INTERSTATE

Pest Management Conference

January 30 & 31, 2019 | Linthicum Heights, MD | Maritime Conference Center

Session Descriptions
Conference I & II

MARYLAND STATE PEST CONTROL ASSOCIATION

Maryland State Pest Control Association
105 Eastern Ave. Suite 104, Annapolis, MD 21401
Phone: 410-940-6581 Email: info@marylandpest.org
Website: www.marylandpest.org

Agenda

7:30 AM - 8:00 AM	**Registration and Coffee**
8:00 AM - 8:30 AM	**Welcome to the 2019 Interstate Pest Management Conference and Introduction of Exhibitors** Julio Gonzolez Maryland Pest Control Association
8:30 AM - 10:00 AM	**How the "Missed"-application of IPM in the Urban Environment Has Impacted German Cockroach Infestations-A Case for Assessment -Based Pest Management (APM)** Presented by Dini M. Miller, Ph.D, Department of Entomology, Virginia Tech.
10:00 AM - 10:30 AM	**Refreshments**
10:30 AM - 11:00 AM	**Sensing-Rodent Technologies A look into the future of Rodent Control** Presented by Brian Hensel, Bell Labs
11:00 AM - 12:00 PM	**Regulatory Updates** Presenters: Russell Noratel - Maryland Department of Agriculture Alvin Harris - District of Columbia Ryan Rutherford - Virginia Department of Agriculture
12:00 PM - 1:00 PM	**MITAGS Luncheon Buffet**
1:00 PM - 2:45 PM	**Afternoon Concurrent Sessions**
1:00 PM – 1:50 PM	Concurrent Session I
1:55 PM – 2:45 PM	Concurrent Session II
2:45 PM - 3:10 PM	**Coffee Break**
3:10 PM - 5:00 PM	**Afternoon Concurrent Sessions (continued)**
3:10 PM – 4:00 PM	Concurrent Session III
4:05 PM – 4:55 PM	Concurrent Session IV
4:55 PM -	**Sign Out**

Morning General Sessions

How The "Missed"- Application of IPM In the Urban Environment Has Impacted German Cockroach Infestations - A Case for Assessment - Based Pest Management (APM)

8:30 AM - 10:00 AM | Presented by Dini M. Miller, Ph.D., Virginia Tech.

Outline

Introduction: In the 1950s there was discussion regarding the overdependence on pesticides after WWII. This dependence led to pest resistance, reductions in natural enemies and environmental contamination.

- 1960s Rachel Carson publishes ***Silent Spring*** and the public is alerted to the problems with pesticides
- 1970s producers began organized application of IPM as an economically, and environmentally sound practice of pest resistance management.

IPM: Origin in Agriculture

- **"IPM pesticides are used in combination with other crop management approaches to minimize the effects of pests while supporting profitable systems that have negligible negative effects"**

Wikipedia Definition

- **Integrated pest management (IPM),** also known as integrated pest control (IPC) is a broad-based approach that integrates practices for economic control of pests.
- Integration of measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified…and minimize risks to human health and the environment.

Applied IPM: A series of steps

1. Scouting the crop to identify any pests **assess** the pest pressure
2. Based on experience or pest information the Economic Injury Level (EIL) is determined
3. If scouting (assessment) determines that the Economic Threshold Level (ETL) is reached, a decision is made on what remediation measures make economic sense to apply
4. May scout again after treatment to determine efficacy

It Costs to Apply Pesticide, so pest pressure must be assessed!

- Producers Know Their Business
- The agricultural producer knows the crop value ($$$) and the threat due to pest pressure
- Personal knowledge of pests and pesticide application costs
- Interest in preserving the integrity of his environment (sanitation and natural enemies)
- Will take personal responsibility in assessing the pest issues, and efficacy of treatment methods ($$$).

1980s: "IPM" gets cut and pasted onto the Urban Environment

Consider these questions…

- There is no EIL or ETL so what is a "manageable" in the urban environment?
- Do we even know what the pest level is?
- Does an apartment manager or procurement officer have any idea what the application of the IPM process looks like?
- Does the farmer ask the soybeans or the corn to help him/her in the pest management process?

