

Advancing Support for IPM: Northeastern IPM Center Vegetable Working Group's Collaboration with USDA Natural Resource Conservation Service

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Introduction

The USDA Natural Resources Conservation Service (NRCS) provides technical assistance and cost-sharing incentive payments to farmers to encourage adoption of reduced-risk practices such as Integrated Pest Management (IPM). Vegetable growers are often unaware of the availability of NRCS programs and NRCS staff, though well trained in agronomy, soil sciences and engineering, often lack a good understanding of IPM. This project was undertaken to increase awareness and participation by northeastern vegetable growers in the NRCS Environmental Quality Incentive Program to encourage greater adoption of new and advanced IPM practices.

Project Goals:

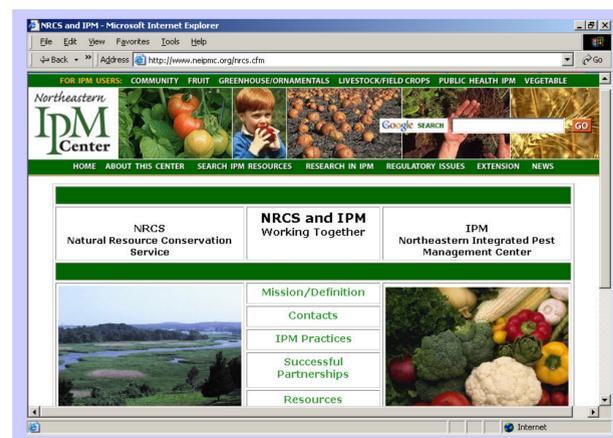
- Build partnerships among NRCS, Cooperative Extension, state agriculture departments, and independent crop advisors to improve delivery of IPM technical service, information, and incentives to northeast vegetable producers.
- Increase adoption of IPM practices to mitigate risks of environmental impacts from crop protection practices, such as pesticide use and tillage.

Objectives:

- Develop and test the utility of 'tools' to help NRCS field staff and their contracted Technical Service Providers to write IPM plans for vegetable growers. IPM Plans are a required element for growers to receive incentive payments to encourage adoption of new IPM practices.
- Offer workshops for NRCS, Extension and other service providers and farmers demonstrating IPM and conservation practices.
- Inform vegetable growers about how to apply for NRCS cost-share programs to support IPM on the farm.

Fig. 1. The Working Group works with the Northeastern IPM Center to develop and update an 'NRCS & IPM' webpage to link to IPM information and NRCS programs.

Provides links to IPM and NRCS resources and contacts, success stories and more.



<http://www.northeastipm.org/nrcs.cfm>

Accomplishments

- Organized a regional meeting to identify opportunities for collaboration with NRCS held Nov. 2005 in Harrisburg, PA.
- Organized farm tours and on-farm workshops to demonstrate conservation and IPM practices in Maine (2006, 2007), Massachusetts (2006, 2007) and Rhode Island (2007). Participants have included NRCS, Extension, state gov't, ag suppliers, farmers, growers associations, and crop consultants.
- Drafted 'tools' to facilitate IPM planning as required for farms participating in cost-share program.

On-Farm Workshops Demonstrating IPM & Conservation Practices are Effective

Table 1. Results from participant surveys conducted before and after on-farm workshop. Results from Maine 2007 workshop. Number of participants= 69

Survey Question	Before Workshop	After Workshop	% Increase
What is your level of knowledge about IPM? Rating Scale: 1 = low to 5 = high	3.1	3.9	16
What is your level of knowledge about conservation practices? Rating Scale: 1 = low to 5 = high	3.4	3.9	10
How much do IPM and Conservation share in terms of practices and goals? Rating scale: 1= little 2 = some 3 = a lot	2.5	2.8	24
What is your level of knowledge of IPM resources? Rating Scale: 1 = low to 5 = high	3.3	4.1	16
What is your level of knowledge about NRCS programs? Rating Scale: 1 = low to 5 = high	2.9	3.3	8
Which of the following practices are you likely to use or recommend? Rating Scale: 1 = unlikely to 5 = very likely			
Row covers	3.0	4.3	26
Weed mapping	2.1	3.6	30
Crop disease forecasting	2.8	4.0	24
Insect traps	3.1	4.2	22
Pest record keeping	3.2	4.2	20
Cover cropping	3.7	4.4	20



Joel Myers (PA NRCS Agronomist, retired) demonstrates soil quality characteristics of no-till cropping practice at 'IPM & Conservation' On-farm Workshop', County Fair Farm, Jefferson, ME June 2007.

Table 2. Results from participant surveys at UMASS IPM Field Schools for NRCS staff, farmers and others. Total number of participants = 180

Topics	Farm					
	Riverland	Warner	Foppema	Golonka	Paradise	Howden
Scouting & Monitoring	100%	100%	86%	100%	67%	33%
Insect ID and Biology	100%	20%	71%	100%	67%	33%
Disease ID and Biology	100%	50%	86%	100%	100%	83%
Weed ID and Management	80%	70%	57%	0%	100%	83%
Cultural Management (for prevention of insects or diseases)	100%	100%	100%	25%	33%	83%
Decision Making (when and what to spray)	80%	90%	71%	100%	33%	83%
Biological Control	100%	80%	57%	75%	33%	17%



UMASS IPM Field School participants learning to identify sweet corn insect pests.



NRCS staff learning by doing: scouting for sweet corn pests at UMASS IPM Field School 2007.



Andy Williamson (owner, County Fair Farm) explains his approach to IPM and conservation-based vegetable production practices to ME workshop participants.

NRCS Tools under Development:

- Vegetable IPM Practice List: lists types of IPM practices for pest prevention, avoidance, monitoring, suppression with examples and links to Extension IPM guidelines.
- Sweet Corn Scouting Guide
- IPM guide for Sweet Corn. Assigns resource conservation benefit points to individual IPM practices to measure potential environmental impacts. Additional crop-specific guidelines are under development as part of related projects.

Comment from an NRCS participant at a MA IPM Field School: 'NRCS employees could use many days like this one! A series of trainings would greatly improve my ability to effectively discuss IPM with growers'

Measuring Impacts:

- We will compare numbers of farms and acreage participating in NRCS cost share for pest management before and after the project.
- We will compare cost share payment rates and EQIP dollars paid for IPM among the NE states before and after the project. Some changes have already occurred. For instance ME NRCS increased the payment rate for IPM in vegetable crops from \$25/A to \$158/A in 2007.

The Northeastern IPM Center Vegetable Working Group's mission is to foster the development and use of IPM as a means to achieve ecological and economic sustainability of vegetable farms in the Northeast.



NE Vegetable IPM Working Group Members and Partners: Front row (l-r) Tim Elkner (PA Extension), Kathy Murray (ME Dept of Agric), Liz Thomas (NE IPM Center), JoAnne Whalon (DE Extension), Ruth Hazzard (WG Leader, MA Extension), Betty McKenzie (Red Tomato), Kate Everts (MD/DE Extension), Hank Bissell (Lewis Creek Farms). Back row (l-r) Tom Akin (MA NRCS), Jim Ward (Wards Berry Farms), Ken Gauen (PictSweet), Brad Majek (Rutgers U.), Luke McConnell (McAgro Crop Consulting), Warren Lamborn (Fifer Orchards), Sue Futrell (Red Tomato).