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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

PMU Focus - Product Combination

By [Michael Bentley](#)

Responsibility, accountability, and education accompany the use of pest control products. We have spent some time over the past few issues focusing on **Mode of Action** and **product chemistry** in an effort to improve the effectiveness of application methods. The goal of this article is apply the information to real world settings. We will discuss the benefits and proper technique of using multiple label-approved products in combination with each other.

It is important to stress that not all products can be combined with each other. Combining many pesticides may not only be harmful or lethal, but illegal. Before considering mixing ANY pest control products always refer to the label for recommendations!

Non-repellants, Repellants, and Synergists

Non-Repellents

Non-repellent products often are undetectable to target pests, and are commonly used when treating for social insects including ants or termites (Fig 1, 2).



Fig 3. Termidor SC.

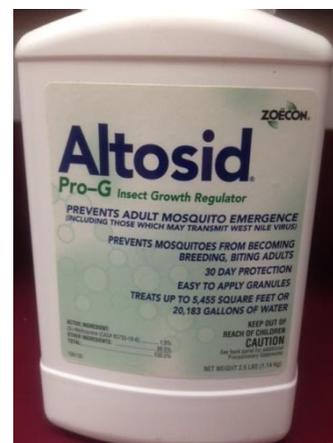


Fig 4. Altosid Pro-G.

Repellents

Repellants are any chemical which can be used to drive away insects or other pests (Fig 3, 4). This category includes many pesticides used as general perimeter applications.



Fig 3. Phantom Aerosol.



Fig 4. Temprid SC.

Photos: Mike Bentley

Synergists

Synergists are chemicals that can boost the pesticidal activity of an active ingredient (Fig 5, 6). Synergists typically have little or no activity against a target pest when used alone. A common example of a synergist is piperonyl butoxide, a product often used in combination with pyrethrin insecticides. This active ingredient is believed to interfere with an insects' ability to break down pyrethrin, resulting in fewer insects recovering from pyrethrin exposure.



Fig 5. Exponent.



Fig 6. ExciteR.

Photos: Domyownpestcontrol.com

Combining Pest Control Products

Depending on the target pest, combining products may be the most effective technique in controlling the pest. But with so many products available, it can be difficult to decide which combinations of label-approved products are best. Below are some tips that can improve the effectiveness of using products together.

- Never mix products outside of label recommendations
- Using baits alongside non-repellants can be a highly effective treatment strategy when targeting pests such as ants or roaches
- Never apply any additional product directly over a bait
- Never flush with a pyrethrin and attempt to bait in the same area. Your bait will be contaminated, and therefore, unpalatable.
- Always wash your hands thoroughly before handling baits

Upcoming Training Opportunities:

We are in the final stretch of 2013 PMU! [GHP Expert](#) is now open for registration! Classes are limited to 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:

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.

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)

Must advance through Foundations and Masters for qualify for this course

Dec 4-6, [GHP Expert](#)

2014 GHP and Termite Courses are open! Look for more next month.

WDO category

Jan 29-31, 2014, [Termite Foundations](#)

Mar 20-21, 2014, [WDO Inspections and Form 13645](#)

July 30, 2014, [Termite Basics](#)

GHP Category

Feb 13, 2014, Bed Bug Management

Feb 26-28, [GHP Foundations](#)

July 31, 2014, [GHP Basics](#)

OCTOBER OFFERING

Master of General Household Pest Management

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

- Learn about biting and stinging insects, stored product pests, and occasional invaders as well as how to recognize delusory parasitosis.
- Do canines for bed bug inspections really work? See for yourself!
- Learn about modes of action, formulations and their impact on product selection.
- Play with the tools of the trade, vacuums, steamers, foamers and practice spray patterns.
- Prepare for an introduction to vertebrate pests that carry disease causing organisms.
- Learn about the legal liabilities of GHP work.
- Practice affidavit writing and working with DACS on licensee inspections.

Review labels of commonly used products including changes in pyrethroid labels, rodenticide labels and the impact of bee health on product use patterns.

Date: Oct 16-18, 2013; W-F

Registration Deadline: Oct 11, 2013; Friday (only 5 slots remaining)

Place: UF/IFAS Apopka MREC

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

Cost: \$350

[Register here](#)

NOVEMBER OFFERINGS

Foundations of Turfgrass Management

Topics and activities will include

- How to reduce your risk through proper safety training (e.g., pesticide storage, transport, use, and spill management),
- Turfgrass management (e.g., distinguishing grasses, weeds and different pest signs and symptoms; ID of weather-related stresses, compaction, irrigation and mowing problems),
- Understanding pesticide labels, common formulations, integrated pest management, and pesticide resistance management.

Date: Nov 6-8, 2013; W-F

Only 2 slots remaining

Place: UF/IFAS Apopka MREC

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

Cost: \$350

[Register here](#)

Master of Termite Management

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.

Date: Nov 13-15, 2013; W-F

Registration Deadline: Nov 5, 2013; Friday (only 5 slots remaining)

Place: UF/IFAS Apopka MREC

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

Cost: \$350

[Register here](#)

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>