Urban IPM

- Some lay people may be interested in IPM, but most have no knowledge of pest control.
- Humans are unwilling tolerate even one bed bug, but still want the least expensive treatment.
- Feelings about pesticide use in the home are extremely variable.
- Urban "IPM" has morphed into a belief that it a low toxicity or non-toxic (to humans) pest control procedure that is carried out by the PCO.
- Do apartment managers care about IPM?
  "Not my money…not my home…. the residents' fault…."

The Term "Integrated Pest Management (IPM)" is written into HUD Contracts but

- No assessment of building infestation levels
- (for years)
- Managers do not know what IPM is
- Long-term pest issues easily blamed on the resident (instead of resistance to spray formulation insecticides)
- Managers have NO IDEA their units are so infested – they never look
- No one asks for records to indicating fewer cockroaches after treatment than before

What is Assessment-Based Pest Management (APM)

- Pre-trapping apartments
- Placed three sticky traps in each unit for 24 hours
  - Above the sink
  - Below the sink
  - Behind the toilet
  - Returned the next day to pick up the traps and count the cockroaches

- How Many Cockroaches?
- Baiting Protocol
  - All units received 30 g of bait on Day 1
  - On Day 14 units trap catch was evaluated for each unit and bait was applied according to infestation level
    - Trap catch >500 received 60 g
    - Trap catch >100 received 30 g
    - Trap catch 50-100 received 15 g
    - Trap catch < 50 received 7.5 g

        - Trap catch <10 receive 0 g
        - How do we get all of this bait (30g) out?

- Applying 30 g of Bait Quickly
    - This is wax paper!
    - Cut into Squares
    - Marked our bait tubes…
    - The Bait Burrito
    - Cockroaches really liked these baits in wax paper!
    - Resident clean-up was not necessary!

These Populations Can Be Controlled…

Presented this method at many pest management, scientific, and housing meetings all over the world.

US HUD took notice and asked me to write pest model pest management contract language for their facilities

Proposal to Work at 3 Sites

Considerable cockroach issues

Three contracts

Three prices

Three treatment protocols

- Overnight-Trapping Assessment (60 units each site)
- Inspection revealed large numbers of German cockroaches (under contract why so many?)
- Conditions of Sanitation
    - Bed Rooms
    - Sanitation in the Kitchen
- Resident Doing Their Own Pest Control

Gel Bait Quantity Based on Assessment:

- Advion Evolution (NC)
- Vendetta Nitro (VA)
- Maxforce Magnum (VA)

Trap Catch Assessment: Determines how much bait each unit received on Day 1

- 0-24 controls
- 25 - 74: applied 7.5 g
- 75 - 249: applied 15 g
- 250 +: applied 30 g

On Day 14 units trap catch recorded for each unit and bait was applied according to infestation level

- Trap catch >500 received 60 g
- Trap catch >100 received 30 g
- Trap catch 50-100 received 15 g
- Trap catch 1-50 received 7.5 g

Results

- ***>90% average reduction in trap catch in all apartments units treated using APM***

If we eliminate cockroaches using APM, why don't we do it this way?

- Apartment managers and procurement officers do not understand IPM at all!!!!!
- Request for Bids
- Year-long Cockroach Study!
- Monitoring and baiting every 30 days in tests units
- Considering vacuuming as part of treatment to remove dead bodies
- Comparing cockroaches numbers during summer months next year
- Determine annual costs
- Survey to determine resident satisfaction

We must use APM!

- PMPs must assess so they know what is in the units even if management doesn't!
- Managers do not "get" IPM. They expect **spray** to be part, or all of the program. This must change!
- Marriage to **spray** formulations has led to cockroach resistance
- No pest control expertise in contract – they need help!
- No wasting time guessing how much to apply. Use the numbers!
- Assessment needs to be the basis of urban IPM. Force the data on the managers so they cannot claim ignorance.

Failure to control cockroaches is no longer to be blamed on residents!!

APM will tell everyone that control methods are based on "pest assessment". Assessment is THE key! (Pass on the numbers to the managers!)

