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### UGA IPM INFORMATION:

Have comments on the newsletter redesign? Be sure to fill out our [survey](#) to let us know your thoughts!

The University of Georgia Integrated Pest Management website is undergoing renovations. Be sure to check out the new website at [ipm.uga.edu](http://ipm.uga.edu) after February 15, 2018. New components will include blogs, news and events feeds as well as updated photographs!

We have a new email address! Have questions about the newsletter, website, or basic information? Send us an email at [ipm@uga.edu](mailto:ipm@uga.edu)!

IPM in vegetables, this provides the opportunity to work on a variety of issues as Georgia's vegetable production industry is very diverse with commercial production of a wide variety of crops. Issues of emphasis have included insecticide resistance in diamondback moth and sweet potato whitefly, integration of new chemistries into pest management programs, evaluation of new technologies such as Bt sweet corn, and studies on basic pest biology.

The editors of the newsletter requested one interesting fact about Dr. Sparks. He provided one entertaining fact – at least it has always been entertaining to his friends and colleagues. Despite having obtained the mature age of 60 this past October, Dr. Sparks has four children with ages of 26, 20, 16, and 10. Yes, the youngest will be 11 on March 3, 2018. This has always seemed to provide immeasurable joy to Dr. Sparks' close friends and tremendous pride and joy to his parents.

Located at: CAES Tifton Campus | 2360 Rainwater Road | Tifton, GA 31793

## SPECIALIST SPOTLIGHT

*The IPM program consists of many specialists and faculty throughout the state of Georgia. This section is dedicated to bettering knowledge of your colleagues.*

### Alton 'Stormy' Sparks



Dr. Sparks grew up in the world of entomology. His father and one of his older sisters are entomologists, and he started his entomology career during high school as a student worker in the entomology department in Tifton. Dr. Sparks obtained a B.S.A. in entomology at the University of Georgia and then went to Louisiana State University where he completed both a M.S. and Ph.D. working in soybean entomology. He was the last student to complete a degree under Dr. Dale Newsom at LSU.

After a brief post-doc at LSU, Dr. Sparks landed his first real job with the Texas

Agricultural Extension Service as the Extension Entomologist for the most southern district in Texas. Within the Texas A&M system, extension personnel are generally responsible for all entomology issues within their district. The Lower Rio Grande Valley area of Texas is extremely diverse and provided the opportunity to learn a great deal of applied entomology including production issues in cotton, citrus, and vegetables, as well as spending considerable time on education associated with the impending arrival of Africanized bees in the U.S.

After 14 years in the LRGV, Dr. Sparks had the opportunity to return to Georgia as an Extension Entomologist in Tifton with the responsibility for entomology issues in commercial vegetable production. Dr. Sparks has been back in Tifton for a little over 15 years. While his program is "focused" on

**UPCOMING EVENTS:**

- Feb 9-10 – Sustainable Agriculture Conference | Watkinsville, GA
- Feb 13 – Home Orchard Management | 9:00 AM | \$15 | Trenton, GA
- Feb 13 – Tattnall-Evans County Cotton Production Meeting | 12:00 PM | Reidsville, GA
- Feb 15 – Peanut Production Update | 12:00 PM | Swainsboro, GA
- Feb 15 – Vegetable and Small Fruit Production Training – Journeyman Farmer Certificate Program Part 2 | 6:30 PM | Cumming, GA
- Feb 16 – Corn and Soybean Production Meeting | 12:00 PM | McRae, GA
- Feb 16 – Corn Production Meeting in Telfair County | 12:00 PM | McRea, GA
- Feb 21 – Corn and Soybean Production Update | 12:00 PM | Swainsboro, GA
- Feb 22 – Hay and Baleage Production Short Course | 8:00 AM | Carrollton, GA
- Feb 23 – Pesticide Applicator Licensing Exam Preparatory Class for Category 24 | 8:00 AM | Lawrenceville, GA
- Feb 23 – Tattnall-Evan County Corn and Soybean Production Meeting | 12:00 PM | Reidsville, GA
- Feb 27 – Tattnall-Evans County Pecan Production Meeting | 12:00 PM | Claxton, GA
- Feb 28 – Fencing Field Day | 10:00 AM | Tifton, GA
- Feb 28 – Weed Management Update | 12:00 PM | Swainsboro, GA
- Feb 28 – Northeast Georgia Vegetable Production Meeting | 5:00 PM | Blairsville, GA

**For more events, please visit the UGA Extension Calendar.**

**EVENTS**



**Pesticide Credits Applied For**

**Integrated Pest Management Field Day**

**Agenda:**

- 9:45 Welcome and Introductions.....Will Lovett & Renee Allen
- 10:00 Discuss Gall Midge, Thrips, & SWD IPM.....Dr. Ash Sial
- 11:00 Sprayer Calibration Demo.....Dr. Glen Rains
- 11:30 Hear from our Sponsors.....Sponsors
- 12:00 Lunch, provided by Shorty's BBQ.....Alma, GA

