1.1 Agricultural and Horticultural Business Vitality

V(A). Planned Program (Summary)

1. Name of the Planned Program

1. Agricultural and Horticultural Business Vitality

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
<th>%1862 Extension</th>
<th>%1890 Extension</th>
<th>%1862 Research</th>
<th>%1890 Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>511</td>
<td>New and Improved Non-Food Products and Processes</td>
<td>20%</td>
<td></td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
<td>7%</td>
<td></td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
<td>10%</td>
<td></td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>603</td>
<td>Market Economics</td>
<td>5%</td>
<td></td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>604</td>
<td>Marketing and Distribution Practices</td>
<td>8%</td>
<td></td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>605</td>
<td>Natural Resource and Environmental Economics</td>
<td>10%</td>
<td></td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>606</td>
<td>International Trade and Development</td>
<td>10%</td>
<td></td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>609</td>
<td>Economic Theory and Methods</td>
<td>15%</td>
<td></td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>610</td>
<td>Domestic Policy Analysis</td>
<td>10%</td>
<td></td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>611</td>
<td>Foreign Policy and Programs</td>
<td>5%</td>
<td></td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>

Total 100% 100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

<table>
<thead>
<tr>
<th>Year: 2007</th>
<th>Extension</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1862</td>
<td>1890</td>
</tr>
<tr>
<td>Plan</td>
<td>16.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Actual</td>
<td>105.7</td>
<td>0.0</td>
</tr>
</tbody>
</table>

2. Institution Name: Cornell University

Actual dollars expended in this Program (includes Carryover Funds from previous years)

<table>
<thead>
<tr>
<th>Extension</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith-Lever 3b &amp; 3c</td>
<td>Hatch</td>
</tr>
<tr>
<td>1890 Extension</td>
<td>1862 Matching</td>
</tr>
<tr>
<td>464318</td>
<td>0</td>
</tr>
<tr>
<td>1862 Matching</td>
<td>1890 Matching</td>
</tr>
<tr>
<td>464318</td>
<td>0</td>
</tr>
<tr>
<td>1862 All Other</td>
<td>1890 All Other</td>
</tr>
</tbody>
</table>
2. Institution Name: NY State Agricultural Experiment Station

Actual dollars expended in this Program (includes Carryover Funds from previous years)

<table>
<thead>
<tr>
<th></th>
<th>Extension</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith-Lever 3b &amp; 3c</td>
<td>0</td>
<td>Hatch</td>
</tr>
<tr>
<td>1890 Extension</td>
<td>0</td>
<td>6577</td>
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<tr>
<td>Hatch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1862 Matching</td>
<td>0</td>
<td>1862 Matching</td>
</tr>
<tr>
<td>1890 Matching</td>
<td>0</td>
<td>1890 Matching</td>
</tr>
<tr>
<td>1862 All Other</td>
<td>0</td>
<td>1862 All Other</td>
</tr>
<tr>
<td>1890 All Other</td>
<td>0</td>
<td>1890 All Other</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

V(D). Planned Program (Activity)

1. Brief description of the Activity
   This is a comprehensive, statewide educational program entailing a wide variety of applied research and multiple education methods depending on local context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

2. Brief description of the target audience
   Key audiences served, directly and indirectly, in enhancing agricultural and horticultural business viability include: Established producers; new and young producers, consultants and service providers, input suppliers, cooperative directors and managers, marketing firms, governmental agencies, lenders, and local/state/federal governmental leaders.

V(E). Planned Program (Outputs)

1. Standard output measures

   Target for the number of persons (contacts) reached through direct and indirect contact methods

<table>
<thead>
<tr>
<th>Year</th>
<th>Direct Contacts Adults</th>
<th>Indirect Contacts Adults</th>
<th>Direct Contacts Youth</th>
<th>Indirect Contacts Youth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>12000</td>
<td>35000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>55873</td>
<td>3539268</td>
<td>7358</td>
<td>63272</td>
</tr>
</tbody>
</table>

2. Number of Patent Applications Submitted (Standard Research Output)

   Patent Applications Submitted

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>1</td>
</tr>
</tbody>
</table>

   Patents listed
eClips@cornell.edu

3. Publications (Standard General Output Measure)

   Number of Peer Reviewed Publications

<table>
<thead>
<tr>
<th></th>
<th>Extension</th>
<th>Research</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>0</td>
<td>0</td>
<td>229</td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Report Date 12/03/2009
V(F). State Defined Outputs