About Dr. Miller

Dini M. Miller is a Professor at the Virginia Tech University, and the Urban Pest Management Specialist for the state of Virginia. Dr. Miller is an internationally recognized expert in the area of urban pest management, particularly bed bug biology, behavior and control. She has produced a number of bed bug action plans for the management of infestations in different environments and published one of the first scientific papers evaluating modern bed bug response to insecticide treatments in the field. Dr. Miller's extension program is designed to train pest management professionals, public health officials, apartment and hotel managers, and homeowners to control indoor pests while reducing their pesticide exposure risk. Likewise, her research program focuses on the evaluation and enhancement of reduced toxicity methods for structural pest control.

Dini Miller received her undergraduate degree from UCLA in 1991 where she majored in Geography/Ecosystems. She completed her Masters (1994) and Ph.D. degrees at the University of Florida (1998) where she studied Urban Entomology, specifically German cockroach biology and aggregation behavior. Dr. Miller has won numerous awards for her work in urban entomology including the pest control industry's Crown Leadership Award, the Entomological Society of America's (Eastern Branch) Distinguished Achievement Award in Extension, and the Gamma Sigma Delta Award of Merit in Extension, the 2012 Virginia Tech University Alumni Award for Excellence in Extension and most recently the Virginia Pest Management Industry Stewardship Award in 2014. In 2017, she was named by PMP magazine as an Industry Champion in the special issue on women in pest management. Also, in 2017, Dr. Miller was named the first HUD Housing Hero for her work on German cockroach management in multi-Unit housing facilities. Dr. Miller is also one of the Chief Editors of *Advances in the Biology and Management of Modern Bed Bugs*, the first bed bug text book in 50 years.

Dr. Miller and her graduate students have been spending numerous hours in the field and the laboratory evaluating the efficacy of our current bed bug, cockroach and subterranean termite control tools. Dr. Miller regularly provides the pest management industry, apartment managers, schools, shelters, and hotel personnel with information and training on how to manage pest infestations (particularly bed bugs) throughout the next decade.

Sensing-Rodent Technologies A Look into The Future of Rodent Control

10:30 AM - 11:00 AM | Presented by Brian Hensel, Bell Labs

Outline:

This presentation will cover a look into the future of Rodent control using Sensing Devices

About Brian Hensel

Brian has presented educational and practical rodent control programs implementing the latest IPM practices in the Eastern U.S. Instructed PMP's on proper methods of integrating rodent control tools into a successful and comprehensive Rodent Control Program.

Brian has provided Technical expertise in assisting PMP's to develop Rodent Control Programs in several situations, including urban and rural areas where IPM Practices assure the best solution in sensitive areas. Has performed comprehensive inspections of all types including food facility, farm operations, hospitals, educational facilities.

Regulatory Updates

11:00 AM - 12:00 PM

Presenters:

- Russell Noratel, Maryland Department of Agriculture
  Russell Noratel is with the Pesticide Regulation Section, Maryland Department of Agriculture.

- Alvin Harris, District of Columbia
  Alvin Harris is an entomologist with the Hazardous Materials/Pesticides Branch, District of Columbia Department of Energy & Environment.
- Ryan Rutherford, Virginia Department of Agriculture
  Ryan Rutherford is an investigator with the Office of Pesticide Services, Virginia Department of Agriculture and Consumer Services

IPMC CONCURRENT SESSIONS 2019

Sessions are 50 minutes each with 5-minute breaks	Concurrent Session I	Concurrent Session II		Concurrent Session III	Concurrent Session IV
	1:00 – 1:50	1:55 – 2:45	2:45 – 3:10	3:10 – 4:00	4:05 – 4:55
Basics of Ant Biology & Best Management Practice Heather King - Target Specialty Products	A300		COFFEE ON THE CONCOURSE	A300	
Termites, Biology and Conducive Conditions David Nardolilli - BASF		A300			A300
Bed Bug Monitoring: Why we want it? What will it Cost Dini Miller, Ph.D. - Virginia Tech.	Auditorium			Auditorium	
Safe Practices in the Workplace Jeff McGovern - Pest Coach		Auditorium			Auditorium
A Comprehensive RPM Approach to Rodent Control Brian Hensel - Bell Labs	Classroom 2			Classroom 2	
Flies/Insect Light Traps Dr. Stuart Mitchell - Pest West		Classroom 2			Classroom 2
Stored Product Pest Roseanne Radavich, MS, BCE - Army Public Health Center	111-113			111-113	
Mosquito Vectors of Zika Virus: Identification, Biology and Management Strategies Dr Nancy Troyano – Rentokil - Conference I: January 30		111-113			111-113
Barrier Application Strategy for Mosquito Control Jeffrey O'Neill - Zoecon Professional Products – Conference II: January 31		111-113			111-113
Right of Way-Modern Herbicide Use Todd Hagenbuch - Arborchem Products	A302			A302	
Moisture Control as Part of a Pest Control Solution Marc Marchillo - Aprilaire		A302			A302
Wildlife Charlie Hicks - Yard Guard	Bridge Room			Bridge Room	
Commodity Fumigation Options Marty Morgan - Douglas Products		Bridge Room			
Fumigation Planning Robert Verrico - Western Fumigation					Bridge Room

