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## LAKE ONTARIO REGION NEW YORK 2006

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#### Abstract

This report is a summary of 2006 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.


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## 2006 FRUIT FARM BUSINESS SUMMARY LAKE ONTARIO REGION

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# 2006 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 2006. The analysis was supported by a grant from the New York Farm Viability Institute, and marks the second consecutive comprehensive annual 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 the development of a new program in Access and Excel for analyzing these fruit farms, with some new measures of financial performance added for 2005 and 2006.

The farms in this study are primarily apple farms. An average of 78 percent of the accrual receipts in 2006 was from the sale of apples. (This percentage is down from 84 percent in 1998, and is virtually identical to the 77 percent for apple receipts in 2005). 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 22 farms in this summary produced a total of 3.17 million bushels, or about 10.6 percent of the state's total production in 2006. The average price of apples (both fresh and processing) for the Fruit Farm Business Summary farms was $\$ 4.65$ per bushel. The return on equity was $9.0 \%$ (including appreciation of assets), and is the highest return on equity since the $19.1 \%$ realized in 1991! The value of the New York apple crop was estimated at $\$ 248$ million (National Agricultural Statistics Service) and was the first time the estimated value had exceeded $\$ 200$ million.

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

## 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 1 presents the balance sheet data for the 22 fruit farm cooperators. It lists the average value of assets and liabilities for December 31, 2005 and December 31, 2006 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 1
Farm Balance Sheet, 22 Western New York Fruit Farms, 2006

| Farm Assets | $\begin{array}{c}\text { Beginning } \\ \text { of Year }\end{array}$ | $\begin{array}{c}\text { End } \\ \text { of Year }\end{array}$ | $\begin{array}{c}\text { Farm Liabilities }\end{array}$ | $\begin{array}{c}\text { Beginning } \\ \text { of Year }\end{array}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| of Year |  |  |  |  |$]$

Table 2 provides a format for the reader to use to develop a balance sheet for an individual farm business.

Table 2.
Farm Balance Sheet-My Farm, 2006

| Farm Assets | Beginning of Year | End of Year | Farm Liabilities | Beginning of Year | End of Year |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Current Assets |  |  | Current Liabilities |  |  |
| Farm cash, checking \& savings |  |  | Accounts payable |  |  |
| Notes receivable |  |  | Operating lines |  |  |
| Accounts receivable |  |  | Other short-term |  |  |
| Prdtn, packing supplies \& prepaid exp. |  |  | Current portion intermediate |  |  |
| Fruit \& other crops in inventory |  |  | Current portion long-term |  |  |
| Farm market inventory |  |  |  |  |  |
| Other current assets: |  |  |  |  |  |
| Total Current Assets |  |  | Total Current Liabilities |  |  |
| Intermediate Assets |  |  | Intermediate Liabilities |  |  |
| 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: |  |  |  |  |  |
| Total Intermediate Assets |  |  | Total Intermediate Liabilities |  |  |
| Long term assets |  |  | Long Term Liabilities |  |  |
| Land \& buildings: |  |  | Mortgage \#1 |  |  |
| Owned |  |  | Other long term |  |  |
| Structures leased |  |  |  |  |  |
| Leasehold Improvements |  |  |  |  |  |
| Other: |  |  |  |  |  |
| Total Long Term Assets |  |  | Total Long Term Liabilities |  |  |
| Total Farm Assets |  |  | Total Farm Liabilities |  |  |

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.

The current ratio and working capital are measures of liquidity, or the ability of the farm business to meet its financial obligations as they come due. The business needs to generate enough cash to pay family living expenses, taxes, and to make debt payments on time. The current ratio is measured by end of year current assets divided by current liabilities.

Working capital indicates the operating capital available in the short term. The working capital expense ratio is computed by subtracting current liabilities from current assets, and dividing the result by total accrual expenses (end of year values).

The leverage ratio indicates the dollar amount of debt in relation to the dollar amount of net worth. As long as the rate of return on new investment exceeds the interest rate (marginal), the farm business can increase the level of net income with increased leverage. If some of the funds are reinvested, saved, or used to pay off debt, net worth will increase. Investing a portion of earnings back into the farm business results in growth under these conditions. Leverage is computed by dividing total liabilities by total farm net worth (end of the year values).

Table 3.
Farm Business Balance Sheet Analysis, 22 Western New York Fruit Farms, Dec. 31, 2006

| Item | Average 22 Farms | My Farm |
| :---: | :---: | :---: |
| Financial Ratios - end of year |  |  |
| Percent Equity | 65.00\% | \% |
| Debt to Asset Ratio |  |  |
| Total Debt | 0.35 |  |
| Long-term | 0.11 |  |
| Current and intermediate | 0.24 |  |
| Intermediate and long-term | 0.18 |  |
| Leverage Ratio | 0.54 |  |
| Current Ratio | 1.84 |  |
| Working Capital as \% total expenses | 32.00\% |  |
| Change in Net Worth |  |  |
| With appreciation | \$131,046 | \$ |
| Without appreciation | \$ 93,823 | \$ |
| Debt Analysis |  |  |
| Percent of total farm debt that is: |  |  |
| Long term | 31.00\% | \% |
| Current and intermediate | 69.00\% | \% |
| Accounts payable only | 4.00\% | \% |
| Debt Levels |  |  |
| Per bearing fruit acre |  |  |
| Total farm debt | \$3,083 | \$ |
| Long-term | \$957 | \$ |
| Current and intermediate | \$2,126 | \$ |

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 4.