**When:** Wednesday, Feb. 21, 2018

**Time:** 9:45 AM– Lunch

**Place:** Blueberry Research Farm, 163 Research Rd, Alma, GA 31510

*For questions about accessibility or to request accommodations please contact our office at 912-632-5601 or uge4005@uga.edu*

**Thanks to our sponsors:**



**Good Bugs vs Bad: Using biological controls in SWD management**



A webinar presentation from the Sustainable SWD Management SCRI Project

February 23, 2018  
12 – 1 pm ET



Register at: <http://bit.ly/2EhwqPf>



**WEBINAR**

*Title:*

**Organic Management of spotted wing drosophila**

*Date:*

**February 27, 2018 (Tuesday) 3:00-4:30pm Eastern**

Dear Organic Fruit Growers, Pest Management Professionals and other stakeholders: Spotted wing drosophila (SWD) has emerged as a devastating pest of small and stone fruits worldwide. We have organized a webinar to provide you with the most updated information on everything you need to know for organic management of SWD.

**Please register at:** <http://articles.extension.org/pages/74612> to attend this webinar.

**Presented by:** Ash Sial (UGA), Mary Rogers (UMN), Christelle Guedot (UW), Matt Grieshop (MSU), Kelly Hamby (UMD), Rufus Isaacs (MSU), Vaughn Walton (OSU), Oscar Liburd (UF) and other members of SWD OREI project team.

*Sponsored by:* Award No. 2015-51300-24154

Organic Agriculture Research and Extension Initiative (OREI)

USDA National Institute of Food and Agriculture





## FROM THE FIELD

*This section includes articles and news stories pertaining to IPM field work written by IPM members.*

### **The Cowpea Curculio**

David Riley

Department of Entomology, University of Georgia, Tifton, GA 31793

Originally published 8/5/16 by [COWPEA PROFILES](#)

#### **Where It Is Found**

The cowpea curculio, *Chalcodermus aeneus* Boheman, is a weevil that seems to have originated from the Caribbean / Central America region of the New World. It has never been reported in the Old World, but has been reported as a major pest of southern peas in the SE USA for well over a century. The distribution of the weevil in the SE USA has been reported roughly in the triangle from southern Texas to North Carolina and south to Florida. However, with the tremendous decline in southern pea acreage over the last 50 years, the distribution is more scattered and tends to be reported more in traditional southern pea production areas of Alabama, Georgia and South Carolina in recent years. Outside of the USA, this weevil or closely related species are found in México, Belize, Guatemala, Honduras, Nicaragua, Peru, Brazil and Jamaica.

#### **Biology of the Curculio**

It takes an average of 30 to 40 days for the cowpea curculio to go from egg to adult. The adult lay eggs into the tissue of the pod or all the way through the pod wall into the tissue of the developing pea. Each female can lay up to 280 eggs (avg. 122) over a period of 45 days. Eggs are in the plant tissue 3-6 days before they hatch and begin feeding on the pea. The larva or “grub” has no legs and develops through 4 larval instars over 6-9 days. The larva reaches a length of 7 mm when mature and then eats its way out of the pod, falling to the ground. Once on soil, the grub quickly digs in 1-6 inches and begins making a pupal cell or cavity in the soil. The pre-pupal stage can last about 6 days. Once in the pupal cell in the soil, it can be in the pupal stage (see – The soil phase Image) for 4-13 days and then as a newly formed adult (top right – The soil phase Image) for 1-5 days before it crawls out of the soil. In the first generation, we typically think that adults emerge ~3 weeks after they have entered the soil.

This last winter, we observed that adults emerging after the second generation can wait for months before they crawl off of the soil surface into collection containers in emergence traps. We detected the greatest emergence rates in November to the first week in January. Therefore, the amount of time that the adult spends in the soil during the winter can be quite long. Adult overwinter on non-reproductive hosts, such as broomsedge, ~5 months and can experience up to ~90% mortality due to naturally occurring disease, predators, etc. We begin seeing movement of the surviving adults into southern pea fields as early as April, but only lay eggs once the flowering structures appear on the southern pea crop. Therefore insecticide sprays for curculio are recommended to begin at first bloom in the spring.

#### **Curculio Crop Damage**

Both the larval and adult feeding causes damage to the pea (see – The plant phase Image) and can make it unmarketable. Heavy feeding by adults can reduce the amount of flowering and therefore fruit set in the crop. As much as 40-60% yield loss can be typical. From our recent studies and based on previous publications we know that specifically cowpea curculio, more so than other major insect pests of cowpea in the USA, is extremely destructive to cowpea crop. This is in spite of cowpea plant “resistance” that has been reported in the literature. The main resistance trait has been the thickness of the pod wall, such as in Green Acre varieties, which also have a small pea and lower shellout weights than a blackeyed pea or pinkeyed purple hull (see – The harvest phase Image). Our recent data indicated that as little as 10% “stung” peas resulted in losses of

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42.6 bushels per acre based on an average of 150 bushels per acre expected yield. Above 30% “stung” peas resulted in no marketable southern pea yield. In 2010 and 2011, multiple reports of curculio outbreaks and control failures led to field tests. Field trials indicate that pyrethroid tolerance or possibly resistance is on the rise in Georgia, similar to that reported by N’Guessan and Chalfant (1990). Pyrethroids are currently the primary insecticides used against cowpea curculio throughout the southeast likely driven by resistance to older insecticides. Due to on-going damage issues, the acreage of southern has dropped in areas, and in the presence of curculios, fresh frozen pea production appears to be uneconomical.