Afternoon Concurrent Sessions I & III

Basics of Ant Biology & Best Management Practices

1:00 PM – 1:50 PM & 3:10 PM - 4:00 PM | Presented by Heather King, Target Specialty Products

Outline:

i. Introduction
ii. Ant Biology & Behavior (Focus on Hymenopteran Order)
    i. Life Cycle
    ii. Behavior/Feeding and Harborage Habits

i. Common Species

i. Best Management Practices
    i. Inspection
    ii. Customer Education/Communication
    iii. Treatment Options
    iv. Follow-up
ii. Conclusion and Questions

About Heather King

Heather recently joined Target Specialty Products as the Technical Training and Support Specialist for the East Coast. She has worked in the Pest Management Industry for 11+ years mainly in the training capacity. She is a Board-Certified Entomologist and holds Certifications in Pest Control, Wood Destroying Organisms, Mosquito, and Turf and Ornamental. She graduated from Clemson University with a degree in Crop and Soil Environmental Sciences and is an avid Clemson football fan. She currently lives in Watkinsville GA with her two children, Grace (13) and Aiden (7).

Bed Bug Monitoring: Why do we want it? What will it cost?

1:00 PM - 1:50 PM & 3:10 PM - 4:00 PM | Presented by Dr. Dini Miller, Ph.D., Virginia Tech

Outline:

The multiple class-action lawsuits we have seen in our nation over the last several years have made it clear that multi-unit housing facilities need to have an identifiable pro-active bed bug prevention program in place. Several studies have determined that finding bed bug infestations early, so they can be treated prior to the population spreading, greatly increases our chances of eliminating that population. Regular monitoring (early detection) is one of the very few effective pro-active methods we have available for bed bugs. So why aren't all apartment managers putting a bed bug monitoring programs into place?

This presentation will discuss the necessity of bed bug monitoring. In addition, we will discuss the future of bed bug monitoring -a new electronic monitoring device that sends photos of the trapped insect directly to your cell phone! We will compare the advantages, challenges and costs, of

implementing both the passive and electronic bed bug monitors programs and discuss which would be the most advantageous in specific situations.

About Dr. Miller

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Delta Award of Merit in Extension, the 2012 Virginia Tech University Alumni Award for Excellence in Extension and most recently the Virginia Pest Management Industry Stewardship Award in 2014. In 2017, she was named by PMP magazine as an Industry Champion in the special issue on women in pest management. Also, in 2017, Dr. Miller was named the first HUD Housing Hero for her work on German cockroach management in multi-Unit housing facilities. Dr. Miller is also one of the Chief Editors of Advances in the Biology and Management of Modern Bed Bugs, the first-bed bug textbook in 50 years.

Dr. Miller and her graduate students have been spending numerous hours in the field and the laboratory evaluating the efficacy of our current bed bug, cockroach and subterranean termite control tools. Dr. Miller regularly provides the pest management industry, apartment managers, schools, shelters, and hotel personnel with information and training on how to manage pest infestations (particularly bed bugs) throughout the next decade.

