Safe Playing Fields: Legislation, IPM and the Sports Turf Manager
Rich Watson
Grounds Supervisor
Pine Hill Public Schools
Overbrook High School
Pine Hill, NJ
Belvedere Property Management
Who Am I?
Environmentalist?
Advocate

Sports Field Manager
Defending Sports Turf IPM Programs
IPM Stereotypes

IPM Program?

OR

Pesticide Program?
IPM ?

or

Overuse ?
High Maintenance IPM Program
No Maintenance ?
or
IPM ?
Pesticide Issues

Do Pesticides Make Fields Safe For Play?
Or
Do Pesticides Make Fields Toxic to Users?
Confusion about IPM as it relates to: “Safe Playing Fields”
What is a “Safe Playing Field”?
Aeration, Seeding, Proper Mowing, Fertility/Irrigation Management
Responsible Pest Management
IPM
Can it be done?

July 2004

July 2005
What is IPM?

Integrated pest management is an effective and environmentally sensitive approach to pest management that relies on common sense practices.

Integrated pest management programs use current, comprehensive information on the life cycles of pests and their interaction with the environment.
Integrated Pest Management (EPA definition)

Integrated pest management (IPM) is the control strategy of choice for homeowners, growers, and commercial applicators. IPM is an approach to pest management that blends all available management techniques - nonchemical and chemical - into one strategy: Monitor pest problems, use nonchemical pest control, and resort to pesticides only when pest damage exceeds an economic or aesthetic threshold.
Aesthetic Threshold?
Safety Threshold?
Loose Turf is a Safety Issue
Crabgrass here would be a safety issue.
Worn Crabgrass Provides Poor Footing and No Stability
Concepts

Information in combination with available pest control methods are used to manage pest damage with the least hazard to people, property and the environment.

Integrated pest management programs should take advantage of all pest management options possibly including, but not limited to the judicious use of pesticides.
Benefits of IPM

- Reduction in pesticide use
- Reduced risk products encouraged
- Bigger focus on cultural practices
- Knowledge based decisions made about pests
- Field history records kept
- Thresholds for individual pests are set
- Continuing education is essential
NJ School IPM Act of 2002

- Applies to K-12 schools only
- Develop an IPM plan
- Designate an IPM coordinator
- Provide education and training
- Keep records/ Pest Logs
- 72 hr notification of pesticide use to all staff and parents of students
- Category 13 needed to apply at schools
What am I doing here?

The Safe Playing Fields Act
The Safe Playing Fields Act

Would restrict use of lawn care pesticides at certain day care centers, schools and recreational fields.
Similar Legislation

- NY state has a complete pesticide ban at schools and parks
- Conn. has a k-8 pesticide ban
- Mass. has the Children’s Protection Act
- Canada
Thursday, March 3, 2011
The Montclair Times
Letter to the editor: Our chance to ban toxic chemicals where NJ children play
An issue whose time has come. The Safe Playing Fields Act (S-2610) is currently moving through the New Jersey Legislature. This bill bans the use of toxic lawn pesticides on ball fields and playgrounds at daycares, schools, and parks. Even with the current "Integrated Pest Management" practices, schools too often apply pesticides on a "maintenance schedule," often without even the need.
Legislative Testimony

“We believe that without this proposed legislation, schools will continue to needlessly use lawn pesticides on their playing fields, because they can. If there is a rare case when a weed, insect or fungus presents an immediate health risk to children, the legislation provides an emergency exemption for pesticide use. I cannot think of what that health threat might be.”
If hired by a school, pesticide applicators will still be able to determine best ways to maintain the turf following practices and using products that do not pose a threat to children’s health. They will just not be allowed to use toxic, synthetic pesticides to maintain turf anymore, unless there is an immediate threat to public health.

Where the pesticide applicator won’t have decision making is when it comes to an immediate threat to public health. Decisions about health risks to children are better made by a health officer in conjunction with school officials. Pesticide applicators are trained to apply pesticides, not about the safer alternatives that long-term prevent pest problems (planting resistant grass varieties, enriching soil with organic matter, irrigating infrequently and deeply to encourage healthier roots).
Sports Turf Managers? 
or 
Pesticide Applicators?
Under Attack

Acceptable Turf Conditions

Need to Lower Standards
Consequences

Medium Quality to Poor

Poor Quality to Dangerous
Getting Involved
My Story

- After proposed legislation was announced in Jan of 2011, I wanted to get involved but didn’t know how.
- Tried contacting legislators directly.
- Researched issue online.
- Read online testimony from a previous hearing.
- Seemed like the process was unfair because the testimony didn’t have any balance.
- Well intentioned people were driving this legislation without any real world input on the issue.
- Emotion was replacing common sense and facts.
No turning back:
Stepping out of my comfort zone
Mr. Watson Heads to Trenton
Working With Partners
State Street Lobby Firms
Becoming an Asset

- Learn about how the legislative process works
- Work with lobby firms to get direct access to legislators
- Make available facts, costs and related statistics providing expert information that otherwise might not be available
- Attend strategy sessions with parties involved
- Meet with legislators as part of a group strategy
- Make time to attend hearings
- Get prepared to testify
Legislative Testimony
Legislative Testimony

