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GMCA Newsletter

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Annual Meeting

Athens, GA; Oct 18-20

We had a very good meeting again this year, with a good balance of both research-oriented and applied talks. One talk of particular interest was by Dr Chris Rustin on mosquito control programs in Georgia.

Dr Rustin, developed a 3-page survey tool, and with a group of graduate and undergraduate students from Georgia Southern University, called government offices in all 159 Georgia counties and any city that was a county seat, had a population greater than 20,000 people, or was mentioned in the original mosquito control assessment done in 2007 and revised in 2009.

There were 342 county or city offices called, with a 98% response rate. Seven offices did not respond, but they have mosquito control listed on their websites. All told, 126 programs were identified.

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THEY'RE BACK!!!! The East Asian Joro Spider

The East Asian Joro spider (*Nephila clavata*) was detected for the first time in North America back in late 2014 from Madison County (Colbert), Georgia. In the first year of surveys, it was found commonly in northcentral Georgia in Jackson, Barrow, and Madison counties. Today, the Joro spider has been sighted by homeowners across communities in this same region but also now including Forsyth, Cherokee, Hall, and Clarke counties. In some areas, the Joro spider has been reported to be extremely common on properties. Homeowners have served as citizen scientists in alerting us of the presence of non-native spider in our region.

The Joro spider is one of the most attractive and largest of the local orb-weaving spiders. It can be confused easily with the banana spider, a close relative (*Nephila clavipes*), and our common and native garden spider, *Argiope aurantia*. The Joro spider, however, builds expansive webs, golden-yellow in color, and usually constructed high among lower branches of trees and understory shrubs. It also commonly shows up on porches and along the eaves or roofs of homes. These spiders (the females that is) are most commonly observed later in the season, September through November, when they achieve their maximum size and sexual maturity. Mated females will deposit an egg sac of 400-1,500 eggs, usually deposited on a tree or on home siding, and these will overwinter. The life cycle ends by early winter. There is a single generation annually.

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Annual Meeting (cont)

This talk, and the others, will be posted on the website, along with notes from the meeting. The new list of mosquito control programs will also be posted.

GMCA Board 2017-18

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Please check out our website –
www.GAmosquito.org.

Joro Spider (cont)

In spite of their large size, these spiders are not dangerous. There are no reports of any serious risks to the public, even in East Asia where it is native. It should be noted, however, that all spiders are venomous, but the majority are not dangerous. The only dangerous spiders in our region are the widow spiders and the brown recluse. Their venom can be medically significant because of its potential effect and severity.

Because we are interested in following the spread and establishment of this non-native spider in Georgia, we ask for the assistance of the public in reporting any sightings. Images of suspected Joro spiders, along with either an address or a GPS coordinate, can be sent to E. R. Hoebeke at the University of Georgia (e-mail: rhoebeke@uga.edu).

Contacts: E. Richard Hoebeke and Byron J. Freeman (Georgia Museum of Natural History, University of Georgia, Athens, GA)



Mosquito Control Misconceptions: Naled

By: Natasha Marie Agramonte (ntj8@cdc.gov)

It's that time of year again, mosquito season, so it seems like a good time to tackle a topic that I habitually find concerning my Florida friends during the summer months: mosquito control and the safety of the insecticide Naled. Since significant parts of my PhD deal with mosquito insecticides, and I have spent much of the last 10 years in graduate school working with and studying mosquitoes, I feel I should clarify a few misconceptions related to this topic.

'My local mosquito control is planning on spraying Naled in my area, should I be worried?'

No, the use of Naled should not be a concern. Organophosphates (OP's) are more toxic than some other classes of insecticides, however, they range in their toxicity to humans, and Naled (active ingredient: dibrom) is one of the less toxic OP's, along with Malathion, which is why it is often used for mosquito control. The comparison to the neurotoxin sarin is either a misunderstanding of the science or a scare tactic.

'Why do they even need to spray for mosquitoes?'

Zika is an immediate public health concern and adult mosquitoes must be killed quickly to reduce transmission. Killing the mosquito larvae will not help with the immediate threats of transmission during an outbreak. There is currently no vaccine for Zika and there is still a lot we don't know about its long term neurological effects, but the risks to developing babies is well documented at this point.

'But, Naled is a neurotoxin! That means that it can be toxic to me or my children!'

