

Title: IPM In-depth: Improving crop management in NY greenhouses and nurseries through hands-on workshops

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Abstract:

Thirty-one growers, from retail greenhouses, wholesale greenhouses, nurseries, and garden centers, attended the first IPM In-depth program of hands-on workshops, in association with the Floriculture Field Day in Ithaca. In 2008, the modules were thrips identification, botrytis identification, and measuring pH and salts in container media. Each module was 1 hour long and included a series of hands-on activities so the participants received direct experience with the topic. Response to the program was overwhelmingly positive, with most participants planning on changes in pest and fertility management as a result of attending.

Background and justification:

Surveys of IPM adoption by, and needs assessment of, 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 say 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. Evaluations from other programs, such as the Biocontrol project, show an overwhelming preference (73%) for hands-on training.

Objectives

To evaluate growers' response to a workshop in conjunction with the Floriculture Field Day as a means of providing hands-on experience in topics relating to IPM.

- a. Perceived benefit of training that provides specific experience with IPM techniques
- b. Timing and location appropriate for audience

Procedures:

1. Format for IPM In-depth

The Floriculture Field Day is a full day event held in July in Ithaca. The audience we were considering was greenhouse and nursery growers who were coming into Ithaca for the Field Day and might consider arriving early for a hands-on IPM workshop. Therefore, we chose to create a half-day program with 3 1-hour modules. The modules were designed for a maximum of 15 participants each, due to equipment limitations and so participants could get individual attention. Modules could be run concurrently for a maximum of 45 participants. Three labs were available on the ground floor of Plant Science so travel time from module to module was limited. Also, 2 of the labs had microscopes available for our use. DEC pesticide credits were applied for, for each module.

2. Choice and development of module topics

The modules were chosen based on information requested by growers through program evaluations and surveys. The 3 modules presented in 2008 were: thrips identification (Sanderson), botrytis identification (Eshenaur), and pH/salt content measurement of greenhouse media (Mattson). For each module, the presenter created a brief presentation to introduce the topic followed by a series of activities for individuals or teams. A series of handouts for each module were combined into a workbook for each participant.

3. Identifying participants

Because the audience was the same as that for the Floriculture Field Day, we asked the Greenhouse Program Work Team if advertising for the IPM In-depth program could be included in advertising for the Field Day. This also facilitated registration as growers could register for both at the same time.

Results and discussion:

Thirty-one growers attended the first IPM In-depth program, which we considered excellent for a first-time endeavor. Eighteen were from retail greenhouses, 6 from garden centers, 5 from wholesale growers, 3 from nurseries, and 2 were landscapers (participants checked all that applied so may have checked more than one category). The majority (80%) attended because of the topics covered, but pesticide credits were also considered important.

Thrips were considered a moderate problem for most growers. Sixty-eight percent of the participants planned on changing their thrips management program based on what they had learned, using everything from more monitoring to refining the spray schedule to introducing biocontrol agents. Diseases overall were also considered a moderate problem, with botrytis, root diseases and mildews considered the most common on a wide variety of crops. Sixty-eight percent learned how to identify disease problems and 52% intended to change their disease management strategy. Eighty-four percent of participants planned to try some of the methods learned for pH and salt measurement in their media. Seventy-six percent expected to adjust their fertilization program based on the measurements.

The general comments on the evaluations and those we received after the program were overwhelmingly positive. We plan to continue the IPM In-depth workshops as part of the Floriculture Field Day and are hoping to also try the modules in a series of workshops throughout the state.

Implications:

The number and enthusiasm of the participants indicates that there is continuing need for hands-on IPM training. The module system was effective in providing enough information within a somewhat limited time frame. Small groups meant everyone could have access to equipment and feel free to ask questions as they came up.

Project location:

The program was held in Ithaca, NY and the growers were all from New York State.



Greenhouse growers viewing insect pests via microscopes during IPM In-depth training.