Integrating Assessments into a Municipal/School Grounds Management Program

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UConn Extension
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Objectives

- Understand why an assessment is important for athletic fields on municipal properties
- Understand why an assessment is important for landscaped areas on municipal properties
- Understand how an assessment can be included in a municipal IPM plan

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Who Uses Assessments?

- Business – SWOT analysis
- Extension faculty – evaluation after programs, pre-post surveys
- Health professionals – wellness programs, dietary, hospital efficiencies
- Education professionals – learning impacts-teachers and students, standardized testing
- Police/ Public Safety – threat assessments
- Individuals – Self Awareness: career, work culture, personality

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Assessment Tools Turf Professionals Currently Use

- Soil test
- Field assessments – UConn, Cornell, Ohio State
- STMA's PCI Index

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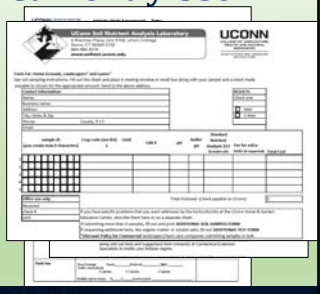

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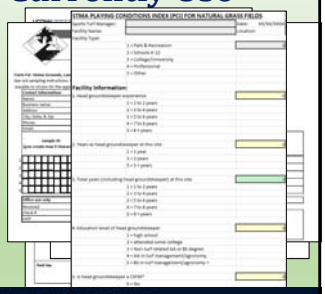

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The Value of Assessments…. Why Use Them?

- Determines whether or not the goals of program are being met…
- Affects decisions about turf/field care…financial/budgetary implications
- Assessments often provide an answer to important questions…is the playing surface of my athletic field safe? Is there an alternative way to make the field safe?

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Reason for Assessments in CT

- 2010 CT Pesticide Ban
- Daycare – K-8
- Municipal STM – had no way to measure field quality or quality of landscape

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Turf Areas: Range of Quality

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Turf Areas: Range of Quality

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With Ban in Place…

- Lack of budget to support additional labor increase
- Interpretation of ban: do nothing or minimal effort with cultural practices
- Move activity to municipal fields that are in better condition and can use pesticides, if needed.
- Sharing of equipment between some towns
- Prioritizing fields, labor effort

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With Ban in Place… Increased Labor Costs

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With Ban in Place… Sharing of Equipment

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With Ban in Place… Minimal Effort – Cultural Practices

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Catastrophic Grub Damage - Closed Field

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Catastrophic Grub Damage - Closed Field

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Dodd Stadium- Home of CT Tigers

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With Ban in Place…
High Priority Fields vs Non-Priority Fields/Turf Areas

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Landscaped Areas

- Courtyards
- School Entrance Areas
- Playgrounds

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Landscaped Areas

Labor Intensive -

Too much time committed to weeding

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Landscaped Areas

Refocused effort in care of property

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Landscaped Areas

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Landscaped Areas

Security – Need to Allow Visibility of Entryways and Windows

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Landscaped Areas

Incorporate products that minimize mowing effort at fenceline areas

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Priority for Development of Assessments

- Athletic fields – to support and encourage improved playing surfaces that ultimately ensure player safety
- Landscape areas – to respond to or reduce health & safety issues, improve aesthetics & improve *quality of life* for staff, teachers, students

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CT Extension Implementation IPM Grant

- **Weather Stations** - 2014: 16 stations; 2015: 5 stations
- **School Athletic Field and Landscape Assessments**
  - 25 schools; Athletic Field & Landscape Assessment
- **Annual school IPM workshops**

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Overview of Project

3 year project: 2015-2017

27 School Districts included in study:

Canton	Hamden	Newtown
Chaplin	Harwinton/Burlington	North Stonington
Clinton	Hebron	Plainville
Colchester	Lebanon	Portland
Coventry	Madison	Rocky Hill
East Haddam	Manchester	Vernon
East Lyme	Meriden	Washington
Ellington	New Canaan	Westport
Glastonbury	New London	Woodstock