Output Target

Output #1

Output Measure
- # persons completing education programs on the labor needs of agriculture/horticulture businesses and and/or the needs of potential employees. (1.1.3a)

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0</td>
<td>31381</td>
</tr>
</tbody>
</table>

Output #2

Output Measure
- # producers/horticulture business persons completing education programs on business management, finance, business planning and marketing, human resource management, risk management, production economics, and business transitions. (1.1.1a)

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Output #3

Output Measure
- # producers/horticulture business persons completing programs to expand profitability, develop marketing options, diversify or substitute alternative products or enterprises, and/or increase operational efficiencies. (1.1.2a)

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0</td>
<td>359</td>
</tr>
</tbody>
</table>

Output #4

Output Measure
- # of non-credit instructional activity contact hours directed to this plan.

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0</td>
<td>493739</td>
</tr>
</tbody>
</table>

Output #5

Output Measure
- # of non-credit instructional activities directed to this plan.

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0</td>
<td>2113</td>
</tr>
</tbody>
</table>

Output #6

Output Measure
- # funded applied research projects directed to this program.

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>16</td>
<td>30</td>
</tr>
</tbody>
</table>

Output #7

Output Measure
- # refereed publications directed to this program

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>85</td>
<td>229</td>
</tr>
</tbody>
</table>
### V(G). State Defined Outcomes

<table>
<thead>
<tr>
<th>O No.</th>
<th>Outcome Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td># participants demonstrating knowledge or skill gains re business management, finance, business planning and marketing, human resource management, risk management, production economics, inter-generational transfer and other business transitions. (1.1.1b)</td>
</tr>
<tr>
<td>2</td>
<td># participants demonstrating knowledge or skill gains related to expanding profitability, develop marketing options, diversify or substitute alternative products or enterprises, and/or increase operational efficiencies to solve immediate concerns. (1.1.2b)</td>
</tr>
<tr>
<td>3</td>
<td># participants who demonstrate knowledge gains related to needs of potential employees and/or availability of qualified employees. (1.1.3b)</td>
</tr>
<tr>
<td>4</td>
<td># participants documented to have applied knowledge or skills gained to strengthen existing business operations. (1.1.1c)</td>
</tr>
<tr>
<td>5</td>
<td># participants documented to have initiated one or more alternative or expanded ventures. (1.1.2c)</td>
</tr>
<tr>
<td>6</td>
<td># participants or producer groups who adopt practices of value-added production through retaining control of their product further in the processing chain, starting their own value added business, or forming alliances. (1.1.2d)</td>
</tr>
<tr>
<td>7</td>
<td># participants documented to have made one or more changes in human resources practices to enhance labor availability or retention. (1.1.3c)</td>
</tr>
<tr>
<td>8</td>
<td># participating family-owned agricultural/horticultural businesses that plan for succession, transfer, or sale of their business. (1.1.1d)</td>
</tr>
<tr>
<td>9</td>
<td># participants reporting improved agricultural/ horticultural business profitability attributed at least in part to program participation. (1.1.1e)</td>
</tr>
<tr>
<td>10</td>
<td># of new food, horticultural, and agricultural businesses and/or new enterprises within existing businesses reported by program participants and attributed at least in part to program participation. (1.1.2e)</td>
</tr>
<tr>
<td>11</td>
<td># producers/horticultural businesses reporting improved labor availability, performance, and/or retention of higher skilled and more valuable human resource team members attributed at least in part to program participation. (1.1.3d)</td>
</tr>
<tr>
<td>12</td>
<td># business owners successfully completing an intergenerational transfer or other desired dispensation of their business attributed at least in part to program participation. (1.1.1d)</td>
</tr>
<tr>
<td>13</td>
<td>Long-term viability and well being of the agricultural/horticulture industry and rural communities in Central New York State.</td>
</tr>
<tr>
<td>14</td>
<td>Integrated Risk Management Decision Strategies for Dairy Farmers</td>
</tr>
<tr>
<td>15</td>
<td>Better Weed Management Improves Profitability for Vegetable Growers</td>
</tr>
</tbody>
</table>
1.1 Agricultural and Horticultural Business Vitality

