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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 - Insecticides Targeting the Nervous System

By [Michael Bentley and Faith Oi](#)

In our July issue, we defined pesticides as “any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest.” We began a series on the modes of action of the various pesticides commonly used in the pest control industry. In this issue, we continue our series on insecticides and how they function. This article will focus on insecticides that target the nervous system.

## Insecticides that Target the Insect Nervous System

Chemical Class	Active Ingredient Example	Trade Name Example	Mode of Action (Target Site)
Pyrethroids	Bifenthrin	Talstar	Nerve Exciter (Sodium Channel)
Oxadiazines	Indoxacarb	Advion Fire Ant Bait	Paralyzer (Sodium Channel)

Table 1. two common active ingredients, their trade names, and their modes of action. (Not an endorsement.)

## *Nerve Toxins*

Insecticides such as those listed in the Table 1 above function by causing over-excitation of nerves or the other extreme, paralysis. Understanding how these insecticides function plays a vital role in developing product rotation protocols. Selecting two insecticides that have a similar mode of action only increases the likelihood of resistance of your target pest. It is important to understand that simply changing the active ingredient used does not always mean that you are changing the mode of action.

Stay tuned for more on how insecticides work or better yet, join us for a PMU class.

## Upcoming Training Opportunities:

We are in the final offerings of PMU for the year. Sign up early before classes are full! Classes cap at 20 participants, including Masters and Expert levels. Master level classes are only offered once a year.

Expert level classes are offered every other year. If you plan on taking the [State Certified Operator examination](#) through PMU, please submit your applications by:

Sept 16 for the Oct 18 PMU [State Exam](#) for GHP

(Write "**PMU OCT GHP**" on the top line of the state application)

Oct 13 for the Nov 15 PMU [State Exam](#) for Termite and WDO

(Write "**PMU NOV WDO**" on the top line of the state application)

## Summary

Click on highlighted course titles for more information or to register.

Sept 4-6, [Termite Foundations](#) (last one for 2013)

Sept 18-20, [Foundations of Turfgrass Pest Management](#)

Sept 25-27, [GHP Foundations](#) (last one for 2013)

Oct 2-4, [Foundations of Tree and Shrub Pest Management](#)

Nov 6-8, [Foundations of Turfgrass Pest Management](#)

*Must advance through Foundations to qualify for these courses:*

Oct 16-18; [GHP Masters](#)

Oct 18; 1 pm; GHP state exam (must also meet state requirement, write "PMU" on application)

Nov 13-15; [Termite Masters](#)

Nov 15; Termite and WDO exam (must also meet state requirement; write "PMU" on application)

Dec 18-20, [Master of Turfgrass Pest Management](#)

*Must advance through Foundations and Masters for qualify for this course*

Dec 4-6; GHP Expert

## SEPTEMBER OFFERINGS

### SEPTEMBER OFFERINGS

#### Foundations of Termite Management 101

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.

**Date: Sept 4-6, 2013; W-F**

**Registration deadline: Aug 30, 2013; Friday**

**Place: UF/IFAS Apopka MREC**

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

**Cost: \$350**

[Register here](#)

### **Foundations of General Household Pest Management 101**

Pest control matters. Cockroach allergen mitigation can be achieved with IPM. Class duration: 2.5 days.

- 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.

**Date: Sept 25-27, 2013; W-F**

**Registration Deadline: Sept 20, 2013; Friday**

**Place: UF/IFAS Apopka MREC**

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

**Cost: \$350**

[Register here](#)

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## 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>

