Integrated Pest Management Program
Monthly Newsletter

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SPECIALIST SPOTLIGHT

Get to know the specialists stationed throughout the state of Georgia that make up the IPM Program.

Mark Abney

CAES Tifton Campus
2360 Rainwater Road | Tifton, GA 31793

Mark Abney is the research and Extension Peanut Entomologist at UGA, and he is located on the beautiful Tifton Campus. He received a Bachelor's degree in crop science and a Master's degree in entomology from the University of Georgia. He received a PhD in entomology from North Carolina State University. After completing his PhD, Mark spent over five years on the faculty of the Department of Entomology at NC State where he had research and Extension responsibilities for insect management in commercial vegetables. His vegetable work was diverse, but his program focused heavily on the biology and management of soil insect pests such as wireworms and white grubs.

The primary focus of his current research at UGA is the development of economically and environmentally sustainable insect management strategies for pests of agronomic crops. Peanut is one of the most economically important crops in Georgia, and the state's peanut growers face a complex of insect pests that have the potential to cause devastating economic losses. Mark's research program concentrates heavily on improving our understanding of the biology and ecology of peanut pests with the ultimate goal of developing effective management tactics. Some on-going projects include economic injury level and threshold development for threecornered alfalfa hopper, improving thrips management, and quantifying risk factors associated with peanut burrower bug injury. In addition to research, he also has a 30% Extension appointment, and facilitating the adoption of best management practices by growers is a key focus of his Extension programming. Developing programs that support the local needs of UGA's County Extension Agents is one of the most important aspects of this work.

Mark and his wife have two young children who occupy much of his time when he is not working. His other interests include a range of outdoor activities and tinkering in the shop. ■

IN THIS ISSUE

UGA IPM INFORMATION

Time to get social! Follow us on social media!

@UGAIPM

The submission deadline for the July newsletter is **July 27, 2018.** Please submit all articles prior to the deadline. If you would like an article written about an upcoming event or project, please email stinafig@uga.edu.

UNIVERSITY OF GEORGIA
EXTENSION
Integrated Pest Management Program

IPM PROGRAM LOCATION:
CAES Athens Campus
463 Biological Sciences Building
Athens, GA 30602

UPCOMING EVENTS

Jul 18 - Getting the Best of Pests | 8:15AM | Online

Jul 10, 11, & 12 - 50th American Peanut Research and Education Society Annual Meeting | 8:00AM | Williamsburg, VA

Jul 19, 20, & 21 - Southern Peanut Growers Conference | 8:00AM | Miramar Beach, FL

Jul 24 - 2018 Northwest Georgia Row Crop Scouting School | 10:00AM | Cartersville, GA

SAVE THE DATE

Aug 9 - Home IPM Workshop | 9:00AM | Griffin, GA

Aug 23 - School IPM Workshop | 9:00AM | Griffin, GA

Aug 23 - Blackberry Production for the Home Gardener and Small Producer | 7:00PM | Eatonton, GA

Aug 29 - August Hay Day | 9:30AM | Culloden, GA

Sep 10 - What's New at UGA - A Virtual Tour of the UGA Gardens | 6:00PM | Jonesboro, GA

For more events, please visit the UGA Extension Calendar.

FEATURED CREATURE

Sweetpotato whitefly

Hemiptera, Aleyrodidae)
Bemisia tabaci (Gennadius), also referred to as B. argentifolii or silverleaf whitefly

Description:
Immature stages – Immature stages begin with a pointed oblong yellow egg (0.2 mm) which darkens at the apex just before hatching. The first instar or crawler stage (0.2-0.3 mm) settles down on the underside of leaves close to the egg shell and goes through three more molts as a sessile, flattened oval nymph. Late third and fourth instars begin to develop eye spots and are often referred to as red-eyed nymphs. The last instar, or "pupal stage" (0.7-0.8 mm, late instars are shown in the photo), has very distinct eye spots.
Adult stages – The adult is small, about 0.9 to 1.2 mm in length and holds solid white wings roof-like over a pale yellow body at rest.