### The soil phase

What most people don’t realize is that the cowpea curculio can spend a considerable amount of time in the soil. When the grubs complete their development in the pod of the pea, they dig out of the pod, fall to the ground and dig in several inches to pupate (middle image above). In the summer generation, after several weeks in the soil, the new adults emerge with a light brown color that eventually darkens to almost jet black. In the winter, the adult can be in the soil for months.

### The plant phase

What most people see are the adults on the foliage, stems and fruit and/or the damage caused by the developing grubs in the pod (above). This is where adults lay eggs in the pods, and where all of the control actions, sprays, etc. have traditionally taken place. Unfortunately, foliar sprays are not working well in recent times. If you cannot keep your damage to significantly less than 20 % “stung” peas, it is not profitable to grow peas for the fresh frozen market at your location.

### The harvest phase

Not only does the number of “stung” peas have a direct negative correlation with harvested pea weight, the contamination of stung peas and grubs in the shelled peas can be a major negative issue for buyers.



### Monitoring and Management of Blueberry Gall Midge

Ash Sial<sup>1</sup>, Brian Little<sup>1</sup>, Craig Roubos<sup>1</sup>, James Jacobs<sup>2</sup>, William Lovett<sup>3</sup>, Joe Slusher,<sup>4</sup>

<sup>1</sup>Department of Entomology, University of Georgia, <sup>2</sup>UGA Extension, Pierce County, <sup>3</sup>UGA Extension, Bacon County, and <sup>4</sup>UGA Extension, Ware County

Originally published January 2016 by [UGA IPM NEWSLETTER](#)

The reports of blueberry gall midge infestations in Georgia blueberries have become more common over the last couple of years. Although blueberry gall midge has historically been referred to as a rabbiteye problem, recently it has been reported to be a concern in some southern highbush fields. The majority of the highbush infestations were primarily reported in older blocks and those surrounded by rabbiteye blueberries. The southern highbush varieties that infestations have been reported include Emerald, Farthing, Meadowlark, and Star. If you haven't already done so, start monitoring and if you observe gall midge larvae or adults in your orchard, implement management strategies immediately.

Blueberry gall midge, *Dasineura oxycoccana* (Johnson) (Diptera: Cecidomyiidae) was first identified as a pest of rabbiteye blueberries in the southeastern United States in early 1990s. Since then, gall midge has been confirmed as a pest of blueberries in major blueberry-growing states throughout the United States. The gall midge larvae feed on developing floral and vegetative buds in southern highbush and rabbiteye blueberries. The infested buds appear dry and shriveled, and eventually disintegrate. Severe gall midge infestations can cause up to 80% crop loss if appropriate control measures are not implemented in a timely manner.

Adults are very small and fragile flies, approximately 2-3 mm long (Fig. 1a). Adult flies have long slender legs, globular cylindrical antennae, and transparent wings with long black hair-like structures and reduced venation. Females lay eggs in floral or vegetative buds just after bud swell, as soon as scales of flower buds begin to separate and the tips of flowers become visible. Totally dormant buds are not infested. The adult stage probably lasts only for a few days (less than a week) during which time a single female can lay up to 20 eggs. Eggs hatch in 2-3 days. First instar larvae are less than 1 mm long, white and almost transparent. They then go through three instars and develop into mature larvae in about 7-10 days (Fig. 1b). The full-grown larvae are about 1mm long, 0.3 mm wide, legless, and reddish-orange in color. Once fully fed, the larvae cease feeding, come out of the buds and drop to the ground to pupate in soil. The puparia transform into adult flies in a few days. In South Georgia, gall midges can complete 5-6 generations from January through June.

Earlier in the season, midge larvae feed on floral bud tissues and on the pedicels that hold the individual flower buds to the peduncle within the developing flower cluster. As a result, flower buds dry up and disintegrate within about two weeks after infestation (Fig. 2). Depending on severity of infestation, high levels of flower bud abortion (as high as 80%) may occur. Although both rabbiteye and southern highbush blueberries are susceptible to blueberry gall midge, the impact of gall midge infestation is relatively less on early blooming cultivars of southern highbush because of the earlier timing of floral bud development. Later in the season, as plants progress to vegetative budding, oviposition also occurs on the new shoot meristems. Infested vegetative buds swell and the



**Figure 1.** Blueberry gall midge (a) Adult, (b) Larva (Credit: Little & Sial, University of Georgia)



**Figure 2.** Blueberry gall midge infested bud (Credit: Little & Sial, University of Georgia)

outer leaves curl enfolding feeding larvae inside. Vegetative meristems may also be infested and killed leading to distorted and blackened shoot tips, characteristic symptoms of damage caused by gall midge. The damage caused by gall midge in blueberries might be confused with frost damage or boron deficiency. The severity of damage depends on temperature and other climatic factors, and generally tends to be worse after mild winters.