- Relay real life experience to legislators
- Puts a face on the issue
- Allows opportunity to refute questionable information from previous testimony
- Gives legislators the opportunity to ask you questions about your testimony
- Lets you highlight specific facts in a public setting
- Brings a lot of attention your way good and bad
- You may see your public testimony again
- Check with your bosses before entering the public arena
Results

- Testimony was well received as factual at assembly hearing
- Met with three sponsors of the bill and was thanked for providing a side of the issue that had not been presented before
- Met with Senate president and Assembly speaker of the house and helped secure delay of legislation until compromise is reached
- Legislation was never brought to senate or assembly floor for a vote
Defending Your IPM Program:
What made the difference

- Able to communicate that IPM programs provide safe playable recreation areas
- Public health and safety is always the turf managers' top priority
- The realization that sports fields are not maintained by pesticide applications but rather by a well thought-out maintenance program
- Understanding that removing pesticide use from playing surfaces does not instantly make them safe playing fields
Personal Results

- Have been invited to be part of a NJDEP committee working on outdoor IPM issues
- Can explain process to fellow turf managers to bring clarity on the issue
- Recognized as knowledgeable expert on outdoor IPM issues
- Asked to write articles on the subject
- Invited to speak at conferences
- Pride in Pine Hill’s IPM program
IPM Pride in Pine Hill
“IPM is a Twelve Month Process”
Pine Hill’s IPM Management Plan
IPM Field Logs

- IPM field inspections are performed monthly and then recorded.
- This information is then used to develop a management plan for pest control.
- Maps, pictures and monitoring forms are all included in the log book giving us a comprehensive look at the past history of each field.
- It may take some time to develop a plan as next year’s IPM program is based on this season’s problems.
<table>
<thead>
<tr>
<th>Kentucky Blue</th>
<th>Tall Fescue</th>
<th>Diseases</th>
<th>Abb.</th>
<th>Insects</th>
<th>Abb.</th>
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<td>Anthracnose</td>
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<td>Ann. Blue Weevil</td>
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<td>Perennial Rye</td>
<td>Brown Patch</td>
<td>BP</td>
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<td>Dollar Spot</td>
<td>DS</td>
<td>Blue Billbug</td>
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<td>Fusarium Patch</td>
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<td>Patch Disease</td>
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<td>Grub Type</td>
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<td>Pink Snowmold</td>
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Comments: 3/8 - 35 lbs N/1000 sf
31-0-0

Patches of clover present in middle of field
Pine Hill BOE IPM Monitoring Log for Sports Fields

Inspector Name:
Field Name:
Threshold Designation:
Field Sq. Ft.:
Date of field inspection:

<table>
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<tr>
<th>Pest Monitoring</th>
<th>Pest</th>
<th>Low 0%</th>
<th>10%</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>Name</th>
<th>District Action Threshold</th>
<th>Recommended Action</th>
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<td>Crabgrass/ sedges</td>
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<th>4</th>
<th>5</th>
<th>Comments</th>
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<th>4</th>
<th>5</th>
<th>Comments</th>
<th>Recommended Action</th>
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## BEST MANAGEMENT PRACTICES

<table>
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<tr>
<th>Non Chemical Actions</th>
<th>Date</th>
<th>Type/ Amount</th>
<th>Comments</th>
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<tr>
<td>Aeration</td>
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<td>Seeding</td>
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<tr>
<td>Irrigation</td>
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<tr>
<td>Top-dress/divot repair</td>
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<thead>
<tr>
<th>Fertility/ Pesticides</th>
<th>Lbs. Nitrogen/ 1000 sq. ft.</th>
<th>Date</th>
<th>Amount</th>
<th>Comments</th>
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<tr>
<td>Product</td>
<td>.10  .25  .50  .75  1.0</td>
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<tr>
<td>21-0-0</td>
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<tr>
<td>Roots 15-0-8</td>
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<td></td>
</tr>
<tr>
<td>Acelepryn 0-0-7</td>
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<td>0-0-60</td>
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Notes:

- White clover exceeds 25% of the field and may need to be treated this summer.
- Dandelion plants observed on field
- Crabgrass has germinated and exceeds 25% of the field. Treatment not needed
- Oriental beetle observed from 7/1 - 7/15
- Acelepryn applied for grub control due to monitoring and field history. Application made to center of field only
White grub infestation has been an ongoing problem for many years.

Clover and crabgrass infestation has been a long existing issue on this field.
Pre-Notification of the Use of Pesticides
(This notice should be received at least 72 hours prior to pesticide use)

Date: 7/16/12
To: Parents and guardians of students, and staff of Overbrook High School
From: IPM Coordinator: Tom O'Donnell  Phone Number: 783-6900 ext 1118
Subject: Notification of the Use of Non Low Impact Pesticides

This notice is to advise you that the following pesticide(s) will be used at Overbrook High School:

<table>
<thead>
<tr>
<th>Pesticide Common Name</th>
<th>Chlorantraniliprole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pesticide Trade Name</td>
<td>Acelepryn</td>
</tr>
<tr>
<td>EPA Registration Number</td>
<td>352-734-82757</td>
</tr>
</tbody>
</table>

Location of the pesticide application: Middle School Soccer, Varsity Field Hockey, Varsity Soccer, Varsity Baseball and Varsity Football fields

Reason for the pesticide application: Control of white grub. These fields have a past history of grub damage and have shown signs of infestation due to beetle monitoring.