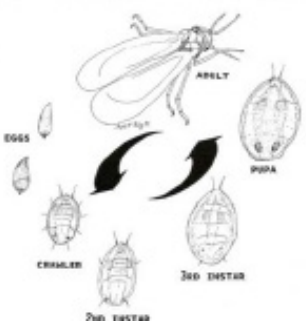
Biology:
Life Cycle – The life cycle from egg to adult may be 18 days under warm temperatures (86°F) but may take as long as 2 months under cool conditions. The number of eggs produced is also greater in warm weather than in cool weather. The rate of reproduction ranges from 50 to 400 eggs (avg. 160, of which about 2/3 are female)/female.
Seasonal Distribution – In Georgia, whiteflies are generally not an economic problem in early spring, but has become severe in cucurbit fields in some years. In the late summer and fall, whiteflies numbers increase dramatically and can cause severe losses in many crops.

Damage to Crop:
In tomato, curcubits, and beans the main damage caused by whitefly results from the transmission of plant viruses (e.g., in tomato mainly Tomato yellow leaf curl [TYLCV], see leaf image) which causes a severe stunting of the plant and a drastic reduction in yield. The presence of high whitefly numbers in vegetables can also cause severe direct damage even if the virus is not present. When virus is present in the field even low number of whiteflies can cause damage. In cotton, whiteflies can build up high populations, causing sooty mold, sticky cotton, and heavy migrations of adults from defoliated cotton can cause severe problems in vegetable crops in the area.

Management:
Use effective, curative insecticide treatments based on crop specific thresholds or preventative treatments and host plant resistance to virus when whitefly transmitted viruses are present. Natural of mortality for the whitefly include predation by beneficial insects such as lacewing or coccinelid larvae, parasitization by wasps such as Encarsia or Eretmocerus species, mechanical injury, desiccation, insect pathogens such as Beauvaria, Paecilomyces or Verticillium species, and lack of host plant material.

David Riley, Professor, University of Georgia, 2018 ■


Whitefly adults on squash leaf



Whitefly life cycle


TYLCV damage in tomato

[Return to Index]

FROM THE FIELD

Articles and news stories pertaining to IPM field work written by IPM specialists.

Brown Marmorated Stink Bug management survey for commercial producers

by Jason K.Harper, Professor, Penn State University

A nation-wide survey is currently underway to gather information from farmers and growers on the economic impact of the brown marmorated stink bug (BMSB) on agriculture. The objective of the survey is to better provide you with the help you need in managing this pest. We'd like to find out when BMSB became a problem for you, where you currently get information on how to control them, how much damage you have suffered, your use of and interest in various management practices, and your feelings about biological control methods and their potential for your operation. The results of the survey will be used by Extension programs across the United States to fine tune management advice for the BMSB and help prioritize research and outreach activities.

Photo courtesy of Bugwood.org

If you'd like to participate, the survey should take you about 20-25 minutes to complete. Your individual survey responses will be confidential and the data collected will only be reported in summaries. Your participation is voluntary and you can decide not to answer a given question if you choose.

The link to the on-line survey along with more information about the survey can be found on the StopBMSB.org website (http://stopbmsb.org/go/BfxA).

If you have any questions about the Brown Marmorated Stink Bug Management Survey for Commercial Producers, please contact Jayson Harper by e-mail at jkh2@psu.edu. ■

[Return to Index]

FROM THE FIELD

Articles and news stories pertaining to IPM field work written by IPM specialists.

A newly-introduced tick threatening the Southeast

by Nancy Hinkle, Professor, University of Georgia - Athens Campus

Anyone who has lived in Georgia probably has experienced ticks, either on themselves or on their pets. The most common of the state's 22 native tick species is the lone star tick. The American dog tick is the next most frequently encountered tick; even though it is called a dog tick, it can be found on mid-sized wildlife of all types – coyotes, foxes, raccoons, opossums, etc. Gulf Coast ticks seem to be increasing in prevalence and expanding their range. Deer ticks are not very common (the ticks typically found on deer are lone star ticks).

