Long Island Pesticide Pollution Prevention Strategy

2nd TRAC Meeting – Focused P2/BMP Discussion

February 26, 2015
Agenda

10:00 - 10:15  Introduction
10:15 - 11:15  Atrazine Update and P2 Discussion
11:15 - 11:30  Break
11:30 - 12:45  Metalaxyl/Mefenoxam Update and P2 Discussion
12:45 - 1:15   LUNCH
1:15 - 2:45    Imidacloprid Update and P2 Discussion
2:45 - 3:30    Discussions/Thoughts/Next Steps
Today’s Goals

1) Provide an Overview on Updates to Data Packages

2) Discuss BMPs/P2 Measures for Each AI

3) Select Highest Priority BMPs/P2 Measures

4) How to Implement and Reach Out to Stakeholders

5) Identify Stakeholders
Follow-Up Items

1) Possible Practices Based on Use Patterns
2) Integrate CCE of SC Profile Information into Documents
3) Prioritize Possible Measures
4) Identify Critical Uses
5) Soil Health Discussion
6) Outreach and Education
7) Expand on IPM
8) Co-Occurrences and Degradates in Groundwater
Atrazine

Updates & Options
Atrazine Data Package Updates

1) Added Sales + Use by Zip Code
2) Alternatives Section Expanded
3) Added EIQ to Pesticide Table
4) Added an Alternatives Matrix
5) Added Land Cover Figure – Residential Uses Apparent
6) Summary/Proposal Added
Possible Alternatives

1) Modified Applications
2) Possible Alternative Active Ingredients
3) Non-Pesticide Options
# Modified Applications

<table>
<thead>
<tr>
<th>1) Application Modifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tank mix with other herbicides.</td>
</tr>
<tr>
<td>Apply atrazine by banding over the row and either cultivating or using post-emergence herbicides between the rows.</td>
</tr>
<tr>
<td>Restrict the use of atrazine to one (1) spring application per year.</td>
</tr>
<tr>
<td>Lower atrazine application rate to below 1 pound active ingredient/acre/year.</td>
</tr>
<tr>
<td>Adjust application timing to maximize quantity staying on target and loss of atrazine through runoff.</td>
</tr>
<tr>
<td>Restrict the use of atrazine to corn crops.</td>
</tr>
<tr>
<td>Promote guidance on buffer zones necessary for atrazine usage.</td>
</tr>
<tr>
<td>Rotate atrazine with other herbicides.</td>
</tr>
<tr>
<td>Use of Precision application methods.</td>
</tr>
<tr>
<td>Improve calibration of application equipment.</td>
</tr>
</tbody>
</table>
## Possible Atrazine Alternatives

### 2) Herbicides that are Possible Alternatives to Atrazine or that can be used in Rotation with Atrazine

<table>
<thead>
<tr>
<th>Active Ingredient Name (Product Trade Name)</th>
<th>Nicosulfuron (Accent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Carfentrazone (Aim EC)</td>
</tr>
<tr>
<td></td>
<td>Bentazon (Basagran)</td>
</tr>
<tr>
<td></td>
<td>Mesotrione (Callisto)</td>
</tr>
<tr>
<td></td>
<td>Topramezone (Impact)</td>
</tr>
<tr>
<td></td>
<td>Tembotrione (Laudis)</td>
</tr>
<tr>
<td></td>
<td>Foramsulfuron (Option)</td>
</tr>
<tr>
<td></td>
<td>Halosulfuron (Sandea, Permit)</td>
</tr>
<tr>
<td></td>
<td>Pendimethalin (Prowl)</td>
</tr>
<tr>
<td></td>
<td>Glyphosate (Roundup Weathermax)</td>
</tr>
<tr>
<td></td>
<td>2,4-D (Weedar 64)</td>
</tr>
</tbody>
</table>
## Possible Non-Pesticide Alternatives

<table>
<thead>
<tr>
<th><strong>3) Possible Non-Pesticide Alternatives</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Scout and map weeds to improve selection of the most appropriate weed control practices.</td>
</tr>
<tr>
<td>Plant a cover crop after harvest to compete with weeds.</td>
</tr>
<tr>
<td>Use cultivation practices for the control or partial control of weeds.</td>
</tr>
<tr>
<td>Improve soil health and quality to promote immobilization of herbicides, increase water holding capacity, and reduce erosion while increasing crop health and yield. Can be achieved through a combination of cultivation practices and measures to increase soil organic matter.</td>
</tr>
<tr>
<td>Shorten corn crop rotations to disrupt weed cycles.</td>
</tr>
<tr>
<td><strong>Forecasting Models</strong> - Encourage or require the use of weather information and pest models found on NEWA for timing of scouting and management applications. <a href="http://newa.cornell.edu/">http://newa.cornell.edu/</a></td>
</tr>
<tr>
<td>Use of early, post-crop planting tine weeding.</td>
</tr>
<tr>
<td>Control the field through mowing after harvest to reduce weed seed production.</td>
</tr>
<tr>
<td>Plant into a killed cover crop.</td>
</tr>
<tr>
<td>Interseed cover crops after last cultivation to reduce weed development.</td>
</tr>
<tr>
<td>Flame and hot weeding in row crops.</td>
</tr>
<tr>
<td>Promote guidance on proper handling of containers and excess product to minimize potential for groundwater contamination.</td>
</tr>
<tr>
<td>Improve irrigation practices/develop an irrigation water management plan.</td>
</tr>
</tbody>
</table>
Prioritizing Possible Atrazine Alternatives

