

In This Issue

- [PMU Focus](#)
- [Pesticide Management for Biological Control](#)
- [Upcoming Training Opportunities](#)
- [Learn More From IFAS](#)

Contact Us

Faith Oi

foi@ufl.edu

Nancy Sanders

nsanders@ufl.edu

Entomology & Nematology

Twitter [@UFEntomology](#)

[Facebook](#) [UFEntomology](#)

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 - Incorporating Biological Control

By Mike Bentley

In last month's issue, we introduced the concept of biological control. In this issue we discuss the importance of pesticide management in successful biological control programs.

Review of Biological Control

To briefly review, biological control is a component of integrated pest management that reduces pest populations using natural predators, parasites, or pathogens of those pests. Biological control programs offer an additional means of controlling pests that can extend the life of your management efforts if done properly with target product applications.



Fig 1. A small wasp, *Encarsia noyesi*, used as a biological control agent against giant whitefly. Photo: UF, S. Taravati

Pesticide Management for Biological Control

The success of a biological control program can be significantly impacted by the type of pesticide applied and the application method used. An applicator's goal should be to reduce pest populations while conserving beneficial arthropod populations. Beneficial arthropod populations are best conserved by minimizing their exposure to pesticides. Therefore, product selection and application methods that reduce exposure should be a priority when developing any biological control program.

Inspect and determine whether a pesticide is needed at all.

- By monitoring pest levels, PMP's can avoid needlessly applying a pesticide when pests aren't present thereby reducing the number of applications and managing pesticide resistance.
- The use of regular monitoring programs can avoid the pitfalls of the "pesticide treadmill." This term refers to the cyclical process of applying increasingly larger amounts of pesticide to control pests that develop an increasing resistance to pesticides.
- Effective monitoring programs include regular inspections with monitoring tools such as sticky traps and accurate record keeping.
- Sticky traps are ideal for monitoring many pests including cockroaches.

Reduce the use of broad-spectrum pesticides with long residual toxicity when possible.

- Broad-spectrum insecticides such as pyrethroids may kill more beneficial arthropods than pests.
- Pesticides with a long residual can mitigate the ability of beneficials to re-establish populations within treated areas.

Apply pesticides selectively.

- Restricting pesticide applications to heavily infested areas improves the effectiveness of the treatment and minimizes the likelihood of exposing beneficial insects to pesticides. This approach provides beneficial insects with untreated areas (i.e., refuges) to reproduce and maintain populations.
- Timing applications to coincide with the seasonality of target-pests ensures that pesticides are being utilized precisely when needed, and limits unnecessary exposure of beneficial insects to the pesticide.
- Regularly alternating active classes of insecticides as well as targeting the most susceptible life stages of pests can improve the long-term effectiveness of applications, and aid in resistance management.

Use pest-specific pesticides when possible.

- Pest-specific products allow beneficial insects to survive pesticide applications, resulting in better long-term management of target pests.
- Syngenta's newer line of products containing the active ingredient chlorantraniliprole controls insect pests through a new mode of action. The label provides directions on how to integrate this product with biological control. Sustaining beneficial insect

population's aids in extending the natural control of pest insects, reducing the possibility of secondary pest outbreaks.

Upcoming Training Opportunities:

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

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

July 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.

June Offerings

Foundations of Termite Management

Date: June 18-20, 2014 (Course full; CLOSED)

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. Class duration: 2.5 days.

[Register here](#)

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

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

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](#)

ADDITIONAL COURSES

PMU Courses

WDO category

Sept 17-19, 2014, [Termite Foundations](#)

Oct 15-17, 2014, [Termite Masters](#), **must** have taken Foundations

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

GHP Category

Oct 1-3, 2014, [GHP Foundations](#)

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.

Sept 24-26, 2014, [Turf Foundations](#). Doing turf work? This is a must have course.

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/ma>