A Comprehensive RPM Approach to Rodent Control

1:00 PM - 1:50 PM & 3:10 PM - 4:00 PM | Presented by Brian Hensel, Bell Labs

Outline:

1. The Need for Rodent Pest Management
    a. Public health threat
    b. Economic losses
    c. Safety measures for the PMP

2. Identification of Three Commensal Rodents
    a. Biology and behavior
    b. Senses and capabilities

3. Rodent Inspection
    a. Detection of rodent signs
    b. Determining where baits should be used

4. Harborage Reduction and Rodent Proofing
    a. Sanitation
    b. Exclusion

5. Baiting and Trapping
    a. Knockdown of Population
        1. Acute vs. Chronic (Single-feed anticoagulants)
        2. Bait Forms (advantages and disadvantages)
            a. Seed
            b. Meal
            c. Extruded Blox
            d. Pellet
            e. Liquid
            f. Tracking Powders
    b. Monitoring and Maintenance Baiting
        1. Multiple-feed anticoagulants
        2. Non-toxic baits

6. Bait Stations and Their Uses
    a. Tamper-resistant
    b. Other

7. Mechanical Devices and Uses
    a. Glue boards
    b. Snap traps
    c. Repeating traps

8. Summary
    a. Questions and Answers
    b. Discussion

About Brian Hensel

Brian has presented educational and practical rodent control programs implementing the latest IPM practices in the Eastern U.S. Instructed PMP's on proper methods of integrating rodent control tools into a successful and comprehensive Rodent Control Program.

Brian has provided Technical expertise in assisting PMP's to develop Rodent Control Programs in several situations, including urban and rural areas where IPM Practices assure the best solution in sensitive areas. Has performed comprehensive inspections of all types including food facility, farm operations, hospitals, educational facilities.

Stored Product Pest

1:00 PM - 1:50 PM & 3:10 PM - 4:00 PM | Presented by Rosanne (Anne) Radavich, MS, BCE

Outline

Roseanne will use photographs, damaged food, and live colonies to introduce attendees to the most common food infesting insects; discuss conditions that promote infestations; explain the health impacts caused by specific insects; and give tips on how to use the unique biology and behavior to recognize infestations early or track insects back to infested products.

About Rosanne (Anne) Radavich, MS, BCE

Rosanne Radavich earned a Bachelor of Science degree from Purdue University in 2002 with concentration in field crop entomology in corn and soybeans. She went on to complete a Master of Science degree at Purdue University in 2006, where she addressed a critical shortage of science education for visually impaired students and designed and taught entomology curricula for the Indiana School for the Blind.

Upon graduation, she joined the US Army as a medical entomologist and served on active duty for seven years and in the US Army Reserve for three additional years. While on active duty, her assignments included second-in-command of a preventive medicine detachment (including a year-long deployment to Iraq); medical entomologist and Chief of the Health Risk Management Division; and Research Liaison Officer and Deputy Chief of Research for the Armed Forces Pest Management Board. Upon transitioning to the US Army Reserve, she served a General's aide-de-camp at the 807th Medical Command, Salt Lake City, UT, and as a Chemical, Biological, Radiological, and Nuclear (CBRN) Medical Support Officer and sole entomologist for the Consequence Management Unit in Abingdon, MD.

Rosanne Radavich currently works as a medical entomologist for the Army Public Health Center, where she routinely provides entomology consultation and training for Soldiers across the Army. She currently maintains 20 common stored-product pests in colony and teaches a stored-product pest management workshop for military food inspectors and entomologists.

Right of Way- Modern Herbicides used in Right of Way

1:00 PM - 1:50 PM & 3:10 PM - 4:00 PM | Presented by Todd Hagenbuch

Outline:

Todd will cover the modern herbicides used for right-of-way, forestry, and invasive plant management. He will discuss pre-emergent, post-emergent, and pre/post emergent chemistry. Soil active chemistry will be highlighted and where and when to use this type chemistry. Also covered will be what happens when certain herbicides are put in the wrong place and how to avoid these off-target situations.

About Todd Hagenbuch

Todd Hagenbuch Is a Vegetation Management Specialist/Sales Manager for Arborchem Products. Todd works with Contractors, DOT's, Utilities, and Foresty applicators all over the Mid-Atlantic and Mid-West. Providing technical advice and consulting on weed and brush management. Todd has over 22 years of Vegetation Management experience

Professional Affiliations:

- Past President of Mountain Lake Vegetation Management Association
- Past President of Pinchot Chapter of Society of American Foresters

Wildlife

1:00 PM - 1:50 PM & 3:10 PM - 4:00 PM | Presented by Charlie Hicks, President BGA Industries

Outline:

Explore controlling wild animals in specific areas with natural ingredients by:

I. examining each pest animal's behavior characteristics, habits and food sources,
II. locating and identifying each pest animal's habitat,
III. reviewing natural ingredients which are safe for people, pets and the environment,
IV. understanding how operant conditioning and how it results in the animal's own senses deterring it from their habitat and foraging areas,
V. considering the different types of natural ingredient repellents and delivery methods for specific animals and how they work,
VI. demonstrating how natural ingredient products can deter the wild animals from the specified area for longer time periods.

