



# Long Island Pesticide Pollution Prevention Strategy

TRAC Meeting - October 30, 2014

## Agenda

09:30-10:00 - Meet & Greet, Sign In

10:00-10:15 – Introduction/Briefing (Peter Scully/Sal Ervolina/Scott Menrath)

10:15-11:15 – Atrazine

Topics for Discussion:

- Atrazine Current and Historical Usage, Implications of Reduced Availability - Andy Senesac (CCE of SC)
- Trends Observed in Public Supply Wells – Kevin Durk (SCWA)
- Trends Observed in Monitoring Wells – Jason Pelton (NYSDEC)
- Human Health Concerns – Jim Leach (NYSDOH)
- Implications of Reduced Availability – Jan Morawski (NYS Ag&Markets)
- Pollution Prevention Measures/Best Management Practices (Open Discussion)

11:15-11:30 – Break

11:30-12:45 – Imidacloprid

Topics for Discussion:

- Imidacloprid Current and Historical Usage, Implications of Reduced Availability – Dan Gilrein (CCE of SC)
- Trends Observed in Public Supply Wells – Kevin Durk (SCWA)
- Trends Observed in Monitoring Wells – Jonathan Wanlass (SCDOH)
- Human Health Concerns – Jim Leach (NYSDOH)
- Pollution Prevention Measures/Best Management Practices (Open Discussion)

12:45-1:15 – Lunch

1:15-2:45 – MetalaxylMefenoxam

Topics for Discussion:

- Metalaxyl/Mefenoxam Usage and Regulatory History – Jeanine Broughel (NYSDEC)
- Trends Observed in Public Supply Wells – Kevin Durk (SCWA)
- Trends Observed in Monitoring Wells – Jason Pelton (NYSDEC)
- Human Health Concerns – Jim Leach (NYSDOH)
- Implications of Reduced Availability – Margaret Kelly (NYS Ag&Markets)
- Pollution Prevention Measures/Best Management Practices (Open Discussion)

2:45-3:30 – Discussions/Thoughts/Next Steps

# Long Island Pesticide Pollution Prevention Strategy

## Summary of the October 30, 2014 Technical Review and Advisory Committee (TRAC) Meeting

The NYSDEC Bureau of Pest Management convened a TRAC meeting on Thursday, October 30, 2014 at the DEC Region 1 office in Stony Brook. The meeting included a series of presentations by TRAC members to facilitate discussion on possible pollution prevention measures and best management practices for the following three active ingredients: atrazine, imidacloprid, and metalaxyl/mefenoxam. A summary of the major points discussed along with items requiring follow-up are included in the tables below for each of the three active ingredients.

### **Atrazine**

<b>Selection of Primary Topics Discussed</b>
<ul style="list-style-type: none"> <li>• Primarily used with corn production, but industrial uses at higher application rates occurred prior to the early 1990's.</li> <li>• Reduced atrazine application rates in combination with other herbicides has been found to effectively control weeds.</li> <li>• The majority of alternative herbicides have similar Environmental Impact Quotients (EIQ) to atrazine. The EIQ is a tool developed by Cornell to quantify the relative potential for environmental impacts associated with each pesticide and allows for a comparison with other pesticides.</li> <li>• Reduction in atrazine use may result in the use of increased volumes of less effective herbicides.</li> <li>• Atrazine has not been detected in Suffolk County Water Authority (SCWA) pumping wells since sampling began in 2003.</li> <li>• Atrazine was detected in two groundwater samples collected by the Suffolk County Department of Health Services (SCDHS) between 2012 and 2013 and both were below the NYSDOH maximum contaminant level (MCL) of 3 ppb.</li> <li>• Two historic atrazine detections (3.96 ppb in 1999 and 3.67 ppb in 2003) from groundwater samples collected from monitoring wells exceeded the NYSDOH MCL of 3 ppb.</li> <li>• The EPA estimated risks from a majority of dietary exposures to atrazine in food and drinking water do not exceed their level of concern for the general population and all population subgroups. However, estimated seasonal dietary risk from exposure to atrazine in drinking water (primarily community water system scenarios in the Midwest) exceeded the EPA's level of concern for infants, children 1-6 years of age, and adults.</li> <li>• Farmers/growers want to make sure there is an economical alternative should atrazine no longer be available for use on Long Island.</li> </ul>
<b>Questions and Follow-Up Items</b>
<ul style="list-style-type: none"> <li>• Are the current atrazine groundwater detections from when atrazine was used for more of an industrial purpose (i.e. right of ways, railways) or are these remaining detections from sweet corn use? To better understand this relationship, groundwater monitoring results will be further evaluated relative to nearby land uses and there will be follow-up with atrazine users.</li> <li>• Related to this, it was brought up that we may be trying to address a problem that no longer exists.</li> <li>• There may be a need to install groundwater monitoring wells downgradient from corn fields where atrazine is used at the agricultural rate to see if there are corresponding impacts to groundwater quality.</li> <li>• The atrazine degradates need to be further evaluated.</li> </ul>