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Assessment

- Needed quantitative data to measure field quality and field safety of natural grass areas

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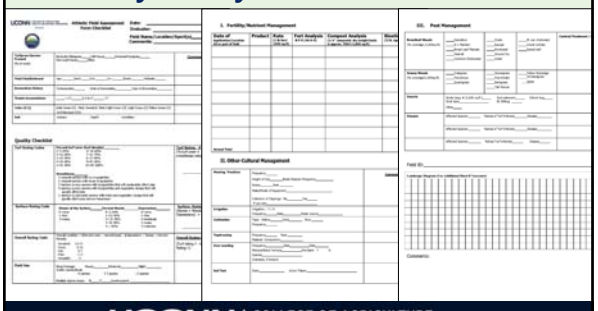
Assessments to Improve Safety and Playability of Fields



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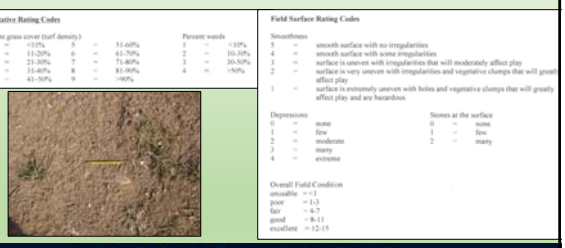
Assessments to Improve Safety and Playability of Fields

Rating System with Codes



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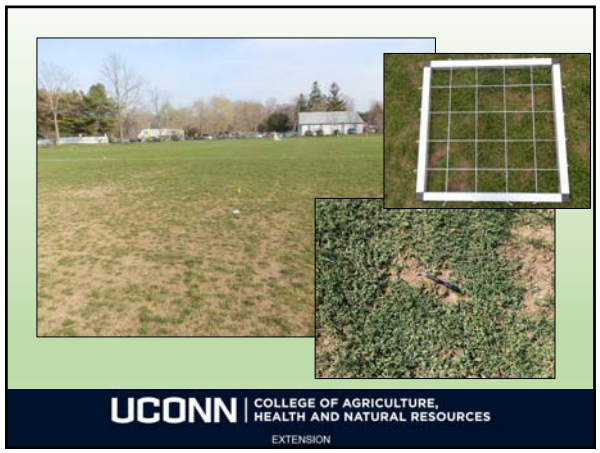

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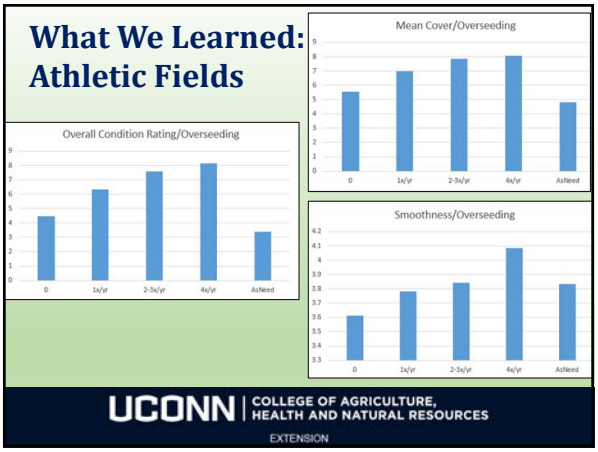
What We Learned: Athletic Fields



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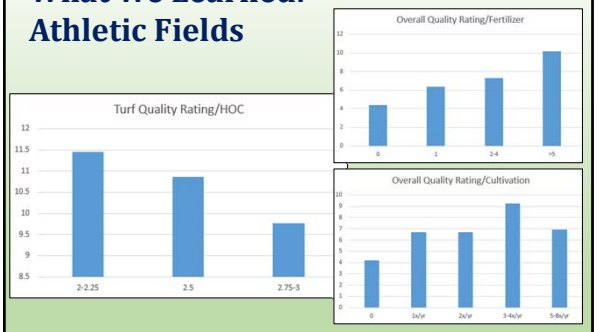