The small size of the blueberry gall midge larvae and adult flies, and the larval feeding occurring inside the buds makes field detection very difficult before damage occurs. However, blueberry gall midge infestations can be detected prior to the onset of symptoms by collecting bud samples and using emergence traps and panel traps.

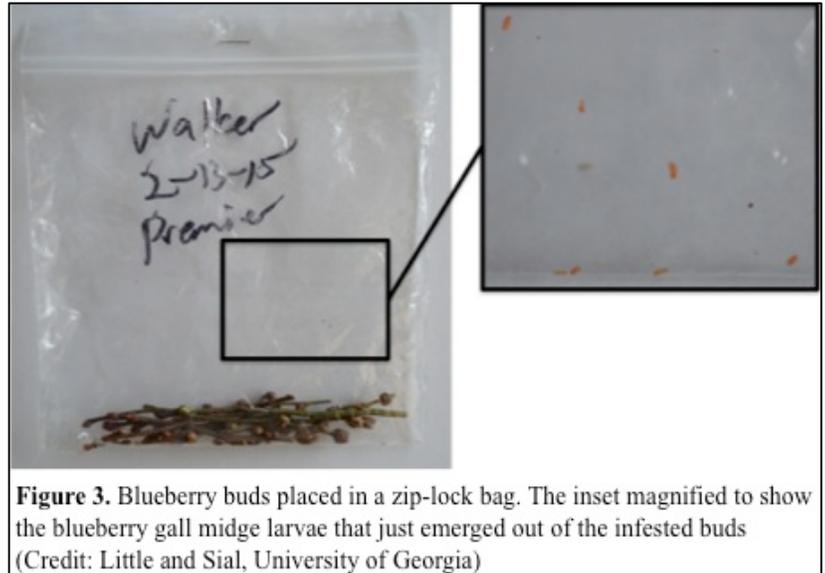
**BUD SAMPLING:** For bud sampling, collect five young buds from 10–15 randomly selected bushes per acre. Place the buds into a zip-lock bag at room temperature. If buds are infested, reddish-orange larvae will begin to emerge after 3–4 days (Fig. 3).

**EMERGENCE TRAPS:** The emergence traps made up of an overturned bucket with a sticky transparent window at the top (Fig. 4) can be used to detect gall midge populations earlier in the season. These traps can also be used to predict peaks in larval infestation which is important for targeting pesticide application.

**PANEL TRAPS:** Panel traps consisting of 1ft x 1 ft sticky panel attached to a metal or wooden post (Fig. 5) can also be used to detect midge adults.

The blueberry gall midge larvae are very difficult to kill using insecticides because they are protected by surrounding plant tissue while feeding inside the buds. It is therefore extremely important to kill adults before they lay eggs in the buds. However, because of their ability to go through multiple generations per season and short adult lifespan, careful scouting and timing of insecticide application are key to successful control of blueberry gall midge. Insecticides that have been shown to be effective against blueberry gall midge include Diazinon, Delegate, Imidan, Malathion, and Assail. Entrust is the only effective material for certified organic blueberries. For specific insecticide recommendations, please refer to Southeast Regional Blueberry Integrated Management Guides available at

<http://www.smallfruits.org/SmallFruitsRegGuide/index.htm>. Several species of endoparasites such as *Synopeas* spp., *Platygaster* spp., and *Inostemma* spp. have been reported to contribute significantly to the biological control of blueberry gall midge populations, but the actual impact will depend on populations densities of these natural enemies in the blueberry orchards.



**Figure 3.** Blueberry buds placed in a zip-lock bag. The inset magnified to show the blueberry gall midge larvae that just emerged out of the infested buds (Credit: Little and Sial, University of Georgia)



**Figure 4.** Bucket emergence trap (Credit: E. M. Rhodes, University of Florida)



**Figure 5.** Panel Trap (Credit: E. M. Rhodes, University of Florida)



## References:

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- 3) Lyrene, P. M. and J. A. Payne. 1993. Blueberry gall midge: A pest in rabbiteye blueberry in Florida. Proceedings, Florida State Horticulture Society, 105: 297-300.
- 4) Lyrene, P. M. and J. A. Payne. 1995. Blueberry gall midge: A new pest of rabbiteye blueberries. Journal of Small Fruit and Viticulture 3: 111-124.
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## MEDIA MENTIONS

*This section includes articles and news stories pertaining to IPM field work written by outside sources.*

### **UGA Extension fruit pathologist says use lime sulfur on blueberries to manage Exobasidium disease**

By Clint Thompson

Published 2/8/18 by [CAES MEDIA NEWSWIRE](#)

The key to managing Exobasidium leaf and fruit spot disease in blueberries, which makes the fruit unmarketable, is one application of lime sulfur approximately two weeks prior to bud break, according to Jonathan Oliver, University of Georgia Cooperative Extension fruit pathologist.

