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Online Training Available

<https://pmu.ifas.ufl.edu/>

<https://eces.ifas.ufl.edu/>

Additional Resources

University of Florida
Extension Publications

<http://edis.ifas.ufl.edu/>

Pest Management in and
Around Structures

<http://www.eXtension.org/>

PMU Focus - Biological Control

By Mike Bentley

In last month's issue, we reviewed the importance of pesticide management in successful biological control programs. In this issue we discuss the three branches of biocontrol, and we hear from an industry expert, Lee Bloomcamp, about successful biological control.



Fig 1. A lady bird beetle, commonly used as a biological control agent against plant damaging insects including scales, aphids, and whiteflies. Photo: UF, M. Bentley

Lee Bloomcamp on Successful Biological Control



Lee Bloomcamp knows what it takes to find success with biological control programs. Lee handles [Syngenta's](#) plant protection and biologicals business as a territory manager in the Home and Garden division. She has 24 years of combined research and industry experience working with PMP's, landscapers, nurseries, and greenhouses.

Lee believes that the most successful pest management programs are truly integrated, utilizing every IPM tool including biological control. Lee said, "There is a growing demand for biological control in today's market." Consumers are looking for "greener" pest management strategies that rely on fewer chemicals to control pests. Pest control programs that utilize biological control practices reduce

their need for pesticides, appealing to that “greener” consumer demand.

How to get started in biological control?

Focusing on education is a great way to get started with integrating biological control into your existing pest management program. Lee says, “biological control is a constant learning process.” One way to focus on education is to become active in your respective industry associations and attend meetings. Involving yourself with industry networks can provide opportunities to interact with other professionals already involved with biological control programs.

More advice from Lee: When you first begin incorporating biological control agents into your programs, start small. Smaller pest issues can still present a challenge without being overwhelming. Resolving smaller issues first will give you valuable hands-on experience needed to develop your expertise with a new and successful pest management tactic.

How is a successful biological control program conducted?

A successful biological control program begins with a thorough understanding of the life histories of both the target pest and the biological control agent because timing of the biological control release can greatly impact the success of your program.

There are many approaches to biocontrol implementation. Here are a few:

- **Augmentative** biocontrol is the “release of large numbers of biological control agents to supplement the small numbers already present, in expectation of a greatly increased effect.”
- **Conservation** biocontrol preserves naturally occurring predators and parasites already present through habitat modification and the judicious use of pesticides.
- **Inoculative** biocontrol is the “importation and release of biological control agents in an area in which they are not already present, with the intent to establish a permanent population.” This is also referred to as “classical biocontrol.”
- **Inundative** biocontrol is the “release of large numbers of biological control agents relative to the numbers of a target species, in expectation of a rapid effect. There is no implication that the released biological control agent will establish a permanent population.”

Product selection, application method, and type of biological control agent must be tailored to fit the treatment goals. In the case of fire ant management, a product such as TopChoice™ or a fire ant baits such as Amdro™ or Advion™ can be used to eliminate fire ants from an area, while biological control agents

are released around the treated zone to slow the reinfestation, resulting in area-wide control for up to 18 months, according to one report. In other programs, biological control agents are released first and allowed to work before using products.

Why could biological control programs fail?

Biological control programs, as with all pest control programs, may fail when consumers and PMP's set unrealistic expectations. It is often assumed that a single release of a biological control agent will be sufficient to resolve a pest issue. However, biological control agents may require multiple releases throughout a pest cycle to satisfactorily suppress or eliminate pests. Customers should be made aware that when the pest problem is eliminated, the biocontrol agent may also be eliminated and, like pesticide applications that require periodic reapplications, the biocontrol agent may require reintroductions if and when the pests return.

To learn more about Syngenta's biological control division, Bioline, click [here](#).

Upcoming Training Opportunities:

If you plan on taking the [State Certified Operator examination](#) through PMU, please submit your applications by:

Sept 1 for the Oct 17 PMU [State Exam](#) for Termite and WDO
(Write "**PMU NOV WDO**" on the top line of the state application)

Sept 1 for the Nov 7 PMU [State Exam](#) for GHP
(Write "**PMU OCT GHP**" on the top line of the state application)

Must have taken both Foundations and Masters through PMU to qualify for these PMU state exam seatings.

July Offerings

Termite Basics 100

Date: July 30, 2014

Time: 8 AM-5 PM (W)

Place: UF/IFAS Apopka MREC, 2725 S. Binion Rd, Apopka, FL 32703-8504

Registration fee: \$175

Registration deadline: July 23, 2014; 10 slots remaining

Offered only once a year. This one-day class is good fit for employees who need to understand the basics of recognizing termite activity, where to look for them and what to do about them. Can also help office staff with scheduling by providing an

understanding of what goes into termite work. Will help fulfill 40 hour training requirement for new ID card holders.