Outcome #1

1. Outcome Measures
   # participants demonstrating knowledge or skill gains re business management, finance, business planning and marketing, human resource management, risk management, production economics, inter-generational transfer and other business transitions. (1.1.1b)

2. Associated Institution Types
   • 1862 Extension
   • 1862 Research

3a. Outcome Type:
   Change in Knowledge Outcome Measure

3b. Quantitative Outcome
<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement
   Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas
<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
</tr>
</tbody>
</table>

Outcome #2

1. Outcome Measures
   # participants demonstrating knowledge or skill gains related to expanding profitability, develop marketing options, diversify or substitute alternative products or enterprises, and/or increase operational efficiencies to solve immediate concerns. (1.1.2b)

2. Associated Institution Types
   • 1862 Extension
   • 1862 Research

3a. Outcome Type:
   Change in Knowledge Outcome Measure

3b. Quantitative Outcome
<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement
   Issue (Who cares and Why)

What has been done
Results

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
<tr>
<td>604</td>
<td>Marketing and Distribution Practices</td>
</tr>
<tr>
<td>603</td>
<td>Market Economics</td>
</tr>
</tbody>
</table>

Outcome #3

1. Outcome Measures

   # participants who demonstrate knowledge gains related to needs of potential employees and/or availability of qualified employees. (1.1.3b)

2. Associated Institution Types

   - 1862 Extension
   - 1862 Research

3a. Outcome Type:

   Change in Knowledge Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

   Issue (Who cares and Why)

   What has been done

Results

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
</tr>
</tbody>
</table>

Outcome #4

1. Outcome Measures

   # participants documented to have applied knowledge or skills gained to strengthen existing business operations. (1.1.1c)

2. Associated Institution Types

   - 1862 Extension
   - 1862 Research
3a. **Outcome Type:**
Change in Action Outcome Measure

3b. **Quantitative Outcome**

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
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</thead>
<tbody>
<tr>
<td>2007</td>
<td>4000</td>
<td>2631</td>
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3c. **Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

What has been done

Results

4. **Associated Knowledge Areas**

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
</tr>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
</tbody>
</table>

**Outcome #5**

1. **Outcome Measures**

# participants documented to have initiated one or more alternative or expanded ventures. (1.1.2c)

2. **Associated Institution Types**

- 1862 Extension
- 1862 Research

3a. **Outcome Type:**
Change in Action Outcome Measure

3b. **Quantitative Outcome**

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
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<td>376</td>
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</table>

3c. **Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

What has been done

Results

4. **Associated Knowledge Areas**

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>604</td>
<td>Marketing and Distribution Practices</td>
</tr>
</tbody>
</table>

**Outcome #6**

1. **Outcome Measures**
1.1 Agricultural and Horticultural Business Vitality

Participants or producer groups who adopt practices of value-added production through retaining control of their product further in the processing chain, starting their own value added business, or forming alliances. (1.1.2d)

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>50</td>
<td>212</td>
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</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>604</td>
<td>Marketing and Distribution Practices</td>
</tr>
<tr>
<td>511</td>
<td>New and Improved Non-Food Products and Processes</td>
</tr>
</tbody>
</table>

Outcome #7

1. Outcome Measures

Participants documented to have made one or more changes in human resources practices to enhance labor availability or retention. (1.1.3c)

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>3000</td>
<td>266</td>
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</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
1.1 Agricultural and Horticultural Business Vitality

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
</tbody>
</table>

Outcome #8

1. Outcome Measures
# participating family-owned agricultural/horticultural businesses that plan for succession, transfer, or sale of their business. (1.1.1d)

2. Associated Institution Types
• 1862 Extension
• 1862 Research

3a. Outcome Type:
Change in Action Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>20</td>
<td>138</td>
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</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
</tbody>
</table>

Outcome #9

1. Outcome Measures
# participants reporting improved agricultural/horticultural business profitability attributed at least in part to program participation. (1.1.1e)

2. Associated Institution Types
• 1862 Extension
• 1862 Research

3a. Outcome Type:
Change in Condition Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>2500</td>
<td>1234</td>
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</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
1.1 Agricultural and Horticultural Business Vitality