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What We Learned: Irrigated Athletic Fields

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What We Learned: Non-Irrigated Athletic Fields

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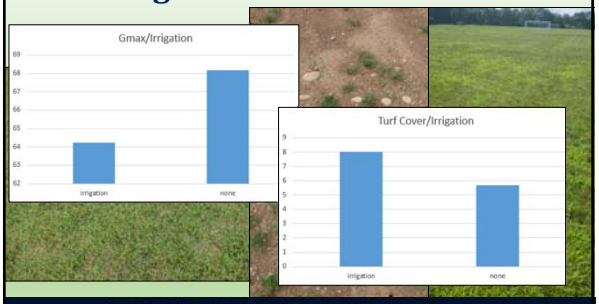
What We Learned: Non-Irrigated Athletic Fields



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What We Learned: Irrigated Athletic Fields

Irrigated Fields

Field Designation	Overall Field Condition	%Cover	%Weeds	Smoothness	G.max
1	12.0	88%	16%	4.7	46
2	8.0	84%	24%	3.0	88
3	7.3	84%	60%	3.3	53
6	11.0	97%	70%	5.0	73
7	-2.7	25%	74%	2.3	144
8	11.2	95%	32%	4.7	70
15	5.7	77%	49%	5.7	79
16	12.0	91%	<10%	4.0	71
17	4.3	67%	43%	3.0	97
22	9.3	81%	87%	4.3	54
23	12.4	95%	28%	4.7	48
24	7.0	68%	44%	4.0	76
Mean	8.1	79%	45%	4.1	75
Minimum	-2.7	25%	10%	2.3	46
Maximum	12.4	97%	87%	5.0	144

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What We Learned: Non-Irrigated Athletic Fields

Non-Irrigated Fields

Field Designation	Overall Field Condition	%Cover	%Weeds	Smoothness	G.max
Non-Irrigated Fields					
4	1.6	36%	49%	2.7	70
9	7.7	48%	19%	4.0	111
10	5.8	78%	73%	4.0	48
11	3.7	37%	39%	3.0	46
12	-0.3	11%	62%	2.7	67
13	4.0	45%	51%	3.0	53
18	2.6	46%	47%	2.3	83
19	1.0	35%	72%	3.0	78
20	4.4	45%	71%	3.7	66
21	-0.3	12%	100%	2.0	67
25	1.7	21%	32%	2.7	109
26	6.6	51%	32%	3.8	69
Mean	3.2	39%	54%	3.1	76
Minimum	-0.3	11%	19%	2.0	43
Maximum	7.7	78%	100%	4.0	111

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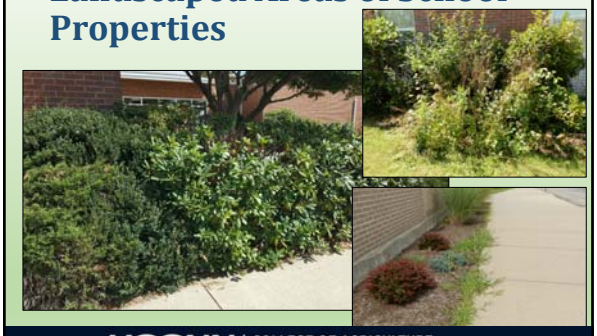
Landscaped Areas of School Properties



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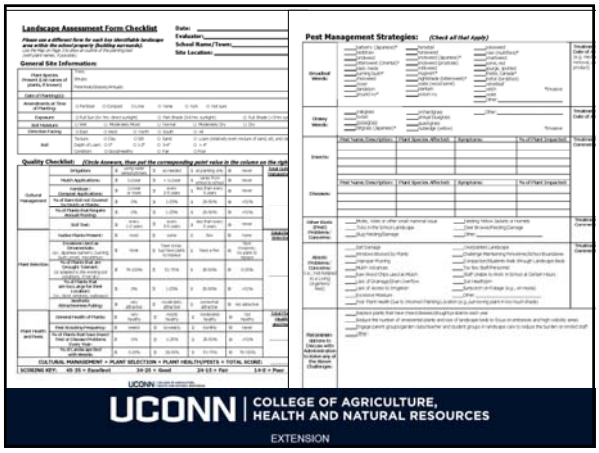