About Charlie Hicks

- Manufacturer of "Yard Gard" Products
- Past: VP of Product Development R & D Coulter Corporation
- National Sales and Marketing Manager
- Product Development R & D
- Studied at Georgia State University
- Business Administration

Afternoon Concurrent Sessions II & IV

Termites, Biology and Conducive Conditions

1:55 PM – 2:45 PM & 4:05 PM - 4:55 PM | Presented by David Nardolilli, BCE

Outline:

I. Overview
II. Identification
III. Biology
IV. Inspection
V. Treatment Strategies
VI. Formulations of Materials for Control
VII. Product Update
VIII. Questions

About David Nardolilli, BCE

BS Biology, Chemistry, Ramapo University of NJ. Board Certified Urban and Industrial Entomologist
34 years of experience in the Professional Pest Industry working in sales, sales management, operations management, technical management for:

- ChemTec Pest Control, NJ
- Horizon Termite and Pest Control, NJ
- Ecolab Pest Elimination, NY, NJ, CT

Safety in the Workplace

1:55 PM - 1:50 PM & 4:05 PM - 4:55 PM | Presented by Jeff McGovern

Outline:

Why bother?

1. Is it just common sense?
2. It's required by regulation and you are not Wolverine.
3. It extends your work life.

Our five senses.

1. See
2. Hear
3. Feel
4. Touch
5. Smell

Our built-in tools. Protecting them and our control center

1. Eyes
2. Ears
3. Nose
4. Mouth
5. Legs
6. Arms
7. Hands
8. Feet
9. Skin
10. Brain

About Jeff McGovern

Jeff McGovern is nationally recognized in the pest control industry. In 1973, Jeff began working in the pest control industry and held various positions within several companies that allowed him travel throughout the US and SE Asia. Jeff developed a unique perspective with extraordinary examples of pest control options and a mission. Through his mission to improve conventional methods of IPM programs, he created an effective and comprehensive program that not only addresses the pests, but also the conditions of the site that lead to the problem. His "12 Key Factors" program is currently in use by professional pest control operators and clients around the world. Jeff's mission continues

to drive change in the pest control industry. Jeff, sometimes referred to as the “Pest Coach” for his abundant knowledge of pests, is known for his practical, down to earth style; Jeff’s engaging, and humorous personality enable him to connect with his audience immediately and deliver content that they can utilize immediately in their daily working environment. He also understands the demands and expectations of government agencies and works to create a program that not only meets the needs and protects the brand of the client but assures the health, safety and property of the public as well.

As a leading consultant and pest control expert, Jeff is a speaker at the annual Purdue University Pest Management and Interstate Pest Management (Baltimore, MD) conferences. His active relationships with professionals at the USDA and numerous others in the field keep his recommendations current and dynamic. He teaches recertification classes for pest control firms and state associations across the country. His articles regularly appear in Pest Management Professional (PMP) and Pest Control Technology (PCT) magazines and he was published in The Journal of Economic Entomology in 2000. He appears in several training videos and has been the voice over talent as well.

Flies/Insect Light Traps

1:55 PM - 2:45 PM & 4:05 PM - 4:55 PM | Presented by Dr. Stuart Mitchell

Outline:

The Physics Behind ILT's 5.0

Insect light traps (ILTs) and electronic fly killers (EFKs) are much more than just traps on the walls. In this talk attendees will learn about sophisticated UVA systems and how they function based upon applied physics and scientific research.

- IPM brief
- House fly
- House fly visual perception
- UVA
- The electroretinogram (ERG)
- The fluorescent lamp
- The Inverse Square Law (ISL)
- ILT geophysics
- UVA from LEDs
- Glue board Pull-Off Adhesion Test
- ILT Deployment
- Questions?

About Dr. Stuart Mitchell

With 35 years of experience, Stuart serves the pest management, public health, and environmental health industries. Consultant, expert-witness, author, and lecturer. As an observing physician, consulting clinical psychologist, veterinarian, and entomologist, Stuart holds and maintains the following academic degrees and board certifications.