Exobasidium disease causes spots on the leaves and fruit, decreases the fruit's size and, because of the fruit's immaturity, gives it a bitter taste. The leaf spots eventually turn velvety and white and lead to early defoliation, and the spotted fruit is not fit for sale.

Blueberry plants are currently dormant — they're alive, but not actively growing. Oliver, who specializes in small fruits, believes that lime sulfur, a chemical spray used to control insects and fungi on fruit trees, can reduce the amount of inoculum carried over from the previous growing season. The application of lime sulfur will reduce disease occurrences for the upcoming year, he said.

"This has the potential to almost completely control in-season Exobasidium disease on both the leaves and fruit," Oliver said.

Blueberry producers hope to rebound from a devastatingly low crop in 2017 due in large part to a late-season freeze last March. The freeze suppressed Georgia's blueberry production, and growers lost about 70 percent of their crop.

Georgia has experienced several bouts of freezing temperatures this winter, but those temperatures haven't affected the still-dormant plants. Once the plants emerge from dormancy this spring, blueberry producers hope to avoid any subfreezing temperatures.



Exobasidium disease causes spots on the leaves and fruit, decreases the fruit's size and, because of the fruit's immaturity, gives it a bitter taste.



The colder temperatures this winter may have a positive impact on reducing some blueberry diseases. In warmer temperatures, certain fungi can grow on leaves in greater numbers throughout the winter. This proliferation makes some diseases worse and allows them to occur earlier in the spring.

“The colder weather we have been having should help to somewhat reduce, but not eliminate, carryover inoculum for some foliar diseases. However, other fungal diseases will be unaffected by the colder weather,” Oliver said.

This year, growers must remain aggressive with fungicide spray programs because carryover inoculum will be prevalent in plantings that were not sprayed or well maintained in 2017, Oliver said.

There are additional measures that blueberry producers can take to reduce disease pressure. Excessive water in the root zone is a key component in the development of root rot disease. Growers can reduce this threat by using raised beds to ensure that there’s adequate drainage and by planning proper irrigation for blueberry fields.

Some diseases, like mummy berry, overwinter on infected berries. Growers can decrease the risk of this disease by burying or removing infected berries from the field, but these measures will not eliminate the disease, Oliver said.

“Typically, in the warm, humid conditions of south Georgia, many fungal diseases can be devastating if not properly managed,” Oliver said.

Georgia is the country’s No. 1 producer of blueberries. According to the UGA Center for Agribusiness and Economic Development, the statewide 2016 farm gate value for blueberries totaled \$283.8 million. Blueberries accounted for 38.1 percent of Georgia’s fruit and nut production.

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### **Peach farmers optimistic about 2018 after a disastrous 2017 crop**

By Merritt Melancon

Published 2/1/18 by [CAES MEDIA NEWSWIRE](#)

Georgia is due for another blast of arctic air this week and, while Georgians themselves might be groaning about the cold weather, it’s beneficial for the state’s peach crop.

These chilly days provide the cold temperatures that Georgia’s fruit crops need for healthy production this summer.

After warm winters in 2016 and 2017 left the state with near-record low numbers of chill hours, peach crops were already on the ropes. Then growers suffered catastrophic damage from a late-March frost and wind damage from Hurricane Irma.

With chill hours back to normal levels — around 900 hours in middle Georgia — peach experts and farmers are very optimistic about the triumphant return of the state’s projected \$48 million peach crop this summer.

“We’re in good shape; we really only need about 900 (chill) hours,” said Jeff Cook, University of Georgia Cooperative Extension Agriculture and Natural Resources agent in Peach and Taylor counties. “Last year we had less than 500 — we had 493.”



There is a five-county area surrounding Peach County that accounts for over 90 percent of the state's peach production. Georgia's top three peach-producing counties are Macon, Peach and Taylor, with the major producers managing orchards in several neighboring counties.

Peach trees are on track to produce flowers in March and, barring any late frost events, should have a good peach season, Cook said.

Still, growers must be vigilant to ensure that the damage caused by last year's weather doesn't affect this year's crop.

At the Southeast Regional Fruit and Vegetable Conference in early January, UGA Extension plant pathologists and entomologists warned growers that last year's climate problems could lead to insect and disease problems this year.

### About chill hours

Peach trees need between 650 and 950 chill hours, or hours below 45 degrees, to produce a healthy number of leaves, blooms and fruit the following summer.

In 2017, Georgia's peach trees — the bulk of which are centered in the middle of the state — received less than 500 chill hours. Even for warm-weather varieties, the warm winter was extremely detrimental, with trees producing few leaves, much less blooms or fruit, said Dario Chavez, UGA Extension peach horticulturist.

Chavez works to pinpoint varieties that may have more flexible chill hour requirements and that bloom later to protect from late frosts. Last year's weather helped him pinpoint some promising contenders able to combat the state's increasingly erratic climate.