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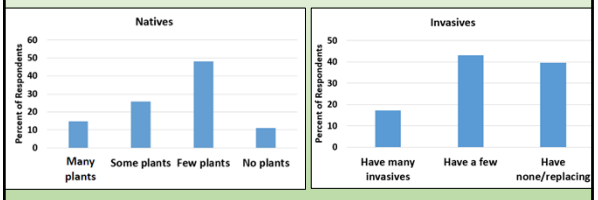
What We Learned: Landscape Plant Diversity



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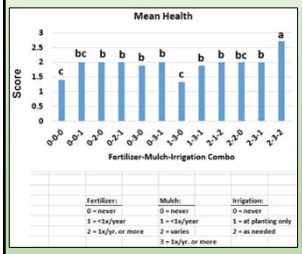
What We Learned: Landscape Maintenance



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What We Learned: Landscape Results

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What We Learned: Landscape Results

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What We Learned: Landscape Results

Create focal points to minimize maintenance

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What We Learned: Landscape Results

Mow Right up to Building

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What We Learned: Landscape Results

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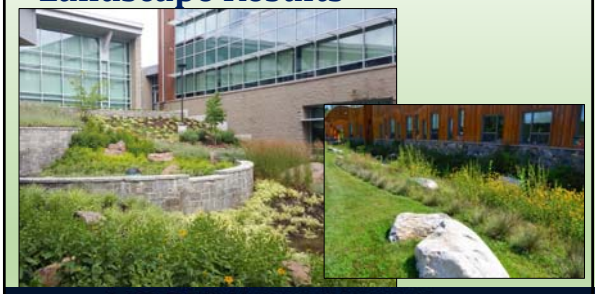

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Using Assessments to Support IPM Protocol

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What is IPM?

- An effective and environmentally sensitive approach to pest management.
- Understanding life cycles of pests.
- Manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment.
- Uses all appropriate pest management options.

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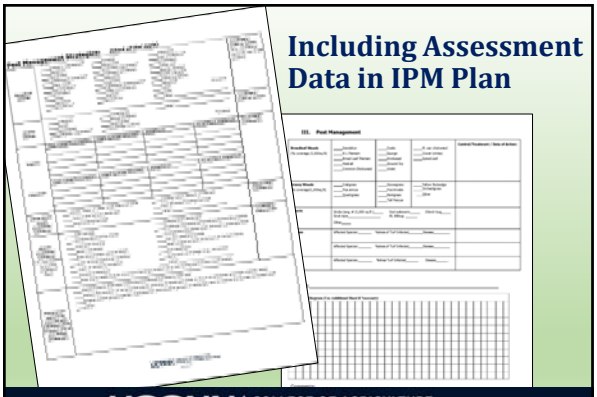
Including Assessment Data in IPM Plan



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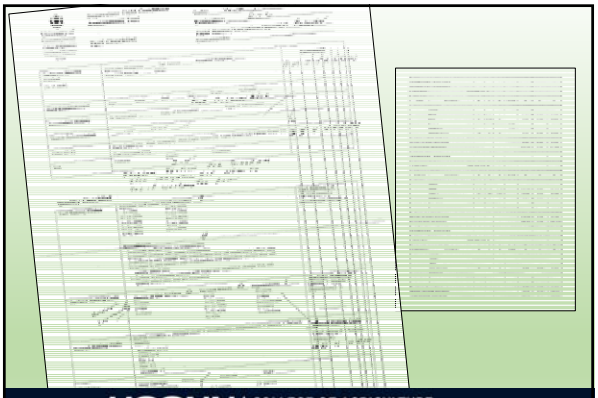

