Integrated Pest Management

(A). Planned Program (Summary)

1. Name of the Planned Program

Integrated Pest Management

(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>213</td>
<td>Weeds Affecting Plants</td>
<td>70%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>216</td>
<td>Integrated Pest Management Systems</td>
<td>30%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(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>1.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Actual</td>
<td>1.5</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>1890 Extension</td>
<td>Hatch</td>
</tr>
<tr>
<td>41448</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1862 Matching</td>
<td>1890 Matching</td>
<td>1862 Matching</td>
</tr>
<tr>
<td>41449</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1862 All Other</td>
<td>1890 All Other</td>
<td>1862 All Other</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

(D). Planned Program (Activity)

1. Brief description of the Activity


2. Brief description of the target audience

Tree Fruit Growers, Livestock and Hay Producers, Field Crop Producers, Organic Vegetable Producers, Master Gardeners
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>2000</td>
<td>3000</td>
<td>500</td>
<td>1000</td>
</tr>
<tr>
<td>2007</td>
<td>1473</td>
<td>3868</td>
<td>35</td>
<td>70</td>
</tr>
</tbody>
</table>

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

Patent Applications Submitted

- Year: Target
  - Plan: 0
  - 2007: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

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

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- 90% of growers interviewed will express satisfaction with recommendations provided to them.

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>120</td>
<td>0</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>Financial gains obtained by undertaking control recommendations will increase. Baseline to be collected.</td>
</tr>
<tr>
<td>2</td>
<td>Growers will use more reduced-risk pesticides</td>
</tr>
<tr>
<td>3</td>
<td>Multiple control strategies will be implemented by growers for weed management</td>
</tr>
<tr>
<td>4</td>
<td>Reduction in pest (weed) levels will be documented</td>
</tr>
</tbody>
</table>
Integrated Pest Management

Outcome #1

1. Outcome Measures
   Financial gains obtained by undertaking control recommendations will increase. Baseline to be collected.

2. Associated Institution Types
   - 1862 Extension

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)

Commercial fruit growers, other agricultural producers, homeowners, Master Gardener participants, commercial gardeners, and farmers of all ages and income levels can make financial gains through integrated pest management.

What has been done

Annual WV fruit schools
Presentations at four out-of-state fruit schools
Eight monthly grower meetings
Annual field day
Biweekly newsletters
Web site
Producer meetings
Farmer's Market pesticide training
Responses to client requests
Grassland Field Day (Weed ID, Pasture Walk Pesticide Re-Certification One on one consultation Farm Visits
IPM seminar for public and at Master Gardener class
Pesticide recertification class for farmers to renew private operators license

Results

Improved fruit quality, enhanced orchard sustainability, and increased profitability based upon fruit injury evaluations, pesticide record cost analysis, and observations.

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>213</td>
<td>Weeds Affecting Plants</td>
</tr>
<tr>
<td>216</td>
<td>Integrated Pest Management Systems</td>
</tr>
</tbody>
</table>

Outcome #2

1. Outcome Measures
   Growers will use more reduced-risk pesticides

2. Associated Institution Types
   - 1862 Extension

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>0</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement
Integrated Pest Management

Issue (Who cares and Why)
Commercial fruit growers, other agricultural producers, homeowners, Master Gardner participants, commercial gardeners, and farmers of all ages and income levels need to learn about reduced-risk pesticides.

What has been done
Annual WV fruit schools
Presentations at four out-of-state fruit schools
Eight monthly grower meetings
Annual field day
Biweekly newsletters
Web site
Producer meetings
Farmer's Market pesticide training
Responses to client requests
Grassland Field Day (Weed ID, Pasture Walk Pesticide Re-Certification One on one consultation Farm Visits
IPM seminar for public and at Master Gardener class

Results
Homeowners have stopped using harsh chemicals. Some have cut the volumes used. Farmers are using 20 percent less harsh chemicals during the last 5 years.

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>216</td>
<td>Integrated Pest Management Systems</td>
</tr>
<tr>
<td>213</td>
<td>Weeds Affecting Plants</td>
</tr>
</tbody>
</table>

Outcome #3

1. Outcome Measures
   Multiple control strategies will be implemented by growers for weed management

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>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Commercial fruit growers, other agricultural producers, homeowners, Master Gardner participants, commercial gardeners, and farmers of all ages and income levels need to learn about weed management.

What has been done
Annual WV fruit schools
Presentations at four out-of-state fruit schools
Eight monthly grower meetings
Annual field day
Biweekly newsletters
Web site
Producer meetings
Farmer's Market pesticide training
Responses to client requests
Grassland Field Day (Weed ID, Pasture Walk Pesticide Re-Certification One on one consultation Farm Visits
IPM seminar for public and at Master Gardener class
Pesticide recertification class for farmers to renew private operators license
Results
Increased knowledge of pesticides and their uses increased safety

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>213</td>
<td>Weeds Affecting Plants</td>
</tr>
<tr>
<td>216</td>
<td>Integrated Pest Management Systems</td>
</tr>
</tbody>
</table>

Outcome #4

1. Outcome Measures
Reduction in pest (weed) levels will be documented

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>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Commercial fruit growers, other agricultural producers, homeowners, Master Gardener participants, commercial gardeners, and farmers of all ages and income levels can measure pest levels and record reduction.

What has been done
Annual WV fruit schools
Presentations at four out-of-state fruit schools
Eight monthly grower meetings
Annual field day
Biweekly newsletters
Web site
Producer meetings
Farmer’s Market pesticide training
Responses to client requests
Grassland Field Day (Weed ID, Pasture Walk Pesticide Re-Certification One on one consultation Farm Visits
IPM seminar for public and at Master Gardener class
Pesticide recertification class for farmers to renew private operators license

Results
Nothing to report

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>213</td>
<td>Weeds Affecting Plants</td>
</tr>
<tr>
<td>216</td>
<td>Integrated Pest Management Systems</td>
</tr>
</tbody>
</table>

V(H). Planned Program (External Factors)

External factors which affected outcomes
• Natural Disasters (drought, weather extremes, etc.)
• Economy
• Government Regulations
• Competing Programmatic Challenges
**Brief Explanation**

(No Data Entered)

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

1. **Evaluation Studies Planned**
   - Before-After (before and after program)
   - Other (population dynamics of pests)

**Evaluation Results**

(No Data Entered)

**Key Items of Evaluation**

(No Data Entered)