ABOUT ALABAMA AG ALERT

The main goal for Alabama Ag Alert is to provide readers relevant information about IPM and other major updates through a single publication. Alabama Ag Alert is geared toward streamlining the delivery of research-based IPM information directly from the researcher’s desk to farmer’s field using teamwork and technology. ALL articles that promote IPM and sustainable farming practices can be published in Ag Alert. Alabama Ag Alert fills the need for a statewide IPM newsletter that is capable of immediate publication to alert crop producers, consultants, foresters, gardeners, Extension personnel and general public about pertinent issues. Currently, about 300 subscribers and private websites receive or post this newsletter directly from ACES. Other readers also will be able to download or view the newsletter online. There is a small editorial board that will work swiftly each week to electronically deliver Alabama Ag Alert on FRIDAYS. Research and/or Extension personnel from any educational institution in Alabama can submit IPM-related article of high relevance for immediate release; authors should pay attention to the guidelines for format and submission deadlines. For queries about Ag Alert or to subscribe, please email bugdoctor@auburn.edu. Feel free to forward this publication with anyone interested in IPM. Readers from other states should check with their university Extension before using any recommendation.

News release: http://www.aces.edu/go/125

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Author guidelines are provided on the last page of this newsletter. Articles may be delayed for publication if they are not in the recommended format.

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IDENTIFYING STINK BUG LIFE STAGES

The first call of concern from a producer about stink bug nymphs feeding on tomato leaves came on April 21. The call came from a Regional Extension Agent in Dothan (an area that is experiencing prolonged dry weather conditions). Vegetable growers with drip irrigation facilities generally see rapid plant growth even in dry conditions which is good for disease issues but gives rise to many insect problems. In recent years, sucking pests of vegetables have become our #1 problem with control choices based on contact insecticides. Systemic insecticides applied too early may lose efficacy in the plant if stink bugs arrive late (size of this insect is another problem) resulting