	_____
Repairs and parts	175	_____	_____
Trucking expense	40	_____	_____
Fuel, oil, and grease	135	_____	_____
All livestock expense	0	_____	_____
Fertilizer and lime	57	_____	_____
Replacement trees and plants	10	_____	_____
Spray	403	_____	_____
Supplies, other	60	_____	_____
Processing and package supplies	23	_____	_____
Storage	165	_____	_____
Marketing, selling expenses	14	_____	_____
Repair-land, build, fence	23	_____	_____
Taxes	57	_____	_____
Rent & lease	53	_____	_____
Fire, liability expenses	65	_____	_____
Crop and revenue insurance	39	_____	_____
All utilities	55	_____	_____
Legal/office expense	32	_____	_____
Fruit purchased for resale	78	_____	_____
Miscellaneous	37	_____	_____
<b>TOTAL Operating Expenses Excluding Interest Paid</b>	<b>\$3,017</b>	_____	_____

Table 20.

**Annual Cash Flow Worksheet- Repayment Analysis  
17 Western New York Fruit Farms, 2005**

Item	Average 17 Farms	My Farm Total
<b>Repayment Analysis (Total)</b>		
Net Accrual Operating Income (excluding interest paid)	\$145,613	\$ _____
- Change in livestock and crop inventory	77,993	_____
- Change in accounts receivable	(105,916)	_____
- Change in supply inventory	(30,140)	_____
Net operating cash flow	97,760	_____
- Net personal withdrawals	75,952	_____
Available for debt payments and investment	21,809	_____
- Farm debt payments (principle and interest)	76,922	_____
Available for farm investment	(55,113)	_____
Capital purchases	\$96,315	_____
Additional capital needed	\$151,428	_____

## 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. Summing the next three ratios (operating expense, interest expense, and depreciation expense) gives total expenses per dollar of accrual receipts.

**Table 21.**

### Capital Efficiency Analysis 17 Western New York Fruit Farms

Item	Per worker equivalent	Average 17 Farms	
		Per bearing fruit acre	Per acre operated
<b>Assets:</b>			
Total Farm Capital	\$130,821	\$7,782	\$5,674
Real estate	55,548	3,304	2409
All Equipment	31,137	1,852	1350
<b>Ratios:</b>			
Capital Turnover	Operating Expense	Interest Expense	Depreciation Expense
0.47	0.83	0.04	0.04
=2.13 yrs.			
<b>My Farm:</b>			
Total Farm Capital	_____	_____	_____
Real estate	_____	_____	_____
All Equipment	_____	_____	_____
<b>Ratios:</b>			
Capital Turnover	Operating Expense	Interest Expense	Depreciation Expense
_____	_____	_____	_____

## Equipment Analysis

Equipment costs comprised nearly 18 percent of the cost of fruit production in 2005. Total equipment expenses include the major fixed costs (interest and depreciation) as well as the accrual operating costs.

**Table 22.**

### Accrual Equipment Expenses 17 Western New York Fruit Farms, 2005

Item	Average 17 Farms		
	Total	<u>Equipment cost per fruit acre operated</u>	
		Bearing	All fruit
Machine Hire,			
Equipment Rent, Lease	\$6,535	\$27	\$24
Repair and parts	42,433	175	154
Trucking	9,764	40	35
Fuel, oil, and grease	32,663	135	118
Interest on average equipment capital at 5%	22,489	93	82
Depreciation	<u>30,343</u>	<u>125</u>	<u>110</u>
<b>Total Equipment Cost</b>	<b>\$144,227</b>	<b>\$594</b>	<b>\$523</b>

Item	My Farm		
	Total	<u>Equipment cost per fruit acre operated</u>	
		Bearing	All fruit
Machine Hire,			
Equipment Rent, Lease	\$ _____	\$ _____	\$ _____
Repair and parts	_____	_____	_____
Trucking	_____	_____	_____
Fuel, oil, and grease	_____	_____	_____
Interest on average equipment capital at 5%	_____	_____	_____
Depreciation	_____	_____	_____
<b>Total Equipment Cost</b>	_____	_____	_____

**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, accounting for 46 % of total accrual expenses.

**Table 23.**  
**Labor Inventory Analysis, 17 Western New York Fruit Farms, 2005**

Labor force	Full-time Months	Age, Years	Education, Years	Value of Labor and Management
<b>Average:</b>				
Operator 1	12.29	50	15	\$51,828
Operator 2	7.03	56	15	32,522
Operator 3	2.29	54	15	9,918
Operator 4	0.79	63	15	2,153
Family Paid	0.00		Total	\$96,421
Family Unpaid	0.51		Avg. per Operator	\$51,627
Hired				
Regular	79.76			
Harvest	56.15			
Other PT/Seasonal	14.51			
Total Hired	150.43			
Total	173.34 mo./12 =		14.45 worker equivalent 1.87 oper./manager equivalent 12.54 hired worker equiv	
<hr/>				
<b>My Farm:</b>				
Total	_____	mo./12 =	_____	worker equivalent
Operators	_____	mo./12 =	_____	oper./manager equivalent
<hr/>				