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Using Assessments

- Support Management - Best Practices
- Set Action Thresholds
- Monitor and Identify Pests
- Prevention
- Control/Remediate

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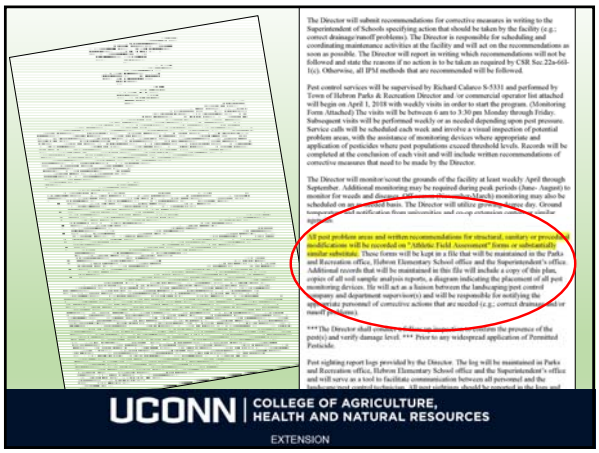

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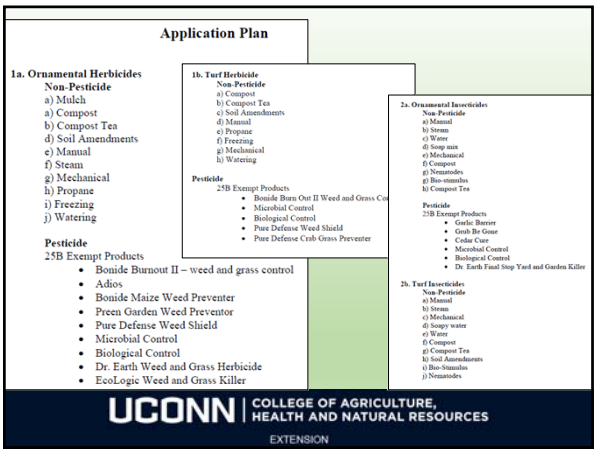

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Stonington, CT

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How STM Can Use Assessments

- What "message" do you want to relay?
  - Field safety – priority
  - Requires effort to maintain landscape areas as high visibility areas around school
- Does the "message" change depending on who interact with?
  - Athletic director – field safety
  - Finance director – more $$ for OS priority fields
  - Administration
- Can assessments support or counter proposed legislation?

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Where Do We Go From Here?

- Incorporate into IPM plan and use as part of record keeping
- Turf Managers need to know how to "use" their assessments to support their needs
  - Equipment sharing or purchases
  - Products and timing of product use
- Use of "new" tools

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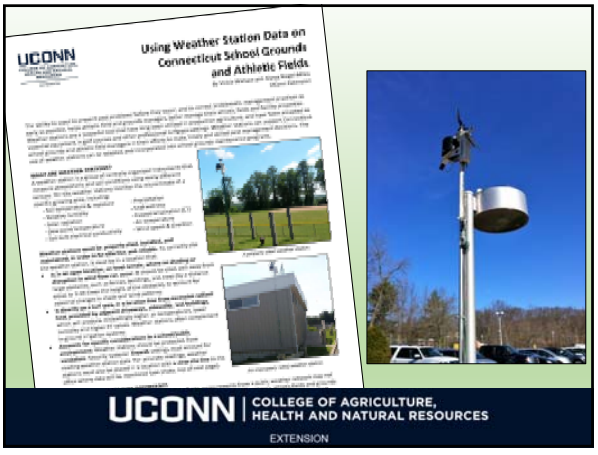

