V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Global Food Security and Hunger

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>202</td>
<td>Plant Genetic Resources</td>
<td></td>
<td></td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>205</td>
<td>Plant Management Systems</td>
<td></td>
<td></td>
<td></td>
<td>15%</td>
</tr>
<tr>
<td>401</td>
<td>Structures, Facilities, and General Purpose Farm Supplies</td>
<td></td>
<td></td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>604</td>
<td>Marketing and Distribution Practices</td>
<td></td>
<td></td>
<td></td>
<td>15%</td>
</tr>
<tr>
<td>610</td>
<td>Domestic Policy Analysis</td>
<td></td>
<td></td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>611</td>
<td>Foreign Policy and Programs</td>
<td></td>
<td></td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

V(C). Planned Program (Inputs)

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

<table>
<thead>
<tr>
<th>Year: 2009</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>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Actual</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

2. 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>0</td>
</tr>
<tr>
<td>1890 Extension</td>
<td>0</td>
<td>Hatch</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>
</tbody>
</table>

V(D). Planned Program (Activity)

1. Brief description of the Activity

Conduct studies in the following areas: (1) defining opportunities for rural entrepreneurs and connecting them with small-scale agricultural enterprises and existing rural businesses and prospective entrepreneurs; (2) determining viable alternatives to tobacco for small scale producers including floriculture production in tobacco greenhouses, outdoor and indoor mushroom production, and specialty melons and other crops; (3) seek improved methods for washing green leafy vegetables for use especially by small scale farmers; (4) identify factors influencing successful small farm operations in North Carolina that can be developed into a protocol for evaluating the predicted success of small farm operations; (5) economic assessment of changes in trade agreements; (6) bioterrorism threats and economic fuel requirements on various industry sectors; and (7) new domestic and international markets for North Carolina producers with particular emphasis on small scale operations.

• Present findings at professional meetings.
• Publish research findings in professional journals.
• Share findings with Extension educators and with other groups that may use the information to improve the viability of small scale agricultural operations, and use to assist small scale producers in finding markets for their products.

2. Brief description of the target audience

The targeted audiences include the scientific community, the general public, small-scale farmers and operations, small businesses, producers of small scale agriculture, and traditionally underserved populations and communities in North Carolina.

V(E). Planned Program (Outputs)

1. Standard output measures

<table>
<thead>
<tr>
<th></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>943</td>
<td>434473</td>
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<td>0</td>
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<tr>
<td>Actual</td>
<td>5040</td>
<td>447000</td>
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<td>0</td>
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</tbody>
</table>

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

Patent Applications Submitted

Year: 2009
Plan: 0
Actual: 0

Patents listed

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>
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<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Actual</td>
<td>0</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

• # presentations at professional meetings

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>7</td>
<td>24</td>
</tr>
</tbody>
</table>

Output #2

Output Measure

• # media occurrences

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>
## V(G). State Defined Outcomes

### V. State Defined Outcomes Table of Content

<table>
<thead>
<tr>
<th>O. No.</th>
<th>OUTCOME NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Increase in number of producers/growers of alternative crops/enterprises</td>
</tr>
<tr>
<td>2</td>
<td>Increase in production and sales of alternative crops and enterprises</td>
</tr>
<tr>
<td>3</td>
<td>% farmers in groups indicating increase in knowledge about small scale operations</td>
</tr>
<tr>
<td>4</td>
<td># of small farmers and businesses trained and becoming involved in export of their products</td>
</tr>
<tr>
<td>5</td>
<td># of new regional or national markets found for NC products</td>
</tr>
<tr>
<td>6</td>
<td># of small farmers and businesses trained in finding regional and national markets for thier products</td>
</tr>
</tbody>
</table>

Report Date 06/03/2010
Outcome #1

1. Outcome Measures

Increase in number of producers/growers of alternative crops/enterprises

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Increase in production and sales of alternative crops and enterprises

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

% farmers in groups indicating increase in knowledge about small scale operations

2. Associated Institution Types

- 1890 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>2009</td>
<td>75</td>
<td>150</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

**Issue (Who cares and Why)**
With the decline in tobacco production in the state, many small scale farmers are forced to either cease farming or shift production to viable alternatives.

**What has been done**
Scientists have researched and developed alternative production opportunities for small scale farmers particularly in the areas of pasture pork, mushrooms, and organic vegetables. This information has been shared in many forms and very effectively through field days on the university farm.

**Results**
The Small Farms Conference is held annually at NCA&T and part of the conference is a field day on the university farm. One hundred and fifty persons participated in the field day and 44 responded to an evaluation survey. Respondents indicated that the information presented was helpful and relevant, especially the sessions on marketing locally grown crops, mushroom production training, and seeding and transplant management. Once again, all indicated that they would likely attend farm field days in the future.

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>205</td>
<td>Plant Management Systems</td>
</tr>
</tbody>
</table>
Outcome #4

1. Outcome Measures

   # of small farmers and businesses trained and becoming involved in export of their products

2. Associated Institution Types

   ● 1890 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>2009</td>
<td>{No Data Entered}</td>
<td>0</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
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4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>610</td>
<td>Domestic Policy Analysis</td>
</tr>
<tr>
<td>611</td>
<td>Foreign Policy and Programs</td>
</tr>
</tbody>
</table>

Outcome #5

1. Outcome Measures

   # of new regional or national markets found for NC products

2. Associated Institution Types

   ● 1890 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>2009</td>
<td>{No Data Entered}</td>
<td>20</td>
</tr>
</tbody>
</table>

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

**Issue (Who cares and Why)**
Connecting farmers with potential buyers of their products is the lifeline of financial success for small farmers.

**What has been done**
Scientists in agricultural economics involved with the International Trade and Development Center met with farmers to train them and connect them with viable markets.

**Results**
The Center identified a broker/retailer and a restaurant operator who is willing to buy free range pork directly from farmers at a premium price. As a result 20 small pork farmers are negotiating a contract with the potential buyer to supply 15 pigs per farmer per week.

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>610</td>
<td>Domestic Policy Analysis</td>
</tr>
</tbody>
</table>

**Outcome #6**

1. **Outcome Measures**

# of small farmers and businesses trained in finding regional and national markets for their products

2. **Associated Institution Types**

- 1890 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>2009</td>
<td>{No Data Entered}</td>
<td>0</td>
</tr>
</tbody>
</table>

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

**Issue (Who cares and Why)**
Small farmers and businesses need to know how to market their products in local, regional and national markets. This knowledge can assist them in increasing sales and boost their success in today's economy.

**What has been done**
Agricultural economists have completed studies on local, regional and national markets for NC products and have offered this information through activities of NCA&T's International Trade and Development Center.

**Results**
The scientists have assisted businesses and individuals in learning more about domestic markets. Two hundred and fifty individuals and 27 businesses benefitted from the conferences, courses, and individual meetings.

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>610</td>
<td>Domestic Policy Analysis</td>
</tr>
</tbody>
</table>

V(H). Planned Program (External Factors)

**External factors which affected outcomes**
- Natural Disasters (drought, weather extremes, etc.)
- Public Policy changes
- Government Regulations
- Other (Negotiations at the WTO)

**Brief Explanation**

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

1. Evaluation Studies Planned
   - Before-After (before and after program)
   - During (during program)
   - Case Study

**Evaluation Results**

**Key Items of Evaluation**