But there is a chance that we'll be getting a new type of tick – as if we needed it. Last year a tick species that had never been found in North America showed up on a farm in New Jersey. Despite control efforts and a harsh winter, it successfully overwintered and in 2018 has already been found in Virginia, West Virginia, and Arkansas. Its mode of distribution is unknown, but this rapid spread bodes poorly for containment.

Originally from northeast Asia, this tick showed up in Australia and New Zealand over 100 years ago, where it has established and become a major problem on cattle and sheep. Known as the "Longhorned Tick" (scientific name Haemaphysalis longicornis), it is capable of transmitting several disease organisms infecting livestock and humans.

Why is this tick of particular concern?

1. It is not native to North America. That means there are no natural controls here to keep it in check – no predators or parasites to suppress its numbers. Also, our animals have not developed any natural resistance to it, so it is anticipated to thrive on both wildlife and livestock.

2. Males are extraneous. This tick is parthenogenetic, meaning females reproduce without mating, so males are unnecessary. Of course, this means that a single female transmitted into a new area can start a new population, indicating that infestations can readily spread. And each female produces over 2,000 eggs, so populations can rapidly explode.

3. Longhorned Ticks do well on a variety of hosts, wildlife as well as livestock. They should thrive on white-tailed deer and easily spread to livestock. They readily feed on small ruminants, horses, dogs, cats, humans, and several common wildlife species.

4. This tick is tolerant of a wide range of environmental conditions, but will flourish in the Southeast, which has climate similar to its native range. As has been shown, it successfully overwinters in New Jersey, Virginia and West Virginia, so may well be active year-round in Georgia.

The adult Longhorned Tick is only 1/8th inch long, while the immature tick would not cover the 'D' on the dime.

5. The Longhorned Tick is capable of transmitting several animal diseases. Tick feeding can damage the skin and large tick populations can produce anemia, particularly in young animals.

Unfortunately this invader looks like many of our native ticks, small and brown before it feeds, then swollen and gray after it takes a blood meal. So what should Georgians be looking for to alert them to the Longhorned Tick? High numbers of ticks per animal. Because each tick can produce over 2,000 eggs, tick populations expand rapidly and frequently exceed hundreds per animal. If you find an animal with lots of ticks on it, pull off at least a dozen, put them in a small bottle with alcohol, and take them to your county Extension office. Tell them to send them to Dr. Hinkle in Athens and we will identify them for you (be sure to include your contact information). Then feel free to treat the animals to kill the remaining ticks.

We may not see Longhorned Ticks in Georgia any time soon, but we do not want to miss them if they do show up. ■

[Return to Index]

AGENT ADVOCATE

Structural Pest Management Program series to aid Extension Agents

Need help generating a little extra revenue for your local Georgia County Extension Office? We have discovered it! The Center for Urban Agriculture (The Center) offers four opportunities for Georgia County Extension offices to generate revenue. In the next four issues of the IPM Program Monthly Newsletter, we will reveal the details for all four opportunities.

The Getting the Best of Pests (GTBOP) is a live webinar series that reaches out to the Georgia Green Industry offering CEU Category Credits from the privacy and luxury of a home or office environment. This GTBOP Green series saves companies time, travel and expenses and provides extension agents user-friendly, useful information and an opportunity to generate a little revenue right from their county office.

The GTBOP Green Webinars are offered on the 3rd Wednesday of every ODD-numbered month. (January, March, May, July, September and November.) These live webinars are accessed online, utilizing the web-based software, Go-To-Webinar, and are aired from 8:15 am to 10:45 am. For more information on the GTBOP Green Webinar Series or other programs that The Center offers, contact the Bodie Pennisi at bpennisi@uga.edu.