If an indoor application, the date and time it is planned:

DATE ______________________ TIME ______________________

If an outdoor application, 3 dates must be listed, in chronological order, on which the outdoor application may take place if the preceding date is canceled.

Date: 7/19/12  Date: 7/20/12  Date: 7/21/12

Description of the possible adverse effects of the pesticide as per the Material Safety Data Sheets for the pesticides to be used, if available: No Signal Word. If eye contact is made, may cause transient irritation with discomfort, tearing and blurred vision

Pesticide product label instructions and precautions related to Public Safety: This product has no known adverse effects on human health

Note: By law, we must advise you that: The Office of Pesticide Programs of the United States Environmental Protection Agency has stated: "Where possible, persons who potentially are sensitive, such as pregnant women, infants, and children, should avoid any unnecessary pesticide exposure."
Different Types of Competition Require Customized Thresholds

Pine Hill Public Schools
Pest Thresholds for Highest Care Fields

Clover/ Broad leaf weeds – **25% coverage of field** will prompt consideration of a low-impact pesticide if available and practical or the lowest risk synthetic pesticide.

Crabgrass – **25% coverage of field** will prompt consideration of a low-impact pesticide if available and practical or the lowest risk synthetic pesticide available. It is important to note that a preventative application may be made to control seed head production. The field will then be evaluated at the end of the.

Pine Hill Public Schools
Pest Thresholds for High Care Grounds

Clover/ Broad leaf weeds – **50% coverage of field** will prompt consideration of a low-impact pesticide if available and practical or the lowest risk synthetic pesticide.

Crabgrass – **50% coverage of field** will prompt consideration of a low-impact pesticide if available and practical or the lowest risk synthetic pesticide available. It is important to note that a preventative application may be made to control seed head production. The field will then be evaluated at the end of the.
Best Management Practices for the Sports Turf Manager
Cultural Practices

- Cutting height/ frequency
- Aeration
- Fertility
- Seed in season
- Proper irrigation
The Reality of IPM
Field Hockey Field Case Study
Varsity Field Hockey Field

2012 Review

4.23 lbs N/1000 sf

400 lbs perennial rye seed

300 lbs tall fescue seed

Granular application of Acelepryn
Varsity Field Hockey Pest Issues

- Crabgrass
- Dollar spot
- Oriental beetle/ white grub
- Brown patch
- White Clover
Zero Pesticide Inputs?

IPM
Field History
Pesticide Use 2009

- Granular Dimension
- Liquid Acclaim
- Liquid Momentum
- Granular Merit
- Granular Bayleton
Pesticide Use 2010

- Granular Dimension
- Granular Merit
- Granular Bayleton
Pesticide Use 2011

- Granular Acelepryn
- Granular Bayleton
- Granular Dimension
2011
Pesticide Use 2012

- Granular Acelepryn
Pesticide Use 2013

- Granular Acelepryn
2013
Does field quality suffer with reduced pesticide inputs in an IPM program?

2009 2013
Crabgrass problems 2009

- 50% of field covered with crabgrass
- Dimension pre-m applied 09,10,
- Acclaim sprayed 09
- Heavily seeded with perennial rye during season
- Cut at 1.75”
What We Don’t Do Now

Practice Football

Field Hockey
Crabgrass 2009
Crabgrass 2013
Disease Drama
Varsity Field Hockey
Dollar Spot 8/10/09

AM  AM
Field Hockey
August
November
2013 Dollar Spot
2012 Labor Day Massacre
\( \frac{3}{4} \) of the field damaged by Brown Patch
November 2012
November 2013
Fertility Changes for 2013

Switched to a slow release poultry manure based fertilizer for the duration of our warm weather months
Oriental Beetle
Apply Acelepryn to Playing Surface Only
What About Clover?
Clover Thresholds Are Difficult to Set

- Clover in small patches can be tolerated
- Clover in low traffic areas can be tolerated
- Clover in high traffic situations such as goal mouth areas should be addressed
- Clover in the middle of football fields should be addressed
While clover may be acceptable in some situations, it is not a durable turf for athletic activity.

- It wears quickly and crowds out preferred turf types.
- In addition to its lateral growth, clover is a prolific seed producer. This makes it very difficult to control without chemical applications.
Clover after Football
Worn clover areas were the only thin spots on this field
11/23/2013

Is this a safe field?
Can you make it work without pesticides?

Yes

But
Keep your options open
IPM is a tool, not a cure for all turf problems

Decide what you can live with and still provide a quality playing surface
IPM Information

Rutgers Cooperative Extension

www.pestmanagement.rutgers.edu/IPM
Contact Info

rwatson@pinehillschools.com
or
wats100@msn.com