pmu PEST MANAGEMENT UNIVERSITY

news

UF UNIVERSITY of FLORIDA IFAS Extension

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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 – Pesticide Resistance

By: Faith Oi

What do disease-carrying mosquitoes, blood-sucking bed bugs, ticks, and chinch bugs have in common? Broadcast treatments. Lots of them. Often times with the same class of pesticide: pyrethroids.

Pesticide resistance is a serious issue that not only results in the loss of effective products, the lack of available chemistries can exacerbate public health issues. Pesticide resistance is a "heritable change in the sensitivity of a pest population that is reflected in the repeated failure of a product to achieve the expected level of control when used according to the label recommendation for that pest species." (IRAC)

Figure 1. IRAC (http://www.irac-online.org/) is the "gold standard" for insecticide resistance information. They have a free app for iphone and android to help you set up your rotations.

Mosquito control is a booming business this year because of the Zika virus appearing in the U.S. As of this writing, there are no "locally-acquired" cases; however, homeowners perceive the risk of Zika to be very high and are willing to broadcast spray even if *Aedes aegypti* is not in their community. There is not a lot of current information on the levels of resistance for mosquitoes of public health concern in urban areas in the U.S.

In the next few months, you will hear growing concerns about insecticide resistance, particularly in the area of mosquito control. One concept that is worth knowing is the **"resistance ratio"** or **RR_{50}**. It is a simple concept where the LD_{50} of a resistant population is divided by the LD_{50} of a susceptible population. The bigger the **RR_{50}** the more resistance. In a study of mosquitoes exposed to permethrin and collected from Alabama and Florida, researchers found **resistance ratios** ranging from a **low of 71 to a high of 1,400** for *Culex quinquefasciatus* (the southern house mosquito). Recall that C.

quinquefasciatus transmits West Nile, St. Louis encephalitis, and Western equine encephalitis.

Have you seen an increase in "call-backs?" Think about where we use pyrethroids in a broadcast fashion. What other classes of are available to replace the pyrethroids if we do not take measures to mitigate resistance? There are not a lot of options currently available. The (PCT) 2015 Mosquito Market Survey conducted by GIE Media and Readex Research revealed that:

- Only 34% of PMPs offered habitat modification (e.g., vegetation management, emptying containers of standing water) as a service, while
- 65% of PMPs experienced some level (1 to >30%) of "call-back" while only 35% did not.

In 2014, the Mosquito Market Survey in PCT revealed that of the PMPs surveyed:

- 84% did not believe resistance was a problem in their market area.
- 66% did not practice resistance management in mosquito control programs.

Yet,

- **60%** found mosquitoes "somewhat difficult," "difficult," or "very difficult" to control with the products currently on the market.

What to do? We need to work together on the mosquito issue. A simple, but effective campaign is to simply empty containers of standing water. It does not matter if you have a GHP, L&O, or public health pest control license, anyone can empty containers of standing water. Encourage civic engagement while on your routes. Talk with homeowners. Share your knowledge. By being good stewards of existing products, you are being good stewards of the environment.

Upcoming Training Opportunities:

Our fall courses are filling, particularly the Masters courses! Register now!

…Did you know that PMU can help you by

- Partially satisfying the 482/5E-14 requirement for initial technician training hours?

Our Oct 12-14 Termite Masters **(10 seats remaining)**, Oct 26-28 GHP Masters **(5 seats remaining)**, and Nov 9-11 L&O Masters **(9 seats remaining)** courses are open! Similar to the

Structural Fumigation School (http://conference.ifas.ufl.edu/fumigation/), the state has graciously allowed us to hold the state certified operator examination at the end of each Masters course. We hold optional reviews in the evenings. To qualify, you must:

- Take the Foundations **and** Masters courses for GHP, WDO, or L&O
- Fill out an application package for the certified operator exam either
  - Online; deadline one week before exam, or
  - Paper; deadline for paper applications **September 1** for the Oct/Nov exams

September 2016 Offerings:

Foundations of Termite Management 101

Date: Sept 7-9, 2016; Wed-Fri

Place: UF/IFAS Apopka MREC

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

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 General Pest Management 101

Date: Sept 21-23, 2016; 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,

occasional invaders, 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 FDACS.

Register here

Click on "Register here" 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 of Florida's sixty-seven counties. We also have twelve Research and Education Centers (RECs) 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 an office near you please visit: **http://solutionsforyourlife.ufl.edu/map/**