What has been done

Results

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
<tr>
<td>604</td>
<td>Marketing and Distribution Practices</td>
</tr>
<tr>
<td>511</td>
<td>New and Improved Non-Food Products and Processes</td>
</tr>
<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
</tr>
</tbody>
</table>

Outcome #10

1. Outcome Measures

# of new food, horticultural, and agricultural businesses and/or new enterprises within existing businesses reported by program participants and attributed at least in part to program participation. (1.1.2e)

2. Associated Institution Types

• 1862 Extension
• 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
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</thead>
<tbody>
<tr>
<td>2007</td>
<td>75</td>
<td>159</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>511</td>
<td>New and Improved Non-Food Products and Processes</td>
</tr>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
</tbody>
</table>

Outcome #11

1. Outcome Measures

# producers/horticultural businesses reporting improved labor availability, performance, and/or retention of higher skilled and more valuable human resource team members attributed at least in part to program participation. (1.1.3d)

2. Associated Institution Types

• 1862 Extension
• 1862 Research
3a. Outcome Type:
   Change in Condition Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
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<tbody>
<tr>
<td>2007</td>
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</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
</tbody>
</table>

Outcome #12

1. Outcome Measures
   # business owners successfully completing an intergenerational transfer or other desired dispensation of their business attributed at least in part to program participation. (1.1.1d)

2. Associated Institution Types
   • 1862 Extension

3a. Outcome Type:
   Change in Condition Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
</tr>
</tbody>
</table>

Outcome #13

1. Outcome Measures
1.1 Agricultural and Horticultural Business Vitality

Long-term viability and well-being of the agricultural/horticulture industry and rural communities in Central New York State.

2. Associated Institution Types

• 1862 Extension
• 1862 Research

3a. Outcome Type:
Change in Condition Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>(No Data Entered)</td>
<td>0</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

As technology, market and economic conditions change agricultural and rural business are faced with the need to transition their businesses to deal with these changes. In addition, new business owners or existing businesses adding new enterprises need training and assistance to adapt and thrive. The Rural and Agricultural Business Enterprise Center of Central New York provides the needed training and assistance to help them be successful.

What has been done

Since its inception in November 2005 the Rural and Agricultural Business Enterprise Center of Central New York has provided technical assistance and business skills training to 259 individual businesses. Initial work began with the development of new curriculum to support the business skills training workshop. This curriculum provided 16 hours of instruction in marketing, business operations, human resource management, and finance. Basic skills in these areas are covered with additional technical information provided as additional reading and through guest speakers. Four business skills workshops have been provided with additional workshops with specific focus on accounting using both QuickBooks and the Cornell Farm Account Book and Labor Management. One-on-one technical assistance has been provided to individual businesses in Onondaga, Oswego, Cayuga, Cortland and Tompkins County.

Results

As a result of these efforts 526 jobs have been retained including 244 full time, 159 part-time and 123 seasonal positions. In addition, 14 new jobs have been created. Participants in the workshops have been able to apply the skills they have learned directly to their business to achieve these goals. Business owners receiving technical assistance have used the information they received to create business plans and have used financial analysis provided to secure finance. A 100 cow family dairy farm facing the challenge of supporting 3 families with the farming operation was able to obtain financing to purchase an existing 1100 cow dairy that was being liquidated. As a result, the family supports 5 families through the farming operation and an additional 8 full time employees. The Chief Executive Officer of the family business commented this just would not have happened if it hadn’t been for our help. Technical Assistance provided support for the award of a $300,000 grant for the construction of a one million gallon per year wheat to ethanol plant in Cayuga County.

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
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</thead>
<tbody>
<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
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<tr>
<td>604</td>
<td>Marketing and Distribution Practices</td>
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<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
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</tbody>
</table>

Outcome #14

1. Outcome Measures
Integrated Risk Management Decision Strategies for Dairy Farmers

2. Associated Institution Types

• 1862 Research
3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>(No Data Entered)</td>
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</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

**Issue (Who cares and Why)**

As dairy producers continue to move toward a more market-oriented environment, it is necessary to gain a better understanding of the various sources of risk facing dairy farmers, and to identify effective and efficient management strategies for the transfer and reduction of risk.

**What has been done**

This project develops and tests strategies within a spreadsheet application to provide dairy farmers with an integrated approach to risk management. Production theory implies that average profits would be greater with more variation in prices if farmers correctly adjust use of inputs and outputs to changes in prices. An empirical non-parametric analysis of farmers' profits under price variation over 12 years using an unbalanced panel of dairy farmers was completed.