"Identifying those unique varieties that thrive in conditions like we saw in 2017 is a priority. This would provide us with important information that will prepare us if and when this situation presents itself again in the future," Chavez said. "Breeders could use this information to determine targets for future varieties."

While he's looking for a long-term solution, farmers are working to combat some of the damage last year's warm winter caused.

### Weakened trees and a year off from spraying

Lack of chill hours meant many trees didn't produce flower buds last season and, in some instances, didn't produce enough leaves.

Last year's lack of leaves could cause some trees to be weaker this season. The late freeze combined with a lack of buds on some trees means many farmers didn't spray their fields for diseases like scab and brown rot, and for insects like the plum curculio and the peach tree borer.

Both disease and insect populations may rebound with this year's peach crop.



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“You’ve got to make sure you’re Johnny-on-the-spot with your spray program to combat brown rot and scab this year,” UGA Extension fruit plant pathologist Phil Brannen told growers.

He also told them to be on the lookout for symptoms of Phytophthora root rot, which could be a problem for young trees that were damaged by Hurricane Irma’s winds in fall 2017.

“Young trees with their leaves out are basically like a pompom with the wind blowing them around,” Brannen said. “A lot of trees were knocked over, but even if they weren’t, they may have ripped their roots from the trunk. Older trees can handle that better, but with young trees, the wind will just rip them.”

While Phytophthora root rot won’t spread as easily from tree to tree as scab or other fungal diseases, farmers should be on the lookout for loss of leaves, which could indicate rot. At this point, trees with root rot will likely have to be replaced, according to Brannen. There are some fungicides that might help prevent the rot, but once plants show symptoms, it is generally too late for fungicides.

### **Insect issues**

Brett Blaauw, a UGA Extension fruit crop entomologist, warned that unmanaged orchards and peaches that fell on orchard floors after last spring’s freeze could have harbored insect pests that may affect this year’s crop.

This is especially true for San Jose scale, lesser peachtree borers and picnic beetles. Farmers need to stay on top of their management programs to avoid problems later in the season, he said.

He also advocated that farmers adopt a brown marmorated stinkbug surveillance program. While the invasive stinkbug hasn’t been a problem in Georgia peach orchards yet, it has affected other crops in surrounding states. The stinkbug is known to eat 100 different host plants and is active most of the year, Blaauw said. Farmers can get a head start on managing these new pests by monitoring their orchards between May and October.

“When you have that many bugs that can eat that a large of a variety of crops, it’s just a matter of time until it becomes an issue,” he said.

### **On to summer**

With all of that in mind, Cook said his farmers are ready for the season ahead. They’re taking special care to guard against pests and diseases this year and hoping for a great growing season.

“It’ll be steady pruning and spraying for the next few weeks,” he said. “They are already getting ready.”

For more information about peach production in Georgia, visit [extension.uga.edu](http://extension.uga.edu) or call 1-800-ASK-UGA1.

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### **National Pesticide Safety Education Month launched to promote safe pesticide use**

By Christina Conner

Published 1/31/18 by [CAES MEDIA NEWSWIRE](#)

Hundreds of people get sick each year from inappropriate pesticide use, but those who don’t deal with pesticides daily may not think about it very often.



Pesticides are used in homes, workplaces, apartments, farms and other places where humans need to control pests such as weeds, insects, fungi, rodents and even viruses. Of the 11 states participating in the Centers for Disease Control and Prevention's (CDC) pesticide safety program, workers reported 853 serious injuries from pesticides in 2011, according to the CDC.

During National Pesticide Safety Education Month this February, University of Georgia Cooperative Extension personnel urge homeowners, and all Georgians, to learn more about the safe use, storage and disposal of pesticides. Land-grant universities across the nation provide programs to educate both public and private sector groups about pesticide safety.

"Pesticide safety education is key to helping pesticide applicators, both commercial and agricultural, safely and effectively use available pesticides to protect their crops and livelihoods," said Mickey Taylor, UGA Extension Pesticide Safety Education Program (PSEP) coordinator. "At the same time, they want to protect themselves, their employees and colleagues from any potential ill effects of pesticide use in addition to protecting their families and neighbors. As good stewards of the land, (they want to) preserve our environment for the future."



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This year, the Weed Science Society of America (WSSA), the American Phytopathological Society (APS) and the Entomological Society of America (ESA) have joined forces to highlight pesticide safety education programs and to teach pesticide safety to the public during the collaboration's inaugural National Pesticide Safety Education Month.

UGA Extension's PSEP promotes the safe, responsible use of pesticides by individuals and commercial groups by providing training programs, materials and educational resources covering pest identification, personal safety, safe storage and disposal of pesticides, environmental protection, pesticide drift and runoff prevention, threatened and endangered species protection, water quality protection, and food safety.

"Georgia's PSEP offers online training modules covering core pesticide safety topics for agricultural producers seeking private applicator licenses, and core and some category study guides for commercial applicators of pesticides," Taylor said. "In addition, recertification classes are offered in requesting counties around Georgia, as well as regional training classes that offer re-certification credit hours."

