



TENNESSEE

Mitigating Risk With Systems-Based Pest Management for Tennessee Nursery Owners, Producers and Hispanic Workforce

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Project Introduction

Expended Amount: \$38,971

New pests are a serious risk to Tennessee nursery profitability. For example, over 50% of Tennessee growers surveyed stated that boxwood blight now threatens their business. Regulatory agencies determined that systems-based pest management reduces plant mortality and allows more flexible shipping, reducing losses and therefore costs. Systems-based pest management is being incorporated into national and international commerce regulations. However, changing operational procedures to include a systems-based approach to pest management affects every aspect of production, exposing growers to considerable risk while they adjust practices. Growers/employees need training to successfully mitigate the risk associated with transitioning to a new production system that utilizes systems-based pest management. Project co-PIs and collaborators organized a workshop and conducted one-on-one visits with workshop participants following the workshop; created a checklist and a 48-page manual (both documents in English and in Spanish); and created five YouTube videos on pest management system critical control points. Participants learned to successfully implement a systems-based approach to field and container nursery pest management and reduced financial losses from adopting key steps in systems-based pest management.

Project Participants

Extension agents, associates and regional specialists, and commercial plant producers (nursery owners,

operators and their Hispanic workforce) were targeted along with female nursery owners and employees. Most of the attendees were from the middle Tennessee area surrounding McMinnville, Tennessee, where the majority of Tennessee nurseries are located. However, there were also workshop attendees from Virginia, Kentucky and South Carolina. The growers who attended represented both small farms 15 acres to nearly 1,000 acres and annual, perennial, shrub and tree production. Growers producing plants in containers and those engaged in field production attended the program as well as a greenhouse producer. The demand for this workshop was demonstrated by results from a fall 2012 survey: 76% of growers are aware that the major national and international phytosanitary and industry organizations are adopting a systems-based approach to pest management, affecting literally all plant commerce; 86% stated they need systems-based pest management training; and 100% said they would attend the proposed training.

Project Area

This project was developed with an emphasis on the Tennessee nursery industry. We also provided printed checklists and manuals to hundreds of Southeastern U.S. nursery growers at the International Plant Propagators' Society North America-Southern Region Meetings in 2013 and 2014 in Athens, Georgia, and Hickory, North Carolina, respectively.

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Project Outcomes

Participants rated their knowledge of systems-based pest management at 2.8 before the workshop and 4.1 (scale of 1-5) after the workshop. Participants attending the Systems-Based Pest Management Workshop stated they would sanitize used pots (51%), quarantine all incoming plants (54%) and keep records to trace plant history and culls (39%) as a result of attending the workshop. (According to pretests, no growers in attendance used these practices prior to the workshop.) Follow-up evaluations (fall 2014) confirmed that these practices were, in fact, adopted following the workshop. In addition, growers indicated that they are sanitizing pruning shears more frequently than before the workshop and are creating wider breaks between groups of plants to prevent the spread of pathogens as well as training employees to recognize the key pests and using diagnostic clinics more than before the workshop. Participants estimated saving \$124,875 because of these and other practice changes that reduce mortality/culls, refine pesticide applications and increase plant quality. An estimated 50% savings is realized annually (such as sanitizing used containers each season) for an ongoing savings of \$62,437 per year. There were 56 participants at the workshop. Growers received copies of “The Systems-Based Approach to Pest Management: A Quick Reference Guide” and also stated that information in the manual that was created as part of this project either saved or earned their business an average of \$3,900 per grower. Over 1,500 copies were printed.

Quotes

“Quality program; Excellent program! Informative; Good job, very informative and good speakers; Thank you! Great workshop; Great program – best on nursery I have attended in awhile; Good training! Thank you for the effort; Very informative; Excellent program; Was a great class; I am new to the business and is very helpful!”

“The workshop really opened my eyes to how easy it is to use some simple practices to reduce pathogens and disease. Amy and the team really simplified the processes needed for common tasks, such as used container sterilization, so that for the first time I left the workshop thinking of how we could actually begin to do this.”

James Hines, Hale and Hines Nursery, McMinnville, TN

“I learned quite a bit from the workshop. I think it was very beneficial.”

Larry Walker, Walker Nursery, McMinnville, TN

“The Systems-Based Pest Management Workshop was a great course offered by our TN nursery professionals. It thoroughly covered many areas of the nursery production cycle and literally provided dozens if not hundreds of simple, free ideas that can be employed on a daily basis around the nursery to break the pest cycle.”

Alex Neubauer, Hidden Hollow Nursery, Belvidere, TN

“We learned a great deal at the workshop and the easy way to sanitize containers with plastic and sunlight will save hundreds of dollars. The workshop provided several ideas to be tested, implemented and improved.”

Elliott Hallum, Mountain Creek Nursery, McMinnville, TN

“This was an excellent workshop! Best Nursery Workshop I’ve ever attended, bar none! It really opened my eyes to ways to prevent diseases. I’d never even thought about doing plants the same as we do animals to prevent diseases. Thanks for allowing me the opportunity to learn. You’d think after 30 years I would have known all of this information.”

John Goddard, UT Extension Agent, Loudon, TN

Project Success Story

Using the Tennessee Plant Diagnostic Clinic with help from project collaborator Adam Blalock showed us that an annually reoccurring dogwood problem (yellow foliage) was nutrient deficiency, not caused by a bug or disease, simply that our fertilizer had run out. This saved us hundreds of dollars on unwarranted chemical applications.

***Sandra Martini, H. L. Goodwin** and **Ronald L. Rainey**, Grant Coordinator and Co-Directors, respectively, of the Southern Risk Management Education Center, serve as editors of this report series. To learn more about risk management education programs and resources, visit the Southern Center website (<http://srmec.uark.edu>) or the Extension Risk Management Education Program link (www.extensionrme.org).

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