OP's are 10-100x more toxic to mosquitoes, and mosquitoes are much smaller in size than a human. This matters! Toxicity is assessed by the amount of chemical per kilogram of organism (mg/kg or parts per million). Because of this, the concentrations being used in ultra-low volume spraying for mosquito control aren't a concern. The application rate for Naled is 0.5-1 oz per acre, or 1-2 tablespoons per football field, in droplets of 25 microns, or about half the width of a human hair. Additionally, Naled begins to break down in soil, water, or even sunlight rapidly. In one hour on soil, approximately 75% of the insecticide has broken down, and in 2 hours 94% of the insecticide is gone. In 2008, a study was done of Florida residents in an area over which Naled was going to be used, and urine samples taken before and after spraying found no increase in the presence of Naled metabolic products.

'But, I heard that Naled is banned in Europe!'

The EU regulates pesticides differently than the US, but not necessarily better. The EU determined that Naled is dangerous for people manufacturing it, and generally handling it in high concentrations, and not necessarily people who are exposed to it in the very low concentrations that it is sprayed in. The EU looks at risk for the whole society, not just the general public. The US, which regulates worker safety separate from the general public, permits this chemical because its end use would be safe, even as its preparation and application requires greater precautions. OSHA manages this risk with annual training on chemical risk and exposure for people using it in the workplace. I have to get re-certified every year, and in Florida insecticide applicators have to maintain a license. The U.S. figures that if you work in certain fields, then you are knowingly taking a calculated risk.

References:

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From the Manufacturer: AMVAC Chemical Corporation:

Naled was first registered in the late 1950's for mosquito control and crop use, and has been fully supported by AMVAC since its acquisition in 1998. Our goal has always been to provide the very best product we could manufacture, be good stewards of its use, and defend the active ingredient and end-use products.

In recent months, Naled has come under criticism from several organizations and outlets. Many of the claims that have been made about Naled are not scientific, unsupported by peer reviewed research and/or questionable in the evaluation methodology. We are well aware as the user of

Naled and other mosquito control products you are often the first to encounter those opposed to the use of them.

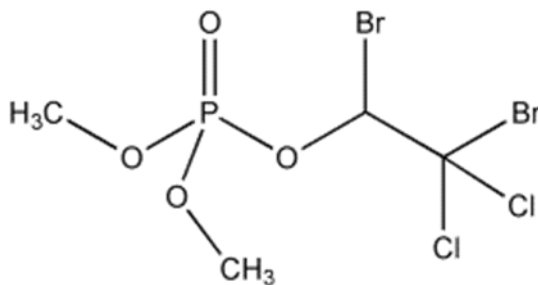
AMVAC has always welcomed a reasonable dialog about the science of Naled and has attempted to provide any and all involved with the facts behind mosquito control and the use of Naled. We have supplied many of you with various studies, answers to questions, and peer reviewed research, to help you in your defense of the product you rely on for unequalled efficacy of mosquitoes in your aerial control programs. In an effort to continue to provide you with the most comprehensive and up-to-date information on Naled and mosquito control facts, we are launching a new website called www.mosquitocontrolfacts.com. We hope this

will be a handy and easy-to-use resource in what appears to be shaping up as a very busy mosquito season.

The structure of this site is very simple to navigate with a series of tabs/pages dealing with content supportive of your mosquito control programs. Throughout these pages, there are comments about mosquito control and hyperlinks to additional resources on the subject. Lastly, the RESOURCES tab will take you directly to live links for additional information from EPA, CDC and other well-known sources. Or you may link directly to a document, an article, abstract or other information that resides in the site library.

You may sometimes feel that your work is largely taken for granted by those you protect. At AMVAC, we recognize the important role you play in protecting public health. We very much appreciate your efforts and hope that you will find www.mosquitocontrolfacts.com helpful. As our valued ally in the stewardship of this product, we welcome any suggestions you have about content or information contained in this site.

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About one million pounds are used annually in the United States with 70% used for controlling adult mosquitoes and the remaining 30% used for various agricultural purposes: cotton in California and Louisiana, alfalfa in Idaho and Oregon, and grapes in California (#Cox, 2002). In mosquito control programs conducted by state or local authorities, Naled is applied from truck-mounted or aircraft-mounted sprayers as a "low-volume spray" which dispense very fine aerosol droplets that stay aloft and kill adult mosquitoes on contact (#EPA).

Like most other pesticides, Naled only makes up a small percentage of the applied product and for mosquito control the maximum rate for application of active ingredient (Naled) is 0.1 lb of active ingredient per acre.

Caroline Cox. "Insecticide Factsheet - Naled (Dibrom)". Journal of Pesticide Reform Fall 2002: 22(3), 16-21.

<http://www.toxipedia.org/display/toxipedia/Naled>



The Georgia Mosquito Control Association

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