### **Atrazine Questions and Follow-Up Items (cont'd)**

- If possible, based on the existing groundwater data set, changes in atrazine groundwater concentrations over time will be further evaluated.
- Integrated pest management details for the use of atrazine on corn crops need to be further defined. This could include a combination of reduced application rates, use of alternative herbicides, modifications to atrazine application techniques, use of cover crops, and modifications to cultivation techniques, etc.

## **Imidacloprid**

### **Selection of Primary Topics Discussed**

- Imidacloprid was registered for use in New York in 1995.
- It was designated as a restricted use pesticide on Long Island in 2005 (no homeowner use).
- Is an alternative to many older insecticides, many of which are not approved for use on Long Island, and is extremely versatile (interior use, veterinary, greenhouses, turf, etc.).
- Low concentrations (0.05 – 0.64 ppb) of imidacloprid were detected in raw water groundwater samples (prior to treatment) collected from six separate public water supply wells located in the North and South fork areas in 2014.
- There has been a slight increase in the percentage of detections occurring in groundwater monitoring wells during the past four years.
- Since 2010, imidacloprid has not been detected in groundwater collected from monitoring wells, private wells, or public wells at a concentration exceeding the NYSDOH MCL of 50 ppb. Specifically, imidacloprid was detected at maximum groundwater concentrations ranging from 2.80 to 8.60 ppb between 2010 and 2013.
- Prior to 2010, there were a few detections in monitoring wells above the NYSDOH MCL of 50 ppb, however, these detections were all due to mis-use/mishandling of the pesticide.
- There is no Federal Drinking Water Standard for imidacloprid. In New York, imidacloprid falls under the Unspecified Organic Contaminant MCL of 50 ppb. The EPA Human Health Benchmark for imidacloprid is 399 ppb.

### **Questions and Follow-Up Items**

- A first step toward pollution prevention could be the review and possible update to the existing best management practice brochures for four types of imidacloprid applications (Turf, Aboriculture, Agriculture, and Greenhouse and Nursery).
- With the wide array of imidacloprid usage, use patterns will be reviewed to identify the uses that pose the greatest risk to groundwater. Based on this, possible best management practices and pollution prevention measures will be identified and prioritized.
- Are there possible pollution prevention measures and/or best management practices that can be readily implemented to reduce the potential for imidacloprid to enter the groundwater system?
- Can existing education and outreach programs be updated to improve imidacloprid usage?
- Some alternatives may require research by Cornell University staff.

# **Metalaxyl/Mefenoxam**

## **Selection of Primary Topics Discussed**

- Metalaxyl was registered in NYS in the mid-1980's. Mefenoxam was registered in 1996 and is considered a reduced risk pesticide, as compared with metalaxyl, which it essentially replaced for all uses.
- Currently, metalaxyl is only used as a form of seed treatment in NYS.
- Mefenoxam is an important fungicide to use in rotation with other active ingredients. Without mefenoxam, there are several diseases that would be very hard to control.
- Many of the mefenoxam alternatives are more expensive, not as effective, and may require more frequent applications for adequate control.
- The laboratory analysis used as part of the groundwater monitoring program cannot distinguish between metalaxyl and mefenoxam so they will be addressed together.
- Low concentrations (0.20 – 1.55 ppb) of metalaxyl were detected in raw water (prior to treatment) samples collected from six separate public water supply wells located in the North and South fork areas in 2014.
- There are five public supply wells from two separate well fields with co-occurrences of metalaxyl and imidacloprid in raw water. Both metalaxyl and imidacloprid were detected at concentrations below 2.0 ppb at these two well fields.
- Based on SCDHS sampling, approximately 24,000 groundwater samples have been collected and analyzed for metalaxyl since 1997 and metalaxyl has not been detected at a concentration exceeding the NYSDOH MCL of 50 ppb.
- Between 2011 and 2013 the maximum metalaxyl groundwater concentrations ranged from 1.1 and 3.2 ppb and most detections were below 1 ppb.
- The majority of groundwater detections occurred in the North in South fork regions.
- There is no Federal Drinking Water Standard for metalaxyl/mefenoxam. In New York, metalaxyl falls under the Unspecified Organic Contaminant MCL of 50 ppb. The EPA Human Health Benchmark for metalaxyl is 519 ppb.
- The EPA considers metalaxyl and mefenoxam toxicologically equivalent.