For more information on the workshops and other programs from the Structural Pest Management Program, please visit http://www.gabugs.uga.edu. ■

In the next issue, we will discuss the GTBOP Webinar Archives...

REVENUE GENERATING OPPORTUNITIES

How to Use GTBOP.com for Your County

PART 2 OF 4 - SHOW ARCHIVED WEBINAR

One opportunity to generate revenue using the GTBOP Webinar Series is by showing an archived webinar. It takes the same amount of effort as hosting a live webinar without the restrictions of time or dates. The county extension office keeps 100% of the revenue collected for each hosted webinar.

REVENUE GENERATING OPPORTUNITIES

How to Use GTBOP.com for Your County

PART 1 OF 4 - HOST A LIVE WEBINAR

One opportunity to generate revenue using the GTBOP Webinar Series is by hosting a live webinar. It takes very little effort from the county agent and the best part is the county extension office keeps 100% of the revenue collected for each hosted webinar.

HOW TO HOST

1. Click the "Host a Webinar" button in the Extension listserv invitation.
2. Choose a host site, like the county office conference room with internet, computer and projector.
3. Advertise!
4. Print GTBOP sign-in sheet before hosting

FULL PROFIT

Collect any fees you decide to charge as clients arrive and sign in, typically $10 ($5/credit hour), or more to cover refreshments. Your office retains 100% of any revenue collected.

CONTINUING EDUCATION UNITS

Make 3 copies of the sign-in sheet. One for the Center sent via gtbop@uga.edu or by mail, one for participants, and one for you. The Center will submit the sheet to the Georgia Department of Agriculture for CEUs.

AGENT BENEFITS

Another perk is that each agent can count these hours from hosting the live webinar as contact hours with their clients for the GA COUNTS required reporting.

For more information on this series, please contact
Tami Boyle: 770-233-6107, tadams@uga.edu

[Return to Index]

MEDIA MENTIONS

Articles and news stories pertaining to IPM field work written by outside sources.

Georgia farmers enjoying improved peach crop

by Clint Thompson

Last year's summer peach crop was disastrous, but Georgia's peach crop rebounded this summer following colder temperatures in December and January, according to Jeff Cook, University of Georgia Cooperative Extension Agriculture and Natural Resources agent for Taylor and Peach counties.

"We were very optimistic this winter, but then we kind of got our feelings hurt because of that late-season freeze in March. But I will say that everybody is excited about having a lot more peaches this year than last year," Cook said.

The mild winter in 2017 contributed to an 80 percent loss of Georgia's peach crop. Cook estimated that about 70 percent of those losses could be attributed to a lack of chill hours.

Peaches need chill hours with temperatures between 32 and 45 degrees Fahrenheit to mature. Most trees need between 900 and 1,000 chill hours.

Peaches require chill hours to grow, though temperatures that dip below freezing can also hurt the quality of the crop. Peach trees bloom in early to mid-March, so late-season freezes can also damage the crop. According to Cook, a late-season freeze affected this year's crop.

"We started the season with low volume, but now that we are into our high-chill-hour peaches, that volume is picking up with good quality and size," he said.

Georgia peach farmer Lee Dickey manages a farm in Crawford County, Georgia, that covers approximately 1,000 acres. He has been pleased with the early-season varieties that account for 25 to 30 percent of his entire crop.

Peaches are growing better this year in Georgia, thanks in large part to more chill hours experienced during the winter in 2017-18.

"I think that, although we had good chill hours, the quality of the chill this year was not great. We had a lot of hours below 45 degrees and also had a lot of chill below 32 (degrees), which is not ideal," Dickey said. "I think some growers in places, certainly south of us, have seen some chill issues this year, but that's relatively small compared to damage from the freeze."

Dickey was one of many Georgia peach producers who suffered through a warm winter with last season's crop. The lack of cold temperatures was a big reason Dickey harvested only about 20 percent of his standard crop.