Cornell Cooperative Extension of Suffolk County
Implementation and Outreach - Atrazine
Identifying Stakeholders - Atrazine

1) Syngenta Crop Protection
2) Drexel Chemical Company
3) Sandy Menasha, CCE SC, Vegetable Specialist
4) John Bokina, Long Island Cauliflower Association
5) Steve Gardiner, Crop Protection Services
Mefenoxam

Updates & Options
Mefenoxam Data Package Updates

1) Added Sales + Use by Zip Code
2) Alternatives Section Expanded
3) Added an Alternatives Matrix
4) Added Land Cover Figure – Residential Uses Apparent
5) Summary/Proposal Added

5.0 Summary of Possible Pollution Prevention Measures

- Minimizing Conditions Leading to Disease Development
- Monitoring and Identifying Pathogens and Susceptibility to Mefenoxam Prior to Usage
- Possible Practices to Improve Mefenoxam Applications
- Education and Outreach
- Long-Term Monitoring and Measuring Success
Mefenoxam Possible Alternatives Tables

3 Tables

1. Fruit & Vegetable – Soil and Foliar Applications
2. Floral, Nursery, Turf – Soil Applications
3. Floral, Nursery, Turf – Foliar Applications

Maintained 3 Categories

1. Modified Applications
2. Possible Alternative Active Ingredients
3. Non-Pesticide Options
Prioritizing Possible Metalaxyl/Mefenoxam Alternatives

Cornell Cooperative Extension of Suffolk County
Implementation and Outreach – Metalaxyl / Mefenoxam
Identifying Stakeholders - Metalaxyl / Mefenoxam

1) Syngenta Crop Protection
2) Bayer Cropscience
3) Sandy Menasha, CCE of SC, Vegetable Specialist
4) Nora Catlin, CCE of SC, Greenhouse/Floriculture Specialist
5) Mina Vescera, CCE of SC, Nursery Specialist
6) Alice Wise, CCE of SC, Viticulturist
7) John Bokina, Long Island Cauliflower Association
8) Steve Gardiner, Crop Protection Services
9) Al Lane, Professional Tree Surgeons (PTS)
10) Tom Germano, Green Island
11) Griffin Greenhouse Supplies
12) Long Island Farm Bureau
Imidacloprid

Updates & Options
Imidacloprid Data Package Updates

1) Added Sales + Use by Zip Code
2) Alternatives Section Expanded
3) Added EIQ to Pesticide Table
4) Added an Alternatives Matrix
5) Added Land Cover Figure – Residential Uses Apparent
6) Summary/Proposal Added

5.0 Summary of Possible Pollution Prevention Measures

- Possible Practices to Improve Imidacloprid Applications
- Possible Non-Pesticide Practices for Pest Management
- Education and Outreach
- Long-Term Monitoring and Measuring Success
Imidacloprid Possible Alternatives Tables

2 Tables

1. Fruit & Vegetable
2. Greenhouse, Nursery, Turf, & Landscape

Maintained 3 Categories

1. Modified Applications
2. Possible Alternative Active Ingredients
3. Non-Pesticide Options
Prioritizing Possible Imidacloprid Alternatives

Cornell Cooperative Extension of Suffolk County
Implementation and Outreach – Imidacloprid
Identifying Stakeholders - Imidacloprid

1) Bayer Cropscience
2) Nufarm Americas
3) Sandy Menasha, CCE of SC, Vegetable Specialist
4) Nora Catlin, CCE of SC, Greenhouse/Floriculture Specialist
5) Mina Vescera, CCE of SC, Nursery Specialist
6) Alice Wise, CCE of SC, Viticulturist
7) John Bokina, Long Island Cauliflower Association
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Discussion/Thoughts/Next Steps

- **Stakeholder Meeting Locations**
  - Region 1 Office?
  - CCE of SC Offices?
  - Farmingdale State College?

- **Measuring Success**
  - Groundwater Monitoring
  - Outreach Efforts
  - BMP Usage