

# Horticulture Industry Integrated Pest Management Symposium

8th Annual Symposium for Professionals in the Horticulture and Landscape Industry  
at The North Carolina Arboretum, Asheville, N.C., in conjunction with North Carolina Cooperative Extension

Thursday, September 27, 2018  
9:00 a.m. to 4:00 p.m.

### Registration Fees

Early bird discount through September 7 \$80 Member/\$85 Non-member  
After September 7 \$90 Member/\$95 Non-member  
*Lunch and snacks are included in the registration fee.*

REGISTRATION LINK <https://4020a.blackbaudhosting.com/4020a/2018-Integrated-Pest-Management>

### Approved Pesticide CEUs:

N.C.: D(4), L(4), N(4), X(4) | T.N.: Categories 2,3,10,12 = 3points |  
G.A.: 5 hours in categories 21 and 23 with 2 hours in private category  
NC Landscape Contractors Association: 4.75  
SC Landscape Contractors Association: 2.5 to 3, session dependent

9:00 - 9:15 a.m.

Welcome and Announcements

### Plenary Session

**Auditorium**

9:15 -10:15 a.m.

Keynote Speaker **Rose Buitenhuis**, *Innovations in IPM: The Future is Now*

10:15 -10:30 a.m.

[Break and Opportunity to View Beneficial Insects](#)

### Breakout Sessions

*Participants may rotate between the sessions.*

10:30 -11:15 a.m.

#### **Breakout session I**

Auditorium

**Anthony LeBude** *Nursery Management Practices to Maintain Plant Health*

Classroom 2

**Steven Arthurs** *Staying on Top of Tospoviruses*

Locke Craig Classroom

**Alan Windham** *Landscape IPM for Diseases*

11:15 a.m. -12:15 p.m.

#### **Breakout session II**

Auditorium

**Mark Windham** *Unravelling the Rose Rosette Disease Puzzle*

Classroom 2

**Charlie McKenzie** *Beyond the Technical Sheet: Practical Application for Beneficial Insects*

Locke Craig Classroom

**Roger McGaughey** *Pioneer Gardens Biological Crop Growing Program*

12:15 - 1:15 p.m.

[Lunch](#)

1:15 - 2:15 p.m.

#### **Breakout session III**

Auditorium

**Steve Frank** *Can Urban Forests Take the Heat?*

Classroom 2

**Rose Buitenhuis** *Biological Controls in IPM Systems*

Locke Craig Classroom

**Steven Arthurs** *Biopesticides: What Are Your Options?*

2:15 - 2:30 p.m.

[Break and Opportunity to View Beneficial Insects](#)

### Final Session

**Auditorium**

2:30 - 3:30 p.m.

**Tim Flowers** *Scouting and IPM at Disney*

3:30 - 4:00 p.m.

Pesticide Credits Issued at Registration Table

**THANK YOU TO OUR COMMUNITY PARTNERS AND SYMPOSIUM SPONSORS!**

**Dr. Steve Arthurs** is a research scientist at Texas A&M University who conducts research and extension in pest management in ornamental plants. He is currently focused on the discovery of new invasive thrips and the diseases that they vector. His research background is in the use of biological control agents and bio pesticides in ornamental and vegetable crops. He received his master's and doctoral degrees from the University of London.

**Dr. Rose Buitenhuis** is a research scientist at the Vineland Research and Innovation Centre in Ontario, Canada. She is responsible for developing and implementing biological control technologies for the management of arthropod pests and supporting sustainable crop management practices for ornamental and production horticulture. Current projects in greenhouse ornamentals and vegetables address the entire spectrum of IPM, from plant resistance and environmental factors and biological control strategies to best practices for integrating pest management in the production system. Buitenhuis received her master's degree in biology at the University of Leiden in the Netherlands in 1997 and her doctorate in entomology at Laval University, Québec, in 2003. She worked as a post-doctoral fellow at Agriculture and Agri-Food Canada in Harrow (2004-2007) and at the University of Guelph (2007-2009) on biological and cultural control of western flower thrips in greenhouse flower crops.

**Tim Flowers** is the manager of horticultural pest management for all Disney properties, and he is the turf manager overseeing 30 sports fields for ESPN at Walt Disney World in Orlando, Florida. Flowers has a degree in landscape operations and has worked in the field almost 40 years. His Disney career highlights encompass 24 years of structural and horticultural pest management. He has embraced environmentally-friendly pest management programs at Disney with successful IPM practices. He is a certified operator in Florida in the categories of Lawn & Ornamental, General Household Pest Control, and Termite & Wood-Destroying Organisms. He is a senior instructor in green industry best management practices for the State of Florida.

**Dr. Steve Frank** conducts research to understand why pests become so abundant on urban trees and how to improve the resilience of urban forests. His research focuses on understanding how urban features like impervious surface cover and high temperatures affect tree stress and pest infestations. Information gained is used to develop tree planting recommendations and extension materials. Frank holds a doctorate in entomology from the University of Maryland.

**Dr. Anthony LeBude** earned his doctorate from North Carolina State University and is an associate professor of horticulture and is the nursery crop extension specialist, based at the NC State Mountain Horticultural Crops Research Station in Mills River. He provides support for North Carolina cooperative extension agents with commercial nursery crop responsibilities statewide. His current research focus is irrigation source water quality, flatheaded appletree borer management in field production, and biocontrol of hemlock woolly adelgid. He routinely visits growers and extension agents to help solve challenges with nursery production.