PSEP also offers an online training course, the Georgia Competent Applications of Pesticides Program, that teaches basic pesticide safety to homeowners, public service employees and public volunteers, like Master Gardener Extension Volunteers, according to Taylor.

"This allows anyone in Georgia who might want to learn about the proper and safe use of pesticides to do so from the comfort of their own living room," Taylor said.

Taylor is the editor of UGA Extension's "Georgia Pest Management Handbook," which is revised and published annually. Copies of the handbook are provided to all UGA Extension Agriculture and Natural Resources agents and are sold to crop advisers, chemical distribution companies and to the general public throughout the Southeast.

More information about UGA Extension's pesticide safety resources can be found at [www.extension.uga.edu/programs-services/pesticide-safety-education](http://www.extension.uga.edu/programs-services/pesticide-safety-education).

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## UGA entomologist encourages the use of cultural practices in managing spotted wing drosophila (SWD)

By Clint Thompson

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University of Georgia entomologist Ashfaq Sial advises Georgia blueberry farmers to manage the spotted wing drosophila (SWD), the crop's most destructive pest, by incorporating cultural practices into farming.

Practices like heavy pruning, controlled burns of the wooded areas surrounding blueberry fields, and the use of weed mat as a ground cover are effective management tools. These practices ensure the success of SWD management programs implemented during harvest, the time when blueberries are most vulnerable to SWD infestations.

SWD can inflict costly damage on blueberry production, and these management techniques are required to fight this pest, according to Sial. SWD deposit eggs into ripe blueberries and leave the fruit unmarketable. Buyers will not accept blueberries with SWD damage.

SWD exist in all of Georgia's blueberry-producing counties, all of which are concentrated in the southeastern part of the state. Research on the pest's biology and ecology shows that SWD will persist, but UGA and UGA Cooperative Extension researchers have developed strategies to effectively control and protect fruit from SWD infestations, according to Sial.

"The maximum impact of SWD was seen in 2013, when more than 20 percent of the crop was lost and several farmers' crops were rejected, which led to 100 percent crop loss," Sial said. "As long as farmers are able to implement management programs in a timely manner, we can keep SWD's impact to minimal levels."

Since joining the UGA College of Agricultural and Environmental Sciences faculty in late 2013, Sial has invested a lot of time and resources, provided by farmers, the state government and federal government through grants, to increase awareness of SWD and develop management programs.

Blueberry orchards should be closely monitored for SWD through traps. Tall traps with a greater bait surface area attract more of the pests. Holes in the traps should be wide enough so that flies can enter, but narrow enough to keep the bait from quickly evaporating.

Growers should check the traps weekly from the time the fruit starts to ripen, or change color, through the end of harvest. Once SWD are detected in the traps, producers need to apply effective insecticides.

Another viable management option involves pruning in the fall, usually after harvest. Research sponsored by the U.S. Department of Agriculture National Institute of Food and Agriculture through the Organic Agriculture Research and Extension Initiative grant shows that heavy pruning opens up the canopy, which increases light penetration and temperature. This pruning creates a less-than-ideal environment for SWD and reduces the risk of infestation, Sial said.

"Now that farmers are aware of this problem and have the tools to identify this problem and implement effective management programs, crop loss due to spotted wing drosophila will continue to decrease with very few to no rejections at the packing lines," Sial said.



Spotted wing drosophila deposit eggs into ripe blueberries and leave the fruit unmarketable. Buyers will not accept blueberries with SWD damage.



While SWD remains the key pest that blueberry farmers must be mindful of, Sial cautions producers to be wary of blueberry gall midges. These tiny flies feed inside young growing buds. Infestations can go unnoticed if a monitoring plan is not established.

“The reports of gall midge infestations have increased tremendously over the past few years, particularly since we have started to use broad-spectrum insecticides for SWD,” he said. “These insecticides can kill beneficial insects in the orchards that were keeping secondary pests, such as the gall midge, under control.”

Several years of insecticide use have significantly decreased populations of the natural enemies of blueberry pests. Consequently, blueberry growers must apply pesticides to control populations of pests, like gall midge, thrips, scales and whiteflies.

Sial is part of the UGA Blueberry Team. The team conducts research on blueberries and provides real-time advice to the state’s growers through its blog at [blog.caes.uga.edu/blueberry/](http://blog.caes.uga.edu/blueberry/).

Those interested in learning how to make a trap for spotted wing drosophila can go to <https://www.youtube.com/watch?v=hVOn5SHqKgl>.

## FUNDING OPPORTUNITIES

*This section provides IPM grant information.*

### Organic Agriculture Research and Extension Initiative

The Organic Agriculture Research and Extension Initiative (OREI) seeks to solve critical organic agriculture issues, priorities, or problems through the integration of research, education, and extension activities. The purpose of this program is to fund projects that will enhance the ability of producers and processors who have already adopted organic standards to grow and market high quality organic agricultural products. Priority concerns include biological, physical, and social sciences, including economics. The OREI is particularly interested in projects that emphasize research, education and outreach that assist farmers and ranchers with whole farm planning by delivering practical research-based information. Projects should plan to deliver applied production information to producers. Fieldwork must be done on certified organic land or on land in transition to organic certification, as appropriate to project goals and objectives. Refer to the [USDA National Organic Program](#) for organic production standards. The closing date for the grant application is March 1, 2018. For more information, please visit their [website](#).

