

Title of project: Improving crop management in NY greenhouses through local hands-on workshops

Project leaders:

Elizabeth M. Lamb, Brian C. Eshenaur

Cooperators:

Neil Mattson, John Sanderson, Karen Dean Hall

Abstract:

Greenhouse growers in NYS are looking for educational opportunities to learn more about managing their crops to maximize profitability. Annual hands-on workshops in Ithaca were very well received as a method to extend crop management information.

This project brings the workshops to the producers rather than vice versa. Each traveling workshop is adapted to local needs and provides the opportunity to apply the knowledge in a real world setting with a grower-led greenhouse tour.

Giving greenhouse growers the chance to learn crop management techniques in a local, hands-on setting provides them with information to improve product quality and/or reduce losses or input costs. The longer term and broader benefits of extending crop management information are reduced environmental and human exposure to pesticides and fertilizers, and the potential for marketing a more ‘sustainable’ product.

Justification:

Surveys of IPM adoption by NYS greenhouse growers suggest that, even though most greenhouses use some integrated crop management practices, there is still great potential for improving the profitability of floriculture production through reducing input costs or improving crop quality (Lambooy, 2002; Lamb et al., 2007, Mattson, 2008)). The needs assessment survey indicated that pest identification (46%), insect and disease control (56-61%), and fertilizer management (48%) were major or very major challenges to growing high quality plants. Of the 394 respondents to the 2007 IPM survey, only half used new pots or disinfected old ones, a basic disease control procedure, and only a few more used sticky cards to monitor insect populations. And while the majority of respondents attend educational programs, they said they would like more information on a wide variety of crop management issues. For example, 80% of those completing the 2007 Greenhouse IPM Practices survey requested more training in disease and insect identification.

Several regions of the state (Long Island, Hudson Valley, Capital District, Western NY) have annual programs for greenhouse growers, but would benefit from the inclusion of a hands-on component. Many counties do not have Extension Educators that specifically serve the green industry. With increasing travel costs and other economic and time constraints for growers, it is more efficient and effective to take the programs to the growers than to provide programs in a single centralized location. Therefore, a series of hour-long hands-on modules on crop management topics (disease identification, insect identification, fertilizer use, pH and salt

measurement, record keeping, etc.) were offered for workshops across the state. Three modules with introduction and wrap-up will fit into a half-day program. On-farm and grower-led walk-throughs of local greenhouses will be organized for the afternoon so growers can see the real-life implications of what they have learned. The IPM In-depth programs in Ithaca during the summer serve as a trial of 3 new modules per year and the workshops scheduled around the state occur in spring and fall.

Benefits of local delivery of information are: the ability to adapt the program to local needs, the potential for information exchange between growers in the region during and after the workshop, and timing the workshops to the local growing seasons for better attendance. Local workshops give us direct contact with growers with whom we have not yet worked (over half of those attending the traveling IPM In-depths were new to us).

Objectives: There are 2 long range impacts of this project: 1) increased profitability of NYS greenhouse growers through improved quality of plant materials and/or reductions in input costs and 2) reduced soil and water impacts through appropriate use of pesticides and fertilizers

2012 In depth Programs:

Canandaigua NY, Ontario County	February 14, 2012
Penn Yan, Yates County	March 9, 2012
Balston Spa, Saratoga County	March 13, 2012
Ithaca NY, Tompkins County	July 23, 2012
Riverhead NY, Suffolk County	September 10, 2012
Akron NY, Erie County	September 19, 2012
Acra NY, Greene County	November 27, 2012
Albany NY, Albany County	November 28, 2012

2012 Results:

With the 174 attendees who participated in the IPM In-depth workshops in 2012, this program has reached a total of over 564 participants from around the state over the 4 years we have been running it. These 174 participants represent primarily wholesale and retail greenhouse growers but nursery producers, landscapers, new growers, and educators also attended. An increasing number of greenhouse vegetable growers and new/beginning farmers are participating in the programs. In addition in 2012 we delivered one specialized program for NYS Ag and Mkt inspectors.

From the evaluations in 2012 (114 respondents), 25% had attended previous IPM In-depths or other IPM programs. Of those who had attended an IPM program before, 73% reported they had made changes based on what they had learned. The most commonly listed changes were improvements in scouting, pest identification, sanitation, and the use of biocontrol. Eighty-five percent of participants indicated that they had learned information the In-depth program that they intended to incorporate into their businesses.

Some of the comments participants wrote on the evaluations are:

Very much appreciate the hands-on portions of the seminar
Have gained better monitoring and pest identification knowledge

Will now look at problems from a broader perspective
Learned how to improve pH and fertilizer program
Now more confident to use beneficials
Very well done—lots of useful information

Implications:

The IPM In-depth programs are encouraging the use of IPM techniques among ornamental growers in NYS. The strong interest of these producers in IPM programs suggests that they find value in them. More In-depth programs are planned for growers and Ag and Mkts inspectors 2013. Surveys of participants will let us evaluate the percentage of growers who actually implement changes based on attendance at an IPM in-depth program.

Keywords:

Pest: any insect pest, any disease pest, root rot,

Setting: greenhouse

Management Technique: monitoring, research & education, biological control