Cook has seen cases of bacterial spot disease in many varieties this year. He said it is not something growers experience every year with every variety, but it is a lot more widespread this summer.

"Right now, mainly all we're seeing are leaf spots and some defoliation. We're not seeing too much on the fruit," Cook said.

Bacterial spot is a sporadic leaf-spot disease that can cause defoliation in certain cultivars. Spots can also appear on the fruit, causing damage and leaving fruit unmarketable.

For more information about growing peaches in Georgia, visit www.extension.uga.edu/topic-areas/fruit-vegetable-ornamentals-production/peaches. ■

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[Return to Index]

MEDIA MENTIONS

Articles and news stories pertaining to IPM field work written by outside sources.

Georgia's tobacco crop hurt by excessive rainfall in May

by Clint Thompson

Excessive rainfall in May reduced the potential yield of Georgia's tobacco crop by as much as 15 percent, according to University of Georgia Cooperative Extension tobacco agronomist J. Michael Moore.

Moore believes that some producers experienced as much as 15 to 25 inches of rainfall during the last two weeks in May, a time when tobacco is starting to grow. The added moisture leached a lot of nitrogen — a vital nutrient — out of the soil, which caused the tobacco to turn yellow.

"When you think about losing 15 percent of optimum yield for the season, it's really not a good start. But then again, it's not just Georgia. We see damage in South Carolina and in North Carolina from late crop planting because it's been too wet," Moore said.

The increased rain combined with limited sunlight caused the tobacco roots to suffocate when the soil filled with water. The roots died and began to rot. Moore said farmers are now trying to grow a new root system that will soak up the nitrogen that still resides in the soil. The plant will regrow roots as the soil dries if it did not totally drown.

Some growers replaced some of the nitrogen that leached from the soil to make it available to the plants growing new roots.

"We experienced a drought several weeks prior to the beginning of the rain. We needed rainfall, we just didn't need it all at once and we didn't need the volume that we received," Moore said.

Growers have worked with local UGA Extension agents to determine how best to replace the leached nitrogen, the amount of nitrogen that needs to be replaced based on what was applied earlier, and the amount of rainfall over this period of time in May.

Alex Csinos, Professor Emeritus in Plant Pathology, talks about tobacco during the Tobacco Tour at UGA-Tifton on June 13, 2018.

Eddie Beasley, Berrien County Agriculture and Natural Resources agent, said the current status of local tobacco farms is both good and bad.

"It depends on where you are. We've got a lot of wet areas and a lot of dry areas. A lot of our crop went through a dry spell, which stunted it. Then we got a lot of rain, so we've got a lot of plants under water," he said.

According to Beasley, Berrien County produces more than 1,250 acres of tobacco. Local growers are seeing an increase in tomato spotted wilt virus, and as much as 20 to 30 percent of the county's crop has been impacted by this disease, which is transmitted by thrips.

"The tomato spotted wilt virus has always been a problem for our growers. It's our No. 1 disease problem, our No. 1 impediment to the yield and quality of the Georgia crop," Moore said.

The virus can damage plants' leaves to the point that they're unusable. Plants can also die if they're infected in the first two weeks.

The first round of tobacco harvests in Georgia should begin in the next two weeks. According to Moore, approximately 12,500 acres were planted this year. ■

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[Return to Index]

MEDIA MENTIONS

Articles and news stories pertaining to IPM field work written by outside sources.

Here's why it's important to plant cotton as soon as possible

by Andrew Sawyer

If Georgia farmers plan to plant cotton, they need to do so as soon as possible. Only 86 percent of the state's crop has been planted as of June 10, according to the U.S. Department of Agriculture's Crop Progress and Condition Report for Georgia.

Late-planted cotton may be inevitable for many Georgia farmers this year because persistent rains in May kept them out of the field and delayed planting.

Friday, June 15, is the final day that farmers can plant cotton and expect decent yields. Although farmers can sometimes get away with planting this late, it generally goes against the University of Georgia Cotton Team's recommendations.