**Roger McGaughey** is a commercial grower with 46 years of practical experience, in ornamental plant production in England and the United States. He has been growing biologically since 2009 with a focus on perennials in the last six years. A senior head grower at Pioneer Gardens in Massachusetts, he is a frequent contributor to "Grower Talks" magazine on the topic of biocontrols. He holds a degree in horticultural science from Reading University in England.

**Charlie McKenzie** was the production manager for Tawaga Greenhouses in New Mexico, where he spearheaded a bio-control program early in his career. A graduate of the University of Georgia, he is now a crop protection and health advisor for Biobest USA. His experience with diverse crop production and integrated pest management make him an excellent resource for those who want to increase their knowledge on using beneficial insects and bio controls. McKenzie prides himself on helping growers solve problems and maintain success through reliable advice and quality relationships.

**Dr. Alan Windham** is a professor in the Department of Entomology and Plant Pathology at the University of Tennessee. His expertise is in the diagnosis and management of plant diseases of ornamental plants. He is located at the Soil, Plant and Pest Center at Ellington Agricultural Center in Nashville. Windham works closely with the green industry in Tennessee and the Southeast. He uses social media to alert professionals and the gardening public of current plant disease outbreaks. Windham holds a bachelor's in plant pathology and weed science and a master's in plant pathology and botany from Mississippi State University. He earned the doctorate in plant pathology with a minor in soil science from North Carolina State University.

**Dr. Mark Windham** is a professor in the entomology and plant pathology department at the University of Tennessee. Windham has been working with rose diseases for more than 25 years and has been involved with two research projects with rose rosette for the last eight years. Windham's main focus had been developing rose rosette disease best management practices for propagators, nursery professionals, landscapers, and homeowners. He holds the doctorate from North Carolina State University.

# Program Descriptions

## Keynote

**Dr. Rose Buitenhuis**, *Innovations in IPM: The Future is Now*

What do new crops, automation, bugs and microbes have in common? They all contribute to the future of IPM. This presentation will cover what is new and exciting in IPM and how you can make it work.

## Breakout Session I

**Dr. Anthony LeBude**, *Nursery Management Practices to Maintain Plant Health*

This discussion covers common nursery production practices that lead to active pest prevention. Learn a few techniques to gauge nutrient availability, irrigation volume efficiency and air space in your substrates and use these to identify and diagnose underlying aspects to pest and plant disease infestation more effectively.

**Dr. Steven Arthurs**, *Staying on Top of Tospoviruses*

Unlike most fungal and bacterial diseases, tospoviruses can occur year round in the greenhouse. Vected by various species of thrips, the symptoms can vary as well. This session will explore the various species of thrips and the different tospoviruses they carry.

**Dr. Alan Windham**, *Landscape IPM for Diseases*

Herbaceous and woody ornamentals are a valuable investment in residential and commercial landscapes. IPM programs for plant diseases include diagnosis and a multi-faceted approach that involves cultural, biological and chemical controls. Learn to minimize damage from plant diseases while maintaining the aesthetics of an attractive landscape.

## Breakout Session II

**Dr. Mark Windham**, *Unravelling the Rose Rosette Disease Puzzle*

This presentation shares the latest in the speaker's research on Rose Rosette Disease, looking at how the disease is caused, how it spreads and how it can be managed successfully.

**Charlie McKenzie**, *Beyond the Technical Sheet: Practical Application for Beneficial Insects*

This program offers insight on practical application of biocontrol in actual growing situations. Learn tricks and get tips on how to use biocontrol to be most beneficial in your growing situation.

**Roger McGaughey**, *Pioneer Gardens Biological Crop Growing Program*

This talk illustrates how Pioneer Gardens incorporates BCA's as a first line of defense against unwanted pests and diseases in the operation's perennial cutting production program. Some soft BCA compatible chemicals may, at times, be needed to complement the biologicals and their integrated use will also be discussed.

## Breakout Session III

**Dr. Steve Frank**, *Can Urban Forests Take the Heat?*

This program's focus is on how the urban heat island effect and impervious surface cover affects tree stress and pest infestations. New tools for planners and planters to use when selecting the right tree for the right place in their landscape will also be shared.

**Dr. Rose Buitenhuis**, *Biological Controls in IPM Systems*

Effective, reliable and economical pest management using biological control: It seems like a dream. However, driven by pesticide resistance and the demand for sustainable production, many growers have already made the switch successfully. The systems approach addresses the underlying weaknesses of the production system that make it favorable to pests. This presentation will show the major components of greenhouse IPM and how it fits into greenhouse production practices.

**Dr. Steven Arthurs**, *Biopesticides: What Are Your Options?*

This session will focus on different categories of biopesticides, what pests they are labelled for, how they work, and various advantages and disadvantages when compared with more traditional pesticides. This session will be of interest for both greenhouse and nursery production.

## Closing Session

**Tim Flowers**, *Scouting and IPM at Disney*

A diverse landscape requires a diverse approach to pest control. This session covers the tools and techniques of scouting in an IPM program at Walt Disney World.