**Table 24.**  
**Labor Efficiency Analysis, 17 Western New York Fruit Farms, 2005**

Labor Efficiency	Average 17 Farms		My Farm	
	Total	Per Worker	Total	Per Worker
Bearing fruit acres	243	16.81	_____	_____
Total acres operated	333	23.06	_____	_____
Apples sold, bu.	144,698	10,017	_____	_____
Accrual receipts	\$878,222	\$60,796	_____	_____

Labor Cost or Value	Average 17 Farms			My Farm		
	Total	Per Worker Equivalent	Per Bearing Fruit Acre	Total	Per Worker Equivalent	Per Bearing Fruit Acre
Value of operators' labor						
@ \$2400/mo.	\$53,788	\$3,724	\$222	\$_____	\$_____	\$_____
Family unpaid						
@ \$2400/mo.	1,214	84	5	_____	_____	_____
Hired						
Regular	157,275	10,888	648	_____	_____	_____
Harvest	111,922	7,748	461	_____	_____	_____
Other part-time/seasonal	22,174	1,535	91	_____	_____	_____
Total hired	291,371	20,171	1,200	_____	_____	_____
Indirect labor costs	61,780	4,277	254	_____	_____	_____
Total labor	353,151	24,447	1,454	_____	_____	_____
Machinery costs	\$144,227	\$9,984	\$594	_____	_____	_____
Total labor and machinery	497,378	34,432	2,048	_____	_____	_____
Hired labor as percent of crop sales	38.15%			\$_____		
Total labor as percent of crop sales	46.24%			\$_____		

### 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. A worksheet is shown (Table 26) to develop comparable figures for your own operation. The nonbearing acreage is 11.9 percent of total fruit acres.

**Table 25.**  
**Land Resources and Crop Production, 17 Western New York Fruit Farms, 2005**

Item	Average 17 Farms			
<b>Land Class (end of year)</b>				
Bearing fruit acres			242.8	
Non-bearing fruit acres			32.8	
Other crops and open acres			0.6	
Non-tillable acres			56.8	
Total land operated			333.1	
Rented land included above			80.2	
<u>For farms having fruit:</u>				
<b>Crop Production</b>	No. of farms	Average acres	Yield per acre	Percent of total apples
<b>Bearing Fruit:</b>				
Apples:				
Fresh	17	136.6	507.1 bu.	48.14%
Peelers	16	75.8	800.5 bu.	42.13%
Juice	17			9.14%
Total Apples	17	207.9	692.2 bu.	
Cherries:				
Sweet	8	15.0	3946.0 lb.	
Tart	5	38.2	5273.8 lb.	
Grapes	0	---	---	
Peaches	11	15.0	3.4 ton	
Plums/prunes	2	13.6	0.6 ton	
Pears	6	11.2	5.6 ton	
<b>Non-Bearing Fruit:</b>				
Apples:				
Fresh	14	18.5		
Peeler	6	6.4		
Cherries:				
Sweet	7	3.8		
Tart	7	21.4		
Grapes	2	3.5		
Peaches	8	7.9		
Plums/prunes	1	2.0		
Pears	1	5.0		
<b>Other Crops, Open:</b>				
Other	4	10.5		

**Table 26.**

**Land Resources and Crop Production, My Farm, 2005**

Item	Total acres		
<b>Land Class (end of year)</b>			
Bearing fruit acres	_____		
Non-bearing fruit acres	_____		
Other crops and open acres	_____		
Non-tillable acres	_____		
 Total land operated	 _____		
Rented land included above	_____		
	My Farm		
<b>Crop Production</b>	Total acres	Yield per acre	Percent of total apples
<b>Bearing Fruit:</b>			
Apples:			
Fresh	_____	_____ bu.	_____ %
Peelers	_____	_____ bu.	_____ %
Juice			_____ %
Total Apples	_____	_____ bu.	
Cherries:			
Sweet	_____	_____ lb.	
Tart	_____	_____ lb.	
Grapes	_____	_____ ton	
Peaches	_____	_____ ton	
Plums/prunes	_____	_____ ton	
Pears			
<b>Non-Bearing Fruit:</b>			
Apples:			
Fresh	_____		
Peeler	_____		
Cherries:			
Sweet	_____		
Tart	_____		
Grapes	_____		
Peaches	_____		
Plums/prunes	_____		
Pears	_____		
<b>Other Crops, Open:</b>			
Other			

## 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 60 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 27.**

### Cost Control Factors 17 Western New York Fruit Farms, 2005

Item	Average 17 Farms		My Farm	
	Bearing Acres	All Fruit Acres	Bearing Acres	All Fruit Acres
All labor including operators' labor	1,454	1,179	_____	_____
Harvest labor	461	374	_____	_____
Other hired labor	739	599	_____	_____
All equipment cost	594	481	_____	_____
Spray	403	327	_____	_____

## 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. Since we have not done the Fruit Farm Summary since 1998, it is not possible to show progress over time in this publication.