Georgia cotton growers who finish planting their cotton this week should:

- Increase seeding rates by 25 percent. Typically, farmers aim for plant stands of at least 1.5 plants per row foot, but now at least two plants per row foot are necessary.
- Cut nitrogen rates by as much as 25 or 30 percent at planting and side-dressing.
- Plant growth regulators (PGRs) are the best way to manage early growth. A PGR is a chemical compound that limits the vegetative growth of the plant. Excessive growth can lead to boll rot and greater potential for target leaf spot disease.

The UGA Cotton Team stresses that farmers who plant late have very little room for error. Late plantings mean producers have only one shot at good plant stand development. Conditions must be ideal, and water must be applied as needed if planting in an irrigated field.

The UGA Cotton Team stresses that farmers who plant late have very little room for error. Late plantings mean producers have only one shot at good plant stand development. Conditions must be ideal, and water must be applied as needed if planting in an irrigated field

It is also extremely important to scout regularly for insects. Thrips are the main threat to seedling cotton. To monitor a field's thrip risk index at the local level, visit the Thrips Infestation Predictor for Cotton website at www.climate.ncsu.edu/CottonTIP. Once fruiting is initiated, all threats from plant bugs, stink bugs and other insects should be monitored regularly. When growers see they've reached an economic threshold, they should apply insecticides as soon as possible.

For additional information about agriculture in Georgia's Wilcox County and across the state, check the Wilcox County Ag blog at https://site.extension.uga.edu/wilcoxcoag. ■

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[Return to Index]

FUNDING OPPORTUNITIES

Agriculture and Food Research Initiative – Foundational and Applied Science Program

A letter of intent for grant application is due July 18, 2018.

The AFRI Foundational and Applied Science Program supports grants in six AFRI priority areas to advance knowledge in both fundamental and applied sciences important to agriculture. The six priority areas are: Plant Health and Production and Plant Products; Animal Health and Production and Animal Products; Food Safety, Nutrition, and Health; Bioenergy, Natural Resources, and Environment; Agriculture Systems and Technology; and Agriculture Economics and Rural Communities. Research-only, extension-only, and integrated research, education and/or extension projects are solicited in this Request for Applications (RFA). See Foundational and Applied Science RFA for specific details. For more information, please visit their website. ■

Southern Region IPM Center – Critical Needs and Emerging Issues

The submission deadline is December 31, 2018

This Request for Applications will fund projects that address a critical or emerging IPM issue of regional or national significance. The Center has a small amount of funding to help facilitate timely responses to critical issues, as an early regional response can lead to more timely and effective solutions. Our purpose is to provide a small source of funds that can be used to start work on new and critical issues, and to support projects that offer new and innovative solutions to emerging IPM challenges. For more information, please visit their website. ■

Southern Region IPM Center – IPM Documents

The submission deadline is December 31, 2018

This Request for Applications will fund projects that address the need for documents that accurately reflect the current state of Integrated pest management on a regional or national basis. IPM Documents may address crops or other (noncrop) settings for a single state or combination of states. Funding provided by the center are intended to help facilitate authoring of these documents including travel, meeting, and survey expenses associated with information gathering. Currently, 3 types of documents are recognized: Crop profiles (CP), Pest Management Strategic Plans (PMSP), and IPM Priorities. For more information, please visit their website. ■

It's time to get social!
Follow us on Twitter and Instagram!

@UGAIPM

We value your feedback. Please complete our survey.

To be added to the mailing list, please call us at 706-542-1320 or email us at ipm@uga.edu.

The UGA Integrated Pest Management Newsletter is a monthly journal for researchers, Extension agents, Extension specialists and others interested in pest management. It provides the most updated information on legislation, regulations, and other issues concerning pest management in Georgia.

Do not regard the information in this newsletter as pest management recommendations. Consult the Georgia Pest Management Handbook, extension publications or appropriate specialists for additional information.

[Return to Index]