- Doctor of Osteopathic Medicine
- Doctor of Clinical Psychology

- Doctor of Veterinary Medicine
- Doctor of Naturopathic Medicine
- PhD Entomology
- PhD Biology
- PhD Zoology
- PhD Complementary & Alternative Healthcare
- Master of Public Health (MPH)
- Bachelor of Science Forensic Psychology
- Bachelor of Science Physics
- Board Certified Family Physician
- Board Certified Stress Management Consultant
- Certified Traditional Naturopath
- Board Certified Veterinary Emergency & Critical Care
- Board Certified Entomologist (Medical/Veterinary & Urban/Industrial)
- Chartered Institute of Environmental Health Accredited Associate
- Certified Wildlife Control Professional
- National Safety Council Instructor (Emergency Medical Response, Professional Rescuer, First Aid, CPR & AED)

Mosquito Vectors of Zika Virus: Identification, Biology and Management Strategies

Conference I: January 30, 2019
1:55 PM - 2:45 PM & 4:05 PM - 4:55 PM | Presented by Dr. Nancy Troyano, Ph.D. BCE

Outline

With the possibility of Zika virus outbreaks now an ever-present threat in the continental United States, it is especially important for pest management professionals to be properly educated on the mosquito vectors. This presentation will cover the following topics:

- Zika virus transmission by mosquitoes
- Physical and behavioral characteristics of mosquito vectors
- Mosquito biology
- Vector management strategies

About Dr. Nancy Troyano, PhD BCE

After receiving her PhD in Entomology from Virginia Tech in 2009, Nancy began working for Rentokil North America as Pest Specialist in Hatfield PA. In May 2010, Nancy assumed the role of Training Manager / Entomologist, and has since been promoted to the Director of Technical Education and Training for Rentokil North America. Nancy is a Board-Certified Entomologist, skilled in medical, veterinary and urban entomology.

As the Director of Technical Education and Training, Nancy's current responsibilities include leading and supporting education and training for 4500+ technicians in Rentokil North America.

This includes the development of comprehensive academic programs for new hire training, continuing education programs for the maintenance of state pesticide applicator licensing, and pest management courses that are utilized globally by Rentokil. Nancy also provides ongoing technical support to field operations and acts as a subject matter expert for vector management programs.

Barrier Application Strategy for Mosquito Control

Conference II: January 30, 2019
1:55 PM - 2:45 PM & 4:05 PM - 4:55 PM | Presented by Jeffrey O'Neill

Concept: Treat mosquito resting sites around high human / animal use areas with residual pesticides.

Purpose: Mosquito females rest in vegetation before and after taking blood meals. Treatment of resting sites with toxic residual chemical pesticides will kill mosquitoes over the life expectancy of the product offering area wide protection from mosquito feeding behavior as mosquitoes die from contacting the treated surfaces reducing their population and activity around treated areas.
Abstract: The discussion will cover the types of pesticide formulations labeled for exterior barrier treatment with various product names and the dosages that are legal to apply. Proper application equipment used for barrier treatments will be illustrated, and examples of potential mosquito resting sites as target areas will be covered. Residual product life and environmental impacts to treatment affect the efficacy of mosquito barrier applications. Labeling considerations such as distance set-backs for proximity to aquatic habitats, impact on honey-bees and addition of spreader/stickers will be discussed.
Key Topics:

- Biology: Mosquito bio, target stages (adult, larvae)
- Pesticides: Pyrethroids, Organic, and Non-Restricted Use Products
- Dosages: Rates per gallon / per acre
- Equipment: Truck mounted or back pack applicators and compressed air low volume sprayers
- Target areas: Vegetation or man-made, high use areas, grass vs trees and shrubs, under decks
- Labeling: Set-Backs to water, phyto (plant) toxicity considerations
- Honey Bees: Lethal or non-lethal products (Low Risk to pollinators) best times to apply products
- Spreader / Stickers: Types of additives and reasons for using them. Extended residual, water resistance
- Calculating Cost: Per unit area, per chemical, per labor time. Profit for service

Moisture Control as Part of a Pest Control Solution

1:55 PM - 2:45 PM & 4:05 PM - 4:55 PM | Presented by Marc Marchillo, Aprilaire

Outline:

The course will cover how dehumidification effects wood destroying fungi and insects in the sealed crawlspace environment. It also covers the International Residential Codes that have been revised for sealed space applications.