The tables on the following pages provide the opportunity for you to compare your business factors with averages for the participating farms for the current year. 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 28.**  
**Analyzing the Fruit Farm Business, 17 Western New York Fruit Farms, 2005**

Selected Factors	Average 17 Farms	My Farm
<b>Size of Business</b>		
Total acres	333	_____
All fruit acres (incl non-bearing)	276	_____
Bearing fruit acres	243	_____
Bearing apple acres	208	_____
Fresh- percent of all apple acres	57.65%	_____%
Apples produced (bushels)	144,698	_____
Apples sold (bushels)	144,698	_____
Worker Equivalent	14.45	_____
Total accrual operating receipts	\$878,222	_____
<b>Rates of Production</b>		
All apples, bushels per bearing acre	692.19	_____
Fresh - percent of apples harvested	0.44	_____
Cherries - tart, pounds per bearing acre	5,273.78	_____
Cherries - sweet, pounds per bearing acre	3,946.04	_____
Peaches - tons per bearing acre	3.42	_____
Plums/Prunes - tons per bearing acre	0.58	_____
Pears - tons per bearing acre	5.63	_____
<b>Labor Efficiency</b>		
Bearing fruit acres per worker	16.81	_____
All fruit acres per worker	19.08	_____
Accrual Receipts per worker	\$60,796	\$ _____
<b>Cost Control - Accrual</b>		
Costs per bearing fruit acre		
All labor	\$1,454	\$ _____
All equipment	\$594	\$ _____
Spray	\$403	\$ _____
Expansion orchard expense	\$25,289	\$ _____
Hired labor as percent of operating expenses	39.77%	_____%
<b>Capital Efficiency</b>		
Total farm capital per bearing fruit acre	\$7,782	\$ _____
Total farm capital per fruit acre	\$6,855	\$ _____
Capital Turnover Ratio	0.47	_____
<b>Profitability</b>		
Net farm income without appreciation	\$71,068	\$ _____
Net farm income with appreciation	\$78,206	\$ _____
Labor and management income per operator	\$6,520	\$ _____
Rate of return on:		
Equity capital with appreciation	-1.68%	_____%
All capital with appreciation	0.69%	_____%
<b>Financial Summary, End of Year</b>		
Farm net worth	\$1,153,546	\$ _____
Debt to asset ratio	0.38	_____
Farm debt per bearing fruit acre	\$2,865	\$ _____
Cash flow coverage ratio	2.59	_____

**NOTES**

**OTHER A.E.M. EXTENSION BULLETINS**

<b>EB No</b>	<b>Title</b>	<b>Fee (if applicable)</b>	<b>Author(s)</b>
2006-10	The Organic Decision: Transitioning Toward Organic Dairy Production	(\$15.00)	Richard S. and S. Bulkley
2006-09	Dairy Farm Business Summary, New York Small Herd Farms, 80 Cows or Fewer, 2005	(\$16.00)	Knoblauch, W., Putnam, L., Kiraly, M. and J. Karszes
2006-08	Dairy Farm Business Summary, Southeastern New York Region, 2005	(\$12.00)	Knoblauch, W., Putnam, L., Kiraly, M., Walsh, J., Hadcock, S. and L. Hulle
2006-07	Dairy Farm Business Summary, Intensive Grazing Farms, New York, 2005	(\$16.00)	Conneman, G., Grace, J., Karszes, J., Schuelke, J., Munsee, D., Putnam, L., Staehr, E. and J. Degni
2006-06	Dairy Farm Business Summary, Western and Central Plateau Region, 2005	(\$12.00)	Knoblauch, W., Putnam, L., Karszes, J., Grace, J., Munsee, D., Schuelke, J. and J. Petzen
2006-05	Dairy Farm Business Summary, Western and Central Plain Region, 2005	(\$12.00)	Knoblauch, W., Putnam, L., Karszes, J., Hanchar, J., Moag, G. and J. Sauter
2006-04	Dairy Farm Business Summary, Northern Hudson Region, 2005	(\$12.00)	Conneman, G., Putnam, L., Wickswat, C., Buxton, S., Smith, R. and J. Karszes
2006-03	Dairy Farm Business Summary, New York Large Herd Farms, 300 Cows or Larger, 2005	(\$16.00)	Karszes, J., Knoblauch, W. and L. Putnam
2006-02	Moving Families Forward by New York FarmNet (video) 26:44	(\$9.99)	Staehr, A.
2006-01	A Value-Added Opportunity: Market Potential for Specialty Cheeses in Select New York Markets		Gloy, A. and M. Stephenson
2005-16	Dairy Farm Business Summary, New York Dairy Farm Renters, 2004	(\$16.00)	Knoblauch, W. and L. Putnam
2005-15	Dairy Farm Business Summary, New York Small Herd Farms, 80 Cows or Fewer, 2004	(\$16.00)	Knoblauch, W., Putnam, L., Kiraly, M. and J. Karszes

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