Farm Inventory Balance 22 Western New York Fruit Farms, 2006

| Inventory Balance | Average 22 FarmsReal |  | Real My Farm |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Real Estate | Equipment |  | Real Estate | Equipment |
| Beginning of year (1) | \$702,485 | \$414,954 | \$ |  |  |
| Purchases | \$14,150 | \$51,043 |  |  |  |
| + Noncash transfer to farm | \$0 | \$0 |  |  |  |
| - Lost capital | \$81 | \$0 |  |  |  |
| - Sales | \$1,276 | \$4,412 |  |  |  |
| - Depreciation | \$4,118 | \$42,385 |  |  |  |
| = Net Investment (2) | \$8,675 | \$4,246 |  |  |  |
| Appreciation (3-1-2) | \$5,334 | \$23,838 |  |  |  |
| End of year (3) | \$716,494 | \$443,038 |  |  |  |

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

Table 5. Farm Expenses, 22 Western New York Fruit Farms, 2006

| Expenses | Cash amount paid | Change in inventory or prepaid expenses | Change in accounts payable | Accrual Expense s |
| :---: | :---: | :---: | :---: | :---: |
| Hired Labor |  |  |  |  |
| Wages: |  |  |  |  |
| Regular | \$181,593 | \$0 | (\$1,008) | \$180,585 |
| Picking | \$78,066 | \$0 | \$89 | \$78,155 |
| Other part-time, seasonal | \$16,370 | (\$206) | \$0 | \$16,164 |
| Other labor costs | \$54,109 | \$821 | \$418 | \$55,348 |
| Picker travel | \$3,328 | \$0 | \$634 | \$3,962 |
| Labor camp expenses | \$866 | \$0 | \$0 | \$866 |
| Equipment |  |  |  |  |
| Machine hire, rent, lease | \$7,900 | \$0 | \$136 | \$8,036 |
| Repairs and parts | \$27,500 | \$97 | \$279 | \$27,876 |
| Trucking expense | \$9,882 | \$0 | \$324 | \$10,206 |
| Fuel, oil, and grease | \$33,952 | \$432 | \$457 | \$34,841 |
| Livestock |  |  |  |  |
| All livestock expense | \$0 | \$0 | \$0 | \$0 |
| Crops |  |  |  |  |
| Fertilizer and lime | \$11,692 | \$1,058 | \$2,293 | \$15,043 |
| Replace trees and plants | \$7,476 | \$987 | \$2,159 | \$10,622 |
| Spray | \$101,543 | \$127 | \$7,412 | \$109,082 |
| Supplies, other | \$20,805 | \$1,191 | \$729 | \$22,725 |
| Processing package supplies | \$2,726 | \$175 | \$0 | \$2,901 |
| Storage | \$29,575 | \$0 | \$598 | \$30,173 |
| Marketing, selling expenses | \$3,386 | \$0 | \$0 | \$3,386 |
| Real Estate |  |  |  |  |
| Repair-Land, building, fence | \$5,965 | \$0 | \$482 | \$6,447 |
| Taxes | \$10,028 | \$338 | \$614 | \$10,980 |
| Rent \& lease | \$14,591 | \$79 | \$701 | \$15,371 |
| Other Expenses |  |  |  |  |
| Fire, liability expenses | \$15,171 | \$0 | \$0 | \$15,171 |
| Crop and revenue Insurance | \$8,979 | \$0 | \$178 | \$9,157 |
| All utilities | \$18,100 | \$0 | \$176 | \$18,276 |
| Legal/office expense | \$9,095 | \$8 | \$0 | \$9,103 |
| Fruit purchased for resale | \$7,771 | \$0 | \$2,730 | \$10,501 |
| Interest paid | \$35,701 | \$0 | \$1,812 | \$37,513 |
| Misc. | \$16,864 | \$479 | \$1,787 | \$19,130 |
| TOTAL OPERATING EXPENSES | \$733,034 | \$5,586 | \$23,000 | \$761,620 |
| Depreciation: |  |  |  |  |
| Equipment |  |  |  | \$42,385 |
| Buildings |  |  |  | \$4,118 |
| Bearing trees and vines |  |  |  | \$3,017 |
| TOTAL ACCRUAL EXPENSES |  |  |  | \$811,140 |

## Table 6.

Income Statement - Farm Expenses, My Farm, 2006

|  | Change in |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Expenses | Cash amount |  |  |  |
| inventory or |  |  |  |  |
| prepaid |  |  |  |  |
| expenses |  |  |  |  |$\quad$| Change in |
| :---: |
| accounts |
| payable |$\quad$| Accrual |
| :---: |
| Expenses |

Hired Labor
Wages:


Table 7. Income Statement-Farm Receipts, 22 Western New York Fruit Farms, 2006

| Receipts | Cash Receipts | Change in inventory | Change in accounts receivable | Accrual Receipts |
| :---: | :---: | :---: | :---: | :---: |
| Apples: |  |  |  |  |
| Fresh | \$423,883 | \$81,091 | \$4,899 | \$509,873 |
| Peelers | \$191,304 | $(\$ 6,241)$ | \$25,750 | \$210,813 |
| Juice | \$17,311 | $(\$ 1,318)$ | \$1,002 | \$16,995 |
| Cherries: |  |  |  |  |
| Sweet | \$28,600 | \$0 | (\$120) | \$28,480 |
| Tart | \$13,060 | \$0 | $(\$ 1,421)$ | \$11,639 |
| Grapes | \$0 | \$0 | \$0 | \$0 |
| Peaches | \$40,394 | \$0 | \$424 | \$40,818 |
| Plums and Prunes | \$1,156 | \$0 | \$0 | \$1,156 |
| Pears | \$12,263 | \$0 | \$218 | \$12,481 |
| Other Crops, Livestock, \& Prod | \$11,222 | \$0 | $(\$ 1,453)$ | \$9,769 |
| Custom Work, Storage, Rent | \$34,633 | \$0 | \$2,930 | \$37,563 |
| Other | \$68,667 | \$0 | \$937 | \$69,604 |
| Total Operating Receipts | \$842,493 | \$73,532 | \$33,166 | \$949,191 |

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 8.
Income Statement - Farm Receipts, My Farm 2006

| Receipts | Cash <br> Receipts | Change in inventory | Change in accounts receivable | Accrual Receipts |
| :---: | :---: | :---: | :---: | :---: |
| Apples: |  |  |  |  |
| Fresh | \$ | \$ | \$ | \$ |
| Peelers |  |  |  |  |
| Juice |  |  |  |  |
| Cherries: |  |  |  |  |
| Sweet |  |  |  |  |
| Tart |  |  |  |  |
| Grapes |  |  |  |  |
| Peaches |  |  |  |  |
| Plums and Prunes |  |  |  |  |
| Pears |  |  |  |  |
| Other Crops, Livestock, \& Prod |  |  |  |  |
| Custom Work, Storage, Rent |  |  |  |  |
| Other |  |  |  |  |
| Total Operating 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 9.

| Net Farm Income, 22 Western New York Fruit Farms, 2006 |  |  |
| :---: | :---: | :---: |
| ITEM | AVERAGE | My Farm |
| Total Accrual Receipt | \$949,191 | \$ |
| + Appreciation: |  |  |
| Livestock | \$0 |  |
| Equipment | \$23,838 |  |
| Real estate | \$5,334 |  |
| Other stocks and certificates | \$8,051 |  |
| = Total Accrual Receipts with |  |  |
| Appreciation | \$986,414 |  |
| - Total Accrual Expenses | \$811,140 |  |
| = Net Farm Income |  |  |
| with appreciation | \$175,274 |  |
| without appreciation | \$138,051 |  |

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 10.
Return to Operators' Labor, Management, and Equity Capital 22 Western New York Fruit Farms, 2006

| Item | Average | My Farm |
| :---: | :---: | :---: |
| With appreciation: |  |  |
| Net farm income | \$175,274 | \$ |
| - Family unpaid labor @ \$2,300/mo | \$0 |  |
| management and equity | \$175,274 |  |
| Without appreciation: |  |  |
| Net farm income | \$138,051 |  |
| - Family unpaid labor @ \$2,300/mo | \$0 |  |
| = Return to operators' labor management and equity | \$138,051 |  |

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 11.
Labor \& Management Income 22 Western New York Fruit Farms, 2006

| Item | Average | My Farm |  |
| :--- | ---: | :--- | :--- |
| Net Farm Income with Appreciation | $\$ 175,274$ | $\$-$ |  |
| Net Farm Income without Appreciation | $\$ 138,051$ |  |  |
| - Family Labor @ \$2,300 per month | $\$ 0$ |  |  |
| - Real interest @ 5\% on Equity Capital | $\$ 60,460$ |  |  |
| = Labor and management income with appreciation (1.4 operators) | $\$ 114,814$ |  |  |
| Labor and management income with appreciation per Operator | $\$ 81,477$ |  |  |
|  |  |  |  |
| = Labor and management income without appreciation (1.4 operators) | $\$ 77,591$ |  |  |

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. Net farm income from operations ratio is net farm income (without appreciation) divided by total accrual receipts. It is a general measure of returns to equity and labor and management as a percent of what the farm produced.

## Table 12.

Return on Equity Capital and Return on Total Capital
22 Western New York Fruit Farms, 2006

| Item | Average 22 |  |
| :--- | :---: | :---: |


| Net farm income with appreciation | \$175,274 | \$ |
| :---: | :---: | :---: |
| - Unpaid family labor @ \$2,000 per month | \$0 |  |
| - Values of operator labor and management | \$66,013 |  |
| = Return to equity capital with appreciation | \$109,261 |  |
| + Interest Paid | \$37,513 |  |
| = Return to all capital with appreciation | \$146,774 |  |
| Return to equity capital without appreciation | \$72,038 |  |
| Return to all capital without appreciation | \$109,551 |  |
| Rate of return on average equity capital with appreciation | 9.00\% | \% |
| without appreciation | 6.00\% | \% |
| Rate of return on all capital |  |  |
| with appreciation | 7.90\% | \% |
| without appreciation | 5.90\% | \% |
| Net farm income from operations ratio | \$14.50 |  |

## 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 13. 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 14).

Table 13.

## Annual Cash Flow Statement, 22 Western New York Fruit Farms 2006

## Cash Flow from Operating Activities

Cash farm receipts \$842,493

- Cash farm expenses
= Net Cash Farm Income
\$109,459
Personal withdrawals \& family expenses including nonfarm debt payments
\$65,112
- Nonfarm income
- Net cash withdrawals from farm
\$13,312
$=$ Net Provided by Operating Activities \$57,659
Cash Flow from Investing Activities


Cash Flow From Financing Activities

| Money borrowed (intermediate \& long term) | \$52,747 |  |
| :---: | :---: | :---: |
| + Money borrowed (short term) | \$4,989 |  |
| + Increase in operating debt | \$25,795 |  |
| + Cash from nonfarm capital used in business | \$0 |  |
| + Money borrowed - nonfarm | \$0 |  |
| = Cash flow from financing | \$83,531 |  |
| Principal payments (intermediate \& long term) | \$39,061 | \$24,909 |
| + Principal payments (short term) | \$4,766 |  |
| + Decrease in operating debt | \$14,795 |  |
| - Cash outflow for financing | \$58,622 |  |
| $=$ Net Provided by Financing Activities |  |  |
| Cash Flow from Reserves |  |  |
| Beginning farm cash, checking \& savings | \$39,252 |  |
| - Ending farm cash, checking \& savings | \$27,287 |  |
| = Net Provided from Reserves |  | \$11,965 |
| Imbalance |  | \$2,915 |

Table 14.

## Annual Cash Flow Statement, My Farm 2006

## Cash Flow from Operating Activities

Cash farm receipts \$

- Cash farm expenses
= Net Cash Farm Income
Personal Withdrawals \& family expenses
including nonfarm debt payments
- Nonfarm income
\$ $\qquad$
- Net cash withdrawals from farm
$=$ Net Provided by Operating Activities
Cash Flow from Investing Activities

| Sale of assets:machinery <br> real estate | - |
| :---: | :---: |

other stock \& certificates $\qquad$
= Total asset sales $\qquad$
Capital Purchases: expansion orchard $\qquad$

+ machinery
+ real estate
+ other stock \& certificates
$\qquad$
+ other stock \& certificates
$\qquad$
- Total invested in farm assets
$\qquad$
+ Net Provided by Investment
Cash Flow From Financing Activities

| 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 |  |
| = Net Provided by Financing Activities |  |
| Cash Flow from Reserves |  |

## 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 15.

## Farm Debt Payments Planned 22 Western New York Fruit Farms, 2006

| Item | Average <br> Actual Payments $2006$ | 22 Farms <br> Planned Payments 2007 |
| :---: | :---: | :---: |
| Current/Short Term (net reduction) | \$13,041 | \$9,113 |
| Intermediate Term (net reduction) | \$7,288 | \$36,573 |
| Long Term (net reduction) | \$6,398 | \$22,608 |
| Total Debt Payments | \$26,727 | \$68,294 |
| Payments as a percent of: |  |  |
| Total accrual receipts | 2.80\% | 7.20\% |
| Total accrual fruit receipts | 2.90\% | 7.50\% |
| Payments per bearing fruit acre | \$126 | \$322 |
| Payments per acre operated | \$91 | \$232 |
| Payments per bushel of apples sold | \$0.19 | \$0.48 |
|  | My Farm |  |
| Item | Actual Payments $2006$ | Planned Payments 2007 |
| Current/Short Term (net reduction) | \$ | \$ |
| Intermediate Term (net reduction) |  |  |
| Long Term (net reduction) |  |  |
| Total Debt Payments |  | - |
| 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 | $\square$ |  |

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 17 and 18 can be used to estimate repayment ability which can then be compared to planned 2006 debt payments shown in Table 16.

Table 16.

## Cash Flow Coverage Ratio 22 Western New York Fruit Farms, 2006

| Item | Average | My Farm |
| :---: | :---: | :---: |
| Cash Farm Receipts | \$842,493 | \$ |
| - Cash Farm Expenses | \$733,034 |  |
| + Interest Paid | \$35,701 |  |
| $=$ Amount Available for debt service | \$145,160 |  |
| Debt Payments Planned | \$68,294 |  |
| Cash Flow Coverage Ratio | 2.13 |  |

Table 17.
Annual Cash Flow Worksheet
22 Western New York Fruit Farms, 2006

| Item | Average 22 Farms | My Farm <br> Total | My Farm per bearing acre |
| :---: | :---: | :---: | :---: |
| Average Bearing Acres and Bearing Fruit Acres | 212 |  |  |
| Accrual Operating Receipts (per fruit bearing acre) |  |  |  |
| Apples: |  |  |  |
| Fresh | \$2,405 | \$ | \$ |
| Peelers | \$994 |  |  |
| Juice | \$80 |  |  |
| Cherries: |  |  |  |
| Sweet | \$134 |  |  |
| Tart | \$55 |  |  |
| Grapes | \$0 |  |  |
| Peaches | \$193 |  |  |
| Plums and Prunes | \$5 |  |  |
| Pears | \$59 |  |  |
| Other Crops, Livestock, \& Prod | \$46 |  |  |
| Custom Work, Storage, Rent | \$177 |  |  |
| Other | \$328 |  |  |
| Total Operating Receipts | \$4,477 |  |  |

Table 18.
Annual Cash Flow Worksheet
22 Western New York Fruit Farms, 2006
$\left.\left.\begin{array}{|lcc|}\hline & \begin{array}{c}\text { Average } \\ \text { Item }\end{array} 22 \text { Farms }\end{array} \quad \begin{array}{c}\text { My Farm } \\ \text { Total }\end{array}\right] \begin{array}{c}\text { My Farm } \\ \text { per bearing acre }\end{array}\right]$

Table 19.

## Annual Cash Flow Worksheet- Repayment Analysis 22 Western New York Fruit Farms, 2006

| Item | Average <br> 22 Farms | My Farm <br> Total |
| :--- | :---: | :---: |
| Repayment Analysis (Total) |  |  |
| Net Accrual Operating Income (excluding interest paid) | $\$ 225,084$ | $\$$ |
| - Change in livestock and crop inventory | $\$ 62,806$ |  |
| - Change in accounts receivable | $\$ 23,932$ |  |
| - Change in supply inventory | $\$ 0$ |  |
| Net operating cash flow | $\$ 140,770$ |  |
| - Net personal withdrawals | $\$ 65,112$ |  |
| Available for debt payments and investment | $\$ 75,658$ |  |
| - Farm debt payments (principle and interest) | $\$ 96,135$ |  |
| Available for farm investment | $\$ 22,901)$ |  |
|  |  |  |
| Capital purchases | $\$ 101,198$ |  |
| Additional capital needed | $\$ 124,099$ |  |

## 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. In Table 20, total expenses per dollar of receipts is $\$ .82$.

Table 20.

## Capital Efficiency Analysis

 22 Western New York Fruit Farms, 2006| Item | Per worker equiv | Average 22 Farms Per bearing fruit acre | Per acre operated |
| :---: | :---: | :---: | :---: |
| Assets |  |  |  |
| Total Farm Capital | \$138,739 | \$8,421 | \$6,072 |
| Real estate | \$57,520 | \$3,491 | \$2,517 |
| All Equipment | \$33,355 | \$2,024 | \$1,460 |
| Ratios: |  |  |  |
| Capital turnover | Operating Expense | Interest Expense | Depreciation Expense |
| 0.55 | 0.73 | 0.04 |  |
| $=1.8 \mathrm{yrs}$. |  |  |  |
| My Farm |  |  |  |
| Total Farm Capital |  |  |  |
| Real estate |  |  |  |
| All Equipment |  |  |  |
| Ratios: |  |  |  |
| Capital turnover | Operating Expense | Interest Expense | Depreciation Expense |
| - | - | — |  |

## Equipment Analysis

Equipment costs comprised nearly 18 percent of the cost of fruit production in 2006. Total equipment expenses include the major fixed costs (interest and depreciation) as well as the accrual operating costs.

Table 21.
Accrual Equipment Expenses
22 Western New York Fruit Farms, 2006

| Item | Average 22 Farms |  |  |
| :---: | :---: | :---: | :---: |
|  | Equipment cost per fruit acre operated |  |  |
|  | Total | bearing | all fruit |
| Machine Hire, |  |  |  |
| Equipment Rent, Lease | \$8,036 | \$38 | \$33 |
| Repair and parts | \$27,876 | \$131 | \$115 |
| Trucking | \$10,206 | \$48 | \$42 |
| Fuel, oil, and grease | \$34,841 | \$160 | \$140 |
| Interest on avg equipment capital at 5\% | \$21,460 | \$96 | \$84 |
| Depreciation | \$42,385 | \$171 | \$150 |
| Total Equipment Cost | \$144,804 | \$644 | \$565 |


| Item | My Farm |  |  |
| :---: | :---: | :---: | :---: |
|  | Total | Equipment cost per fruit acre operated |  |
|  |  | bearing | all fruit |
| Machine Hire, Equipment Rent, Lease | \$ | \$ | \$ |
| Repair and parts |  |  |  |
| Trucking |  |  |  |
| Fuel, oil, and grease |  |  |  |
| Interest on avg.equipment capital at 5\% |  |  |  |
| Depreciation |  |  |  |
| Total Equipment Cost |  |  |  |

## 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 $41 \%$ of total accrual expenses.

## Table 22.

Labor Inventory Analysis, 22 Western New York Fruit Farms, 2006

| Labor force | Full-time Months | Age, <br> Years | Education, <br> Years |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Average |  |  |  |  |  |
| Operator 1 | 11.11 | 54 | 13 |  | \$42,784 |
| Operator 2 | 4.50 | 51 | 15 |  | \$16,070 |
| Operator 3 | 1.23 | 55 | 15 |  | \$6,801 |
| Operator 4 | 0.07 | 64 | 16 |  | \$359 |
| Family Paid | 0.00 |  |  | Total | \$66,014 |
| Family Unpaid | 0.00 |  |  | Avg. per Operator | \$46,845 |
| Hired |  |  |  |  |  |
| Regular | 85.1 |  |  |  |  |
| Harvest | 42.4 |  |  |  |  |
| Other PT/Seasonal | 10.0 |  |  |  |  |
| Total Hired | 137.5 |  |  |  |  |
| Total | 154.4 | mo./12 = | $\begin{aligned} & 12.9 \\ & 1.41 \\ & 11.5 \end{aligned}$ | worker equivalent oper./manager equivalent hired worker equiv |  |

My Farm:

| Total | mo. $/ 12=$ |  |
| :--- | :--- | :--- |
| Operators | mo. $/ 12=$ | $\overline{\text { equivalent }}$ operator. $/$ wanager |

Table 23.
Labor Efficiency Analysis, 22 Western New York Fruit Farms, 2006

| Labor Efficiency | Average 22 Farms |  | My Farm |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Total | Per Worker | Total | Per Worker |
| Bearing fruit acres | 212 | 16.5 |  |  |
| Total acres operated | 294 | 22.8 |  |  |
| Apples sold, bu. | 143,700 | 11,168 |  |  |
| Accrual receipts | \$949,191 | \$73,767 |  |  |


| Labor Cost or Value | Average 22 Farms |  |  | Total | My Farm |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Per Worker Equivalent | Per Bearing Fruit Acre |  | Per Worker Equivalent | Per Bearing Fruit Acre |
| Value of operators' labor @ \$2,400/mo. | \$40,584 | \$3,154 | \$191 | \$ | \$ | \$ |
| Family unpaid <br> @ \$2,400 per mo. | \$0 | \$0 | \$0 |  |  |  |
| Hired |  |  |  |  |  |  |
| Regular | \$180,585 | \$14,034 | \$852 |  |  |  |
| Harvest | \$78,155 | \$6,074 | \$369 |  |  |  |
| Other PT/Seasonal | \$16,164 | \$1,256 | \$76 |  |  |  |
| Total Hired | \$274,904 | \$21,364 | \$1,297 |  |  |  |
| Indirect Labor Costs | \$55,348 | \$4,301 | \$261 |  |  |  |
| Total Labor | \$330,252 | \$25,666 | \$1,558 |  |  |  |
| Machinery Costs | \$144,804 | \$11,253 | \$683 |  |  |  |
| Total Labor and |  |  |  |  |  |  |
| Machinery | \$475,056 | \$36,919 | \$2,241 |  |  |  |
| Hired Labor as Percent of |  |  |  |  |  |  |
| Crop Sales | 32.60\% |  |  | \$ |  |  |
| Total Labor as Percent of |  |  |  |  |  |  |
| Crop Sales | 39.20\% |  |  | \$ |  |  |

## 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 25) to develop comparable figures for your own operation. The nonbearing acreage is 12.4 percent of total fruit acres.

Table 24.
Land Resources and Crop Production, 22 Western New York Fruit Farms, 2006

|  | Average 22 Farms |
| :--- | :---: |
| Item |  |
| Land Class (end of year) | 212.0 |
| Bearing fruit acres | 30.0 |
| Non-bearing fruit acres | 42.0 |
| Other crops and open acres | 53.0 |
| Non-tillable acres |  |
|  | 294.0 |
| Total land operated | 59.2 |
| Rented land included above |  |

For farms having the fruit:
Percent of
Crop Production No. of farms Average acres Yield per acre Total Apples

Bearing Fruit:

| Apples : fresh | 22 | 112.1 | 650.5 bu. | $46.00 \%$ |
| :--- | ---: | ---: | ---: | ---: |
| : Peelers | 21 | 67.3 | 959.7 bu. | $49.00 \%$ |
| : Juice | 16 | - | - | $7.00 \%$ |
| Total Apples | 22 | 176.3 | 827.3 bu. |  |
| Cherries : sweet | 10 | 11.0 | 6067.0 lb. |  |
| $\quad$ : tart | 5 | 38.0 | 7500.0 lb. |  |
| Grapes | 0 | 0.0 | 0.0 ton |  |
| Peaches | 14 | 17.8 | 5.5 ton |  |
| Plums/Prunes | 5 | 4.0 | 3.5 ton |  |
| Pears | 5 | 14.9 | 8.0 ton |  |

## Non-Bearing Fruit:

| Apples : fresh | 20 | 19.0 |
| :--- | ---: | ---: |
| : Peeler | 6 | 7.1 |
| Cherries : sweet | 6 | 3.2 |
| $\quad$ : tart | 7 | 21.9 |
| Grapes | 1 | 1.0 |
| Peaches | 6 | 3.7 |
| Plums/Prunes | 1 | 2.0 |
| Pears | 3 | 5.0 |

## Other Crops, Open:

Other 5

Table 25.
Land Resources and Crop Production, My Farm, 2006

| Item | Total acres |
| :--- | :--- |

Land Class (end of year)
Bearing fruit acres
Non-bearing fruit acres
Other crops and open acres
$\square$
Non-tillable acres $\qquad$
Total land operated
Rented land included above

| Crop Production | My Farm |  |  |
| :---: | :---: | :---: | :---: |
|  | Total acres | Yield per acre | Percent of total apples |
| Bearing Fruit: |  |  |  |
| Apples: |  |  |  |
| Fresh |  | _ bu. | \% |
| Peelers |  | _ bu. | [ \% |
| Juice |  |  |  |
| Total Apples |  | _ bu. |  |
| Cherries: $\quad$ - $\quad$ lb. |  |  |  |
| Sweet $\quad$ _ lb . |  |  |  |
| Tart |  | Ib. |  |
| Grapes |  | _ ton |  |
| Peaches |  | _ ton |  |
| Plums/prunes |  | _ ton |  |
| Pears |  |  |  |

## Non-Bearing Fruit:

Apples:
Fresh $\qquad$
Peeler $\qquad$
Cherries: $\qquad$
Sweet
Tart
Grapes
Peaches
Plums/prunes $\qquad$
Pears $\qquad$
Other Crops, Open:
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 comprising about 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 26.

## Cost Control Factors 22 Western New York Fruit Farms, 2006

| Average 22 Farms |  | My Farm |
| :--- | :---: | :---: |
| Cost Per Fruit Acre Operated |  |  |
| Bearing | Cost Per Fruit Acre Operated |  |
| Acres | All Fruit Acres | Bearing <br> Acres |


| All labor including |  |  |  |
| :--- | ---: | ---: | :--- |
| $\quad$ operators' labor | $\$ 1,558$ | $\$ 1,365$ | - |
| Harvest labor | $\$ 369$ | $\$ 323$ | $\square$ |
| Other hired labor | $\$ 261$ | $\$ 229$ | - |
| All equipment cost | $\$ 683$ | $\$ 598$ | - |
| Spray | $\$ 515$ | $\$ 451$ | $\square$ |

## 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. See the last table in this publication for the progress chart for the farms in this year's study.

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 27.

Analyzing the Fruit Farm Business, 22 Western New York Fruit Farms, 2006

| Selected Factors | $2006$ <br> Average 22 Farms | My Farm |
| :---: | :---: | :---: |
| Number of Farms |  |  |
| Size of Business |  |  |
| Total acres | 294 |  |
| All fruit acres (incl non-bearing) | 242 |  |
| Bearing fruit acres | 212 |  |
| Fresh- percent of all apple acres | 58.00\% |  |
| Apples produced (bushels) | 144,156 |  |
| Apples sold (bushels) | 143,700 |  |
| Worker Equivalent | 12.9 |  |
| Rates of Production |  |  |
| All apples, bushels per bearing acre | 827.30 |  |
| Fresh - percent of apples harvested | 46\% |  |
| Cherries - tart, pounds per bearing acre | 7,500.00 |  |
| Cherries - sweet, pounds per bearing acre | 6,067.00 |  |
| Peaches - tons per bearing acre | 5.50 |  |
| Plums/Prunes - tons per bearing acre | 3.50 |  |
| Pears - tons per bearing acre | 8.00 |  |
| Labor Efficiency |  |  |
| Bearing fruit acres per worker | 16.5 |  |
| All fruit acres per worker | 18.8 |  |
| Accrual Receipts per worker | \$73,767 |  |
| Cost Control - Accrual |  |  |
| Costs per bearing fruit acre |  |  |
| All labor | \$1,558 |  |
| All equipment | \$683 |  |
| Spray | \$515 |  |
| Expansion orchard expense | \$25,723 |  |
| Hired labor as percent of operating expense | 38.00\% |  |
| Capital Efficiency |  |  |
| Total farm capital per bearing fruit acre | \$8,421 |  |
| Total farm capital per fruit acre | \$6,072 |  |
| Capital Turnover Ratio | 0.55 |  |
| Profitability |  |  |
| Net farm income without appreciation | \$138,051 |  |
| Net farm income with appreciation | \$175,274 |  |
| Labor and management income per operator | \$55,062 |  |
| Rate of return on: |  |  |
| Equity capital with appreciation | 9.00\% |  |
| All capital with appreciation | 7.90\% |  |
| Financial Summary, End of Year |  |  |
| Farm net worth | \$1,209,195 |  |
| Debt to asset ratio | 0.35 |  |
| Farm debt per bearing fruit acre | \$3,083 |  |
| Cash flow coverage ratio | 2.13 |  |

Table 28. Progress of the Farm Business, 17 Farms, 2005 and 2006.

| Selected Factors | 2005 Average 17 Farms | $2006$ <br> Average 17 Farms | My Farm |
| :---: | :---: | :---: | :---: |
| Size of Business |  |  |  |
| Total acres | 333 | 310 |  |
| All fruit acres (incl non-bearing) | 276 | 267 |  |
| Bearing fruit acres | 243 | 234 |  |
| Fresh- percent of all apple acres | 57.65\% | 59.00\% |  |
| Apples produced (bushels) | 144,698 | 158,637 |  |
| Apples sold (bushels) | 144,698 | 158,637 |  |
| Worker Equivalent | 14.45 | 14.7 |  |
| Rates of Production |  |  |  |
| All apples, bushels per bearing acre | 692.19 | 823.90 |  |
| Fresh - percent of apples harvested | 44\% | 46\% |  |
| Cherries - tart, pounds per bearing acre | 5273.78 | 7,500.00 |  |
| Cherries - sweet, pounds per bearing acre | 3946.04 | 5,877.00 |  |
| Peaches - tons per bearing acre | 3.42 | 5.50 |  |
| Plums/Prunes - tons per bearing acre | 0.58 | 3.50 |  |
| Pears - tons per bearing acre | 5.63 | 5.80 |  |
| Labor Efficiency |  |  |  |
| Bearing fruit acres per worker | 16.81 | 15.90 |  |
| All fruit acres per worker | 19.08 | 18.20 |  |
| Accrual Receipts per worker | \$60,796 | \$69,918 |  |
| Cost Control - Accrual |  |  |  |
| Costs per bearing fruit acre |  |  |  |
| All labor | \$1,454 | \$1,599 |  |
| All equipment | \$594 | \$675 |  |
| Spray | \$403 | \$532 |  |
| Expansion orchard expense | \$25,289 | \$30,241 |  |
| Hired labor as percent of operating expense | 39.77\% | 38.00\% |  |
| Capital Efficiency |  |  |  |
| Total farm capital per bearing fruit acre | \$7,782 | \$8,435 |  |
| Total farm capital per fruit acre | \$6,855 | \$6,667 |  |
| Capital Turnover Ratio | 0.47 | 0.54 |  |
| Profitability |  |  |  |
| Net farm income without appreciation | \$71,068 | \$113,879 |  |
| Net farm income with appreciation | \$78,206 | \$148,006 |  |
| Labor and management income per operator | \$6,520 | \$27,195 |  |
| Rate of return on: |  |  |  |
| Equity capital with appreciation | -1.68\% | 5.80\% |  |
| All capital with appreciation | 0.69\% | 5.80\% |  |
| Financial Summary, End of Year |  |  |  |
| Farm net worth | \$1,153,546 | \$1,209,402 |  |
| Debt to asset ratio | 0.38 | 0.37 |  |
| Farm debt per bearing fruit acre | \$2,865 | \$3,196 |  |
| Cash flow coverage ratio | 2.59 | 2.20 |  |

## OTHER A.E.M. EXTENSION BULLETINS

| EB No | Title | Fee (if applicable) | Author(s) |
| :---: | :---: | :---: | :---: |
| 2007-14 | Dairy Farm Business Summary, Central Valleys Region, 2006 | (\$12.00) | Knoblauch, W., Karszes, J., Radick, C., Wickswat, C., Manning, J., Balbian, D., Allhusen, G., Buxton, S. and L. Putnam |
| 2007-13 | Dairy Farm Business Summary, Intensive Grazing Farms, New York, 2006 | (\$16.00) | Conneman, G., Grace, J., Karszes, J., Degni, J., Munsee, D., Putnam, <br> L., Staehr, A. and C. Kyle |
| 2007-12 | Quantifying the Contributions to Dairy Farm Business Risk: Implications for Producer's Risk Management Strategies |  | Schmit, T., Chang, H., Boisvert, R. and L. Tauer |
| 2007-11 | Dairy Farm Business Summary, Northern New York Region, 2006 | (\$12.00) | Knoblauch, W., Putnam, L., Karszes, J., Murray, P., Vokey, F., Ames, M., Van Loo, W., Deming, A. and J. Prosper |
| 2007-10 | Dairy Farm Business Summary, Western and Central Plateau Region, 2006 | (\$12.00) | Knoblauch, W., Putnam, L., <br> Karszes, J., Grace, J., Munsee, D. and J.Petzen |
| 2007-09 | Dairy Farm Business Summary, New York Small Herd Farms, 80 Cows or Fewer, 2006 | (\$16.00) | Knoblauch, W., Putnam, L., Kiraly, M. and J. Karszes |
| 2007-08 | Producing a Business Plan for Value-Added Agriculture |  | Streeter, D. |
| 2007-07 | Dairy Farm Business Summary, Northern Hudson Region, 2006 | (\$12.00) | Conneman, G., Putnam, L., <br> Wickswat, C., Buxton, S., Smith, R. and J. Karszes |
| 2007-06 | Dairy Farm Business Summary, Western and Central Plain Region, 2006 | (\$12.00) | Knoblauch, W., Putnam, L., Karszes, J., Hanchar, J., Moag, G., Getty, K. and Z. Waite |
| 2007-05 | Dairy Farm Business Summary, New York Large Herd Farms, 300 Cows or Larger, 2006 | (\$16.00) | Karszes, J., Knoblauch, W. and L. Putnam |

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