

1. Title: Development of IPM Elements for Turf grass: Lawn/Landscape, Sports and Sod production

2. Project Leader: Walt Nelson, CCE, Monroe County

3. Cooperator(s): Jennifer Grant NYS IPM Program, Marty Petrovic & Frank Rossi CU
Department of Horticulture

4. Abstract:

Turf grass is one of the few New York crops without an IPM management protocol (IPM Element). This project corrects the deficiency and creates Element protocols for sod production (13 farms), sports turf (recreational, public and private school and higher education) and lawnscapes (professionally managed residential and commercial lawns with implications for owner use of this element).

Similar protocols exist in Ohio (lawnscapes) and Massachusetts (golf). Neither follows the format utilized in other NYS IPM Elements. Congruence with the NYS format is desirable. Draft protocols were developed for the three turf grass areas.

Potential audiences individually and in small groups in NY's Western, Capital, Hudson Valley and Long Island completed the Element protocol and provided revision comments. Revised protocols were reviewed by the cooperators.

The revised Elements were offered at NYS Turfgrass Association and Sports Turf Managers of NY seminars. Seminar comments are incorporated into the Elements and being added to the IPM Elements web site, where turf managers are able to utilize the Elements.

5. Background and justification:

Turf grass is one of the few New York crops without an IPM management protocol (IPM Element). Turf managers report increasing scrutiny of their management practices and are looking for resources enabling a socially responsible response.

This project corrects the deficiency and creates Element protocols for sod production (13+ farms), sports turf (recreational, public and private school and higher education) and lawnscapes (professionally managed residential and commercial lawns with opportunities for use by owner managed turf grass with further revision).

Similar protocols exist in Ohio (lawnscapes) and Massachusetts (golf). Neither follows the format utilized in other NYS IPM Elements. The Ohio and Massachusetts protocols were used in development of first IPM Element drafts. Congruence with the other NYS Element format was desirable.

These Elements provide turf grass managers environmentally and economically responsible advice in reducing nutrient and pesticide overloading. They also provide guidance in reducing the carbon footprint of turf grass management.

6. Objectives:

- Identify and prioritize pests: disease, pest and weed of turf grass.
- Describe cultural protocols, their priority and assign a point value for growing and managing turf grass.
- Inventory electronic and print resources turf grass managers may use while implementing IPM practices in the culture and management of turf grass.

7. Procedures:

Twelve of the thirteen NYS sod producers provided comments in developing the sod production element in individual and small group interviews. Ten sports turf managers similarly participated in developing an Element for Sports turf. Fifteen lawnscape caretakers similarly aided in development of an Element for lawnscape. These drafts were vetted by CU turfgrass faculty. Revised versions resulted. Elements for sports turf and lawnscape were presented at NYS Turfgrass Association and Sports Turf Managers of NY seminars, gauging level of acceptance and taking comments using i>clicker technology. Last iterations are being posted on the NYS IPM Elements web site.

8. Results and discussion:

1. When turf grass managers embrace their respective Element:
 - Nitrogen application levels would fall from 3-6 pounds/1,000 sq.ft levels reported during the development of these Elements to 1-3 pounds/1,000 sq.ft.
 - Potassium application would drop to zero from reports of 2-3 pound/1,000 sq.ft levels.
 - Phosphorous application would drop to zero from reports of 2-3 pounds/1,000 sq.ft. levels.
2. An unquantified reduction in carbon emissions results from less mowing-fuel use when Elements are followed.
3. Practitioners embracing the Elements eliminate prophylactic insecticide applications and most prophylactic fungicide applications.
4. Approximately 7,500 acres of sod are harvested annually, 18,000 acres of sports turf grass and over 3 million acres of lawnscape cared for by over 40,000 individuals in NYS. (2007 census of agriculture and 2003 NYS Agriculture and Markets)
5. The Elements project was development of Elements caretakers can adopt/embrace.
6. The associated costs of the project were 20% over the grant support. The local audience saw this as a worthwhile investment.
7. The Elements must be added to the IPM Elements web site. The sod elements should be vetted by the sod producers prior to web launching.
8. Empirical evidence at seminars shows enthusiasm to trial these Elements in sports and lawnscape and sports venues.

9. Project location(s):

Element survey work was done with turf grass managers in Erie, Genesee, Monroe Orange, Albany, Renseleer, Saratoga, and Suffolk counties.