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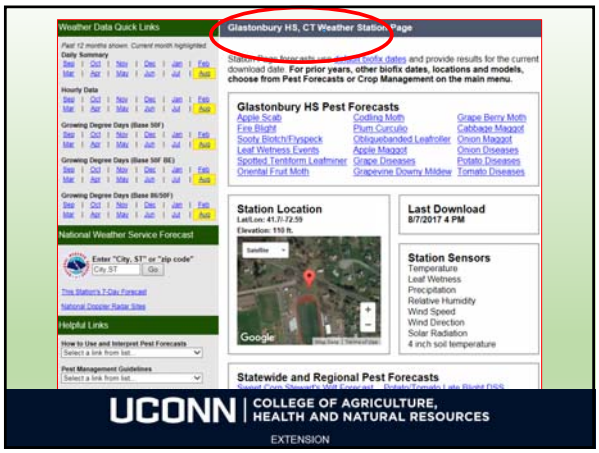

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Sports Turf Manager Challenges

- Relay the positive role/value of STM in maintaining safe playing surfaces & overall field safety.
- STM need to continue record keeping and know how to use data gathered through assessments to their benefit.
- Need to account for baseline information and changes over time.
- Talking points when engaging with administration/ public.

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Extension Faculty can help with Message

- Emotionally charged issue, hard to change mind of many that view any type of pesticide input as "bad." STM message is not always heard.
- We need to continue to relay the value about safe field care and "aesthetic"/quality of life.
- Help develop talking points with public as level of understanding of natural turfgrass care is misunderstood.
- Landscape areas: have issue of health threat as support (ticks, bee allergy, invasive plant health risks).
- BMP's help support STM.

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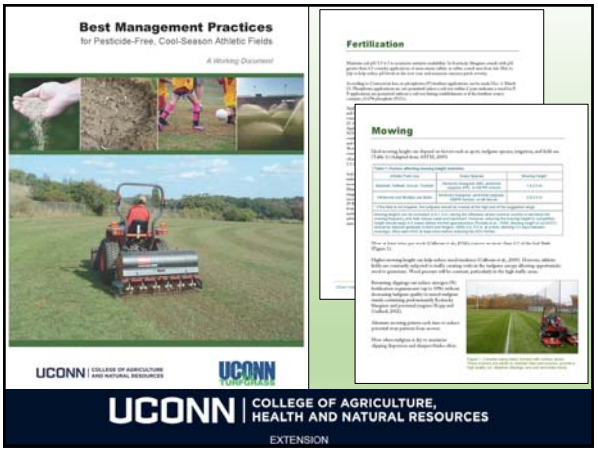

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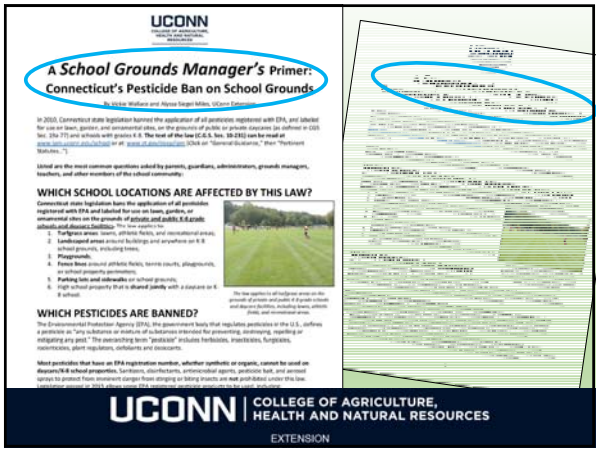

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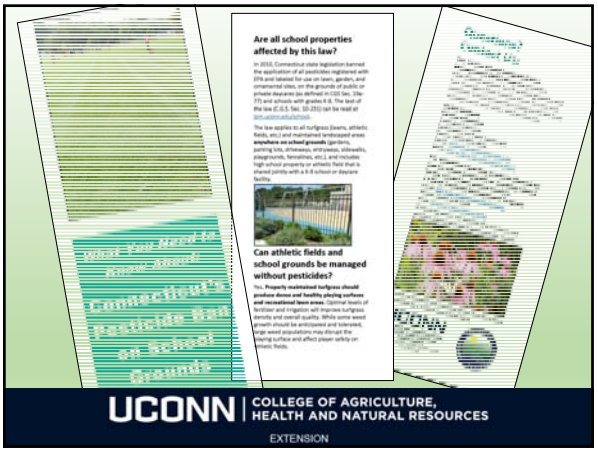