### Organic Transitions

The overall goal of the Organic Transitions Program (ORG) is to support the development and implementation of research, extension and higher education programs to improve the competitiveness of organic livestock and crop producers, as well as those who are adopting organic practices. NIFA administers the ORG program by determining priorities in U.S. agriculture through Agency stakeholder input processes in consultation with the NAREEEAB. ORG will continue to prioritize environmental services provided by organic farming systems in the area of soil conservation, pollinator health, and climate change mitigation, including greenhouse gases (GHG), as well as the development of educational tools for Cooperative Extension personnel and other agricultural professionals who advise producers on organic practices, and development of cultural practices and other allowable alternatives to substances recommended for removal from the National Organic Program’s National List of Allowed and Prohibited Substances. It is expected that all projects will integrate research, education and extension activities, as appropriate to project goals, although some projects may be weighted more heavily



than others in one or more of these areas. However, all proposals should have activities and impact in research and at least one of the other areas: education and extension. The closing date for the grant application is March 29, 2018. For more information, please visit their [website](#).

### **Agriculture and Food Research Initiative – Foundational Program**

The AFRI Foundational Program supports grants in the six AFRI priority areas to continue building a foundation of knowledge critical for solving current and future societal challenges. 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. Single-function Research Projects, multi-function Integrated Projects, and Food and Agricultural Science Enhancement (FASE) Grants are expected to address one of the Program Area Priorities (see Foundational Program RFA for details). The closing date for the grant application is September 30, 2018. For more information, please visit their [website](#).

### **Scale Management to Promote Sustainable Southeastern Peach Production**

Scale insects can damage peach orchards, both acutely and over the long-term, but for decades growers have been able to control San Jose scale with highly effective, but potentially dangerous insecticides. Thus, with the loss of these effective pesticides and increased regulations on other insecticide use, growers have to seek a more integrated pest management approach. Peach growers need a management strategy that more effectively utilizes environmentally friendly insecticides, such as horticultural oils, and support the beneficial insects to help naturally control scale. Thus, by working directly with key peach growers in Georgia, we will demonstrate the effectiveness of horticultural oil coverage and timing for San Jose scale management and identify the impact of management on natural enemies. This project has been extended due to crop loss last year. For more information, please visit their [website](#).



## NEW EMPLOYEE

### Cristina 'Cris' deRevere

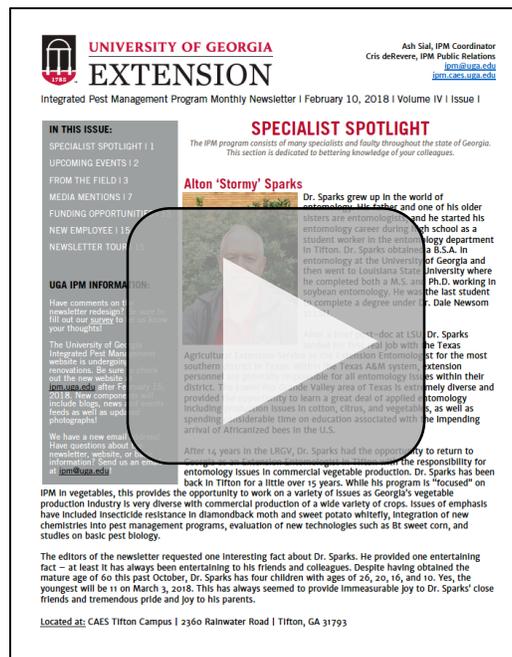


Cris graduated from the University of Georgia with a Bachelor of Arts in English, with an area of emphasis in Studies of the Novel, in 2013. While working at the Georgia Museum of Art, she completed her Master of Science in Communications, with a focus on Public Relations for Non-profit Organizations from Walden University. After graduation, she began working for the State Botanical Garden of Georgia at the University of Georgia as the Rental Coordinator. In the position of Public Relations Coordinator for the Integrated Pest Management program, Cris will manage IPM social media, newsletters, and website content as well as develop stakeholder surveys, marketing strategies, and assist with yearly reports.

Cristina is a Georgia-native, born and raised in Rome. Her parents are from Rome, GA and Pihuamo, Jalisco, Mexico. She has a large nuclear family consisting of three parents, five sisters, three brothers, two nieces and one nephew. Cristina's hobbies and interests include ballroom dancing, science fiction, and outdoor activities with her husband, twin 11-year-old stepchildren, and 4-month-old son.

## NEWSLETTER TOUR

We have redesigned the newsletter. Click this video to learn more about the added features.



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.

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](mailto:ipm@uga.edu).