About Marc Marchillo:

Marc Marchillo is one our industries leading and most dynamic Sales Trainers. Marc has done numerous HVAC-IAQ Accessory radio and television programs as well as sales and motivational sales training seminars in many different industries including companies such as Bose, Yamaha, Sub Zero, and Century 21 to name a few. He has published articles in "theNEWS" "Contracting

Business” and “HVACR/HYDRONICS Distribution Business” magazines. Marc is also the host of the brand New for 2o19 “Contractor ProTalk” Video blog site soon to be released on YouTube as well as other video and social platforms.

Marc is a permanent volunteer speaker for the United Way of America and has presented at numerous ACCA, ASHRAE, and AHACI and COMFORTECH events. He has addressed contractors in 47 states and 6 Canadian Provinces. Marc has spoken at numerous Johnstone Supply, RE Michel, Gensco, Standard Supply, Auer Steel, Carrier, Carrier Mid Atlantic, Trane Distributing, Lennox Distribution, Corken Steel, Winn Air, Fergusson, Gemaire, Williams Distributing, Behler /Young, Famous Supply, Munch Supply and WATSCO and more dealer meetings across the entire United States and Canada and has over 35 years of experience in teaching real world, easy to use techniques to salespeople and service technicians alike.

Fumigation Planning

4:05 PM - 4:55 PM | Presented by Robert Verrico, Western Fumigation | Bridge Room

Outline

Methyl Bromide
- Montreal Protocol Status
- Re-registration Status

ProFume and Vikane
- History
- Role as a MB Replacement for Post-Harvest Uses

Phosphine
- History
- Description of Uses
- Solid vs. Gaseous Forms

About Robert Verrico

Bob has worked for Western Pest Services / Fumigation from 1987 to present. He has been a Service Supervisor for pest control and fumigation divisions for 30 years.

He handles Western Fumigation’s compliance with USDOT (CDL Compliance, Security Plans and Alcohol and Controlled Substance Policies), USOSHA (Ladder, Lift Truck and Respirator Policies) and State Certified Applicator regulations (Initial and Recertification).

He is responsible for technician training in the areas of IPM, applicator safety, worker safety, pesticide documentation and regulations and laws regarding all types of pesticides, including fumigants.

Bob is currently licensed in CT, DE, MD, MA, NJ, NY, PA, RI, VA and VT. He is also a New York Certified Course Instructor for fumigation.

Commodity Fumigation Options

1:55 PM - 2:45 PM | Presented by Marty Morgan, Douglas Products

Outline:

- Label Update
- 2017 Stewardship Policy
- The “Big Four” - Key safety elements
- Quality Assurance Reviews (QARs)
- Emergency Response Information
- Cylinder Handling
- Hazard Communication Training
- Fumigation Review Topics
    - Dealing with Mattresses
    - Using Chloropicrin
    - Bagging
    - Tape and Seal Best Practices
    - Choosing the Right Introduction Equipment
    - Bed Bug Containerized Fumigations

Label Update

- Douglas Products’ label, applicator’s manual and SDS and required changes due to new EPA registration number
- Requirements during transition period
- Accessing product labels and SDS documents

2017 Stewardship Policy Review

- Highlight fumigator and distributor responsibilities
- Initial and Annual training requirements
- Clearance equipment calibration policies
- Requirements for new employees

The Big Four -Key safety elements – Reminders of requirement to follow label requirements for secondary locks and barriers, chloropicrin use, SCBA use, and use of clearance devices.

Quality Assurance Reviews **–** Review of requirement and purpose of quality assurance evaluations including examples of items reviewed.

Emergency Response Information – Review of emergency response procedures and contacts, resources for first responders and shipping paper requirements.

About Marty Morgan

Marty Morgan is employed by Douglas Products as a Business Development Manager for fumigation products. He has 27 years of prior experience as Field Sales Specialist for DowAgroSciences in fumigation, pest control, agriculture, turf and ornamental.

Marty is a graduate of The Ohio State University with a B.S in Agriculture