## **Questions and Follow-Up Items**

- Could the depth to groundwater be a factor influencing the presence/absence of metalaxyl in groundwater beneath different areas of Long Island?
- The metalaxyl degradate needs to be further evaluated in groundwater.
- If possible, based on the existing groundwater data set, changes in metalaxyl groundwater concentrations over time will be further evaluated.

## **Additional Topics of Discussion**

- Soil health is an important component to include in the evaluation of integrated pest management alternatives for the three active ingredients. Long Island soil generally does not have the organic matter to significantly reduce the amount of leaching. There may be opportunities to improve soil health as a method to reduce the amount of pesticide usage.
- Once a consistent set of best management practices and pollution prevention measures have been identified, these can be included in future education and outreach programs.
- Evaluate whether the highest priority best management practices can be integrated into the certified applicator training program.
- Even though combined pesticide groundwater concentrations do not exceed the NYSDOH Total Organic Compound MCL of 100 ppb, there is a need to better understand where the co-occurrences exist and possible exposures.
- Based on the identification of specific use patterns for each active ingredient along with the identification and prioritization of possible best management practices and pollution prevention measures, there may be areas that need further research.
- Farmers need assistance to purchase improved pesticide application equipment. Grants and/or loans need to come out more frequently.

**Long Island Pesticide Pollution Prevention Strategy  
Initial TRAC Meeting (October 30, 2014) Attendees**

<b>TRAC Members</b>	
<b>Agency</b>	<b>Individuals</b>
Suffolk County Dept. of Health Services	Amy Juchatz
Cornell CoOp Ext. Suffolk County	Andy Senesac
NYSDEC	Anthony Lamanno
NYSDEC	Bob Phaneuf
Cornell CoOp Ext. Suffolk County	Dan Gilrein
Suffolk County Dept. of Health Services	Doug Feldman
NYS Agriculture & Markets	Jan Morawski
NYSDEC	Jason Pelton
NYSDEC	Jeanine Broughel
Cornell Dept of Agriculture & Life Sciences	Jennifer Grant
NYS Dept. of Health	Jim Leach
Nassau County Health Dept.	John Lovejoy
Suffolk County Dept. of Health Services	Jonathan Wanlass
NYSDEC	Karen Sanford
Suffolk County Water Authority	Kevin Durk
NYS Agriculture & Markets	Margaret Kelly
Suffolk Soil Water Conservation District	Paul TeNyenhuis
Suffolk Soil Water Conservation District	Polly Weigand
Suffolk County Dept. of Health Services	Ron Paulsen
NYS Dept. of Health	Ryan Macfee
NYSDEC	Sal Ervolina
NYSDEC	Scott Menrath
Cornell University	Steve Pacenka

<b>Non-TRAC Members</b>	
<b>Agency</b>	<b>Individuals</b>
NYSDEC	Ajay Shah
Lebanon Seaboard Corporation	Andrew Cinque
Environmental Protection Agency	Audrey Moore
Rise	Barbara Ahern
Scotts	Brian Herrington
Environmental Assessment & Remediations	Dave Vigliotta
Bartlett Tree	David McMaster
Environmental Assessment & Remediations	Jennifer Lawrence
LI Farm Bureau	Joe Gergela
NY Alliance for Environmental Concerns	Larry Wilson
Scotts	Mark Slavens
Nassau Suffolk Landscape Garndens Association	Pat Voges
Nassau Suffolk Landscape Garndens Association	Patricia Voges
NYSDEC	Sarah Whelen
U.S. Geological Survey	Stephen Terracciano
NYSDEC	Syed Rahmen
NYSDEC	Tony Leung