- Learn about the general Florida Statute 482 requirements for technicians and sales staff.
- Be introduced to basic termite biology and behavior in the context of structural infestations.
- Learn to determine different slab types in the field and the common ways termites enter structures
- Practice basic methods for treatment

[Register here](#)

General Household Pests Basics 100

Date: July 31, 2014

Time: 8 AM-5 PM (TH)

Place: UF/IFAS Apopka MREC, 2725 S. Binion Rd, Apopka, FL 32703-8504

Registration fee: \$175

Registration deadline: July 23, 2014; 10 slots remaining

Offered only once a year. This one-day class a good fit for employees who need to understand the basics of common pests such as cockroaches, ants and bed bugs. Can also help office staff with scheduling by providing an understanding of what goes into a GHP work. Will help fulfill 40 hour training requirement for new ID card holders.

- Learn about the general Florida Statute 482 requirements for technicians and sales.
- Learn the basics concepts Integrated Pest Management.
- Learn how to monitor and make decisions about treatment.

[Register here](#)

September Offerings

Foundations of Termite Management

Date: September 17-19, 2014; Wed-Fri

Time: 8 AM-5 PM (W, TH); 8 AM-12 PM (F)

Place: UF/IFAS Apopka MREC, 2725 S. Binion Rd, Apopka, FL 32703-8504

Registration fee: \$375

Learn how termites exploit over 50 building construction elements and how to treat them in a hands-on environment in

2-days instead of 2 years.

- Practice doing a DACS vehicle inspection and spill drill with Paul Mitola from DACS before a crisis occurs.
- Hear about the top 10 reasons technicians get in trouble and how to avoid them from Mark Ruff, industry attorney.
- Get more in-depth information on termite biology and behavior as well as product label navigation.

[Register here](#)

Foundations of Turf Management

Date: September 24-26, 2014; Wed-Fri

Time: 8 AM-5 PM (W, TH); 8 AM-12 PM (F)

Place: UF/IFAS Apopka MREC, 2725 S. Binion Rd, Apopka, FL 32703-8504

Registration fee: \$375

Learn about common turf varieties, turf diseases, IPM of turf pests, methods of sampling, equipment calibration, turf maintenance requirements and more!

[Register here](#)

October Offerings

Foundations of General Household Pest Management

Date: October 1-3, 2014; Wed-Fri

Time: 8 AM-5 PM (W, TH); 8 AM-12 PM (F)

Place: UF/IFAS Apopka MREC, 2725 S. Binion Rd, Apopka, FL 32703-8504

Registration fee: \$375

Pest control matters. Cockroach allergen mitigation can be achieved with IPM.

- Study domestic and peridomestic cockroach species and how to control them as well as rodent, small fly, filth fly, fire ant and nuisance ant management.
- Review the labels of commonly used GHP products, practice pest inspections at PMU's house and develop treatment strategies focused on IPM.
- Do a vehicle inspection and spill drill with Paul Mitola from DACS.

[Register here](#)

Foundations of Ornamental Plant Pest Management 101

Date: October 8-10, 2014; Wed-Fri

Time: 8 AM-5 PM (W, TH); 8 AM-12 PM (F)

Place: UF/IFAS Apopka MREC, 2725 S. Binion Rd, Apopka, FL 32703-8504

Registration fee: \$375

Learn how to properly ID common southern trees and shrubs, monitor and diagnose pest and maintenance problems, ID beneficials, calibrate and operate different pesticide application equipment, and impress your instructors with your landscape IPM expertise.

[Register here](#)

Master of Termite Management

Date: October 15-17, 2014; Wed-Fri

Time: 8 AM-5 PM (W, TH); 8 AM-12 PM (F)

Place: UF/IFAS Apopka MREC, 2725 S. Binion Rd, Apopka, FL 32703-8504

Registration fee: \$375

This fast-paced class is only offered once a year. **Must have completed Foundations in order to advance.**

- Review termite identification, biology and control and learn about wood-destroying beetles and wood-decaying fungi.
- Learn how to do a proper borate application
- Do baits work?
- Use foam and application techniques to optimize the distribution of liquid termiticides in soil with the Bayer University toys
- Hear about the top 10 reasons that certified operators get in trouble and how to avoid them from Mark Ruff, industry attorney.
- Do an inspection for WDOs at PMU's house designed to challenge even experienced inspectors.
- Practice a licensee inspection with a DACS inspector and learn about the duties of a certified operator.

[Register here](#)

ADDITIONAL COURSES

PMU Courses

WDO Category

Dec 3-5, 2014, [Termite Expert](#), **must** have taken Foundations and Masters

GHP Category

Nov 5-7, 2014, [GHP Masters](#), **must** have taken Foundations

L&O Category

Please contact Dr. Eileen Buss (eabuss@ufl.edu, (352) 273-3976) directly with questions concerning these courses.

Click on links for course descriptions or go to <http://pmu.ifas.ufl.edu/courses> for more information

Learn more from IFAS



- UF/IFAS has Extension Offices in each Florida's sixty-seven counties. We also have twelve Research and Education Centers and Research and Demonstration Sites (RDSs).
- If you need help a great place to start is your local County Extension Office. With an office located in every county it has never been easier to partner with the University of Florida and your local County Government. To find the office near you please visit: <http://solutionsforyourlife.ufl.edu>