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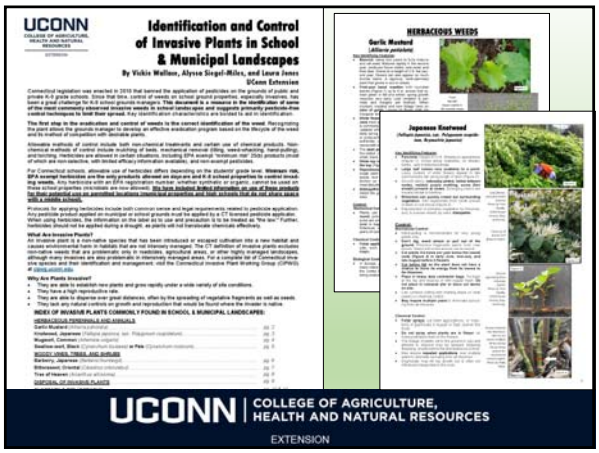
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Identification and Control of Invasive Plants in School & Municipal Landscapes
By Vickie Wallace, Alyssa Siegel-Miles, and Laura Jones
UConn Extension
HERBACIOUS WEEDS
Garlic Mustard
Japanese Knotweed
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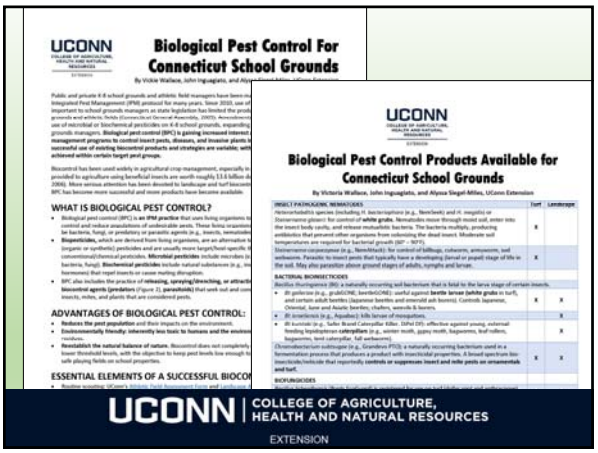
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Biological Pest Control For Connecticut School Grounds
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Biological Pest Control Products Available for Connecticut School Grounds
By Victoria Wallace, John Ingvalgiats, and Alyssa Siegel-Miles, UConn Extension
WHAT IS BIOLOGICAL PEST CONTROL?
ADVANTAGES OF BIOLOGICAL PEST CONTROL:
ESSENTIAL ELEMENTS OF A SUCCESSFUL BIOCO
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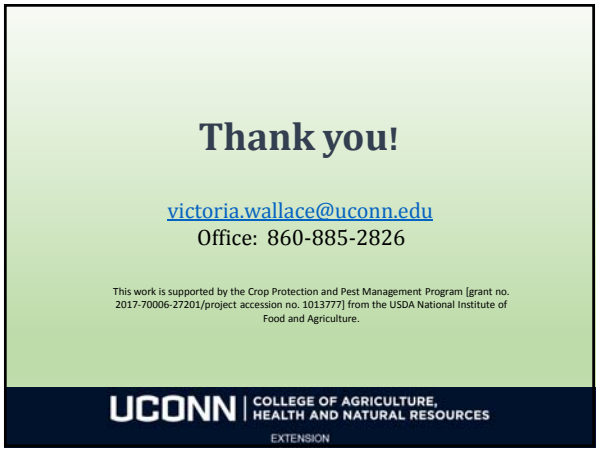
Thank you!
victoria.wallace@uconn.edu
Office: 860-885-2826
This work is supported by the Crop Protection and Pest Management Program [grant no. 2017-70006-27201/project accession no. 1013777] from the USDA National Institute of Food and Agriculture.
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