**Results**

NY dairy farmers receive milk payments based on the quantities of three main components: butterfat, protein, and other solids. These component prices vary significantly over time as the demand for various dairy products change. This provides opportunities for dairy farmers to increase profits by altering individual milk components in response to component price changes. The effects of inputs and business factors on the four milk outputs of aggregate milk, butterfat, protein, and other solids were estimated using a system of four individual functions with dairy farm data. Results show that 13 out of 22 independent variables display statistically significant effects on at least one of the four milk components. Impacts of some inputs indicate milk component composition can be modified by increasing those inputs. Profit increase potentials were computed for these inputs. For instance, results show the optimal level of RPMet to maximize milk production is 2.40% while the optimal level for maximizing profit is only 2.34%. The additional daily profit per cow is $0.29 from normal protein levels found in typical New York dairy rations without RPMet supplement.

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
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<tbody>
<tr>
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<tr>
<td>603</td>
<td>Market Economics</td>
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<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
</tbody>
</table>

Outcome #15

1. Outcome Measures

Better Weed Management Improves Profitability for Vegetable Growers

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
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<td>(No Data Entered)</td>
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</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement
1.1 Agricultural and Horticultural Business Vitality

**Issue (Who cares and Why)**

Crucifer crops such as cabbage, broccoli, cauliflower and Brussels sprouts are significant and valuable products, grown by over 400 NY farms. With an industry valued at up to $80 million annually, NY is the second leading cabbage producer in the nation. These valuable crops are threatened by weeds, which can harbor insects and diseases, as well as reduce crop yields, quality and harvest efficiency. Effective weed management is an important strategy for growers, which includes accurate weed identification and knowledge of effective techniques and tools.

**What has been done**

Over a period of 2 years, data on the occurrence and density of weed species was collected in 47 fields of cruciferous crops on 8 farms in western, NY. The data was compared to field management practices and field history. On-farm herbicide trials were conducted in 2007 for growers to learn about strengths and weakness of products and to determine successful tank mixes for broad-spectrum weed control. In collaboration with other Cornell researchers, the role of cruciferous weeds in harboring the invasive insect swede midge and black rot disease was studied.

**Results**

Shepherd's purse was identified as the most significant problem, found in or around all fields; plus it can harbor the swede midge insect and the bacterium, which can cause black rot disease. Both of these are potentially devastating to crucifer crops, with one grower losing $60,000 as a result of black rot in 2005. An economic analysis identified the cost of several techniques used by growers to manage weeds, which will allow for more informed decisions. The value of field scouting was highlighted, with average costs of $12 per acre or $38 per hour. Cultivation, which was performed on 100% of the farms, ranged in cost from $4 to $70 per acre, with number of cultivations ranging from 3 to 8 times per season. The annual cost for herbicides ranged from $4 to $128 per acre, with an average of $37 per acre. Hand weeding was practiced on 86% of the farms, with cost ranging from $6 to $400/acre. As a result of the herbicide trials, new recommendations for control of shepherd's purse using Goal of Goal Tender herbicides, which provided 93% - 98% control, will provide growers with a new tool for control of this potentially destructive weed, which previously had no recommended herbicide.

4. Associated Knowledge Areas

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<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
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</tbody>
</table>

(V(H). Planned Program (External Factors))

**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities

**Brief Explanation**

See plan.

(V(I). Planned Program (Evaluation Studies and Data Collection))

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- During (during program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants

**Evaluation Results**

Evaluation results are reflected in the outcome indicators and impact statements associated with each planned program and result from a broad variety of evaluation approaches appropriate to the individual programs and contexts they represent.
Key Items of Evaluation

Each of our planned programs represents broad program emphases and strategies. Absent selection criteria, individual “findings” are not useful. See impact statements associated with this planned program for representative results.

Examples from impact statements:

•

526 agricultural jobs in Central NY have been retained including 244 full time, 159 part time and 123 seasonal positions. In addition 14 new jobs have been created.

•

As a result of the herbicide trials, new recommendations for control of shepherd's purse on tomato crops which provided 93% - 98% control, will provide growers with a new tool for control of this potentially destructive weed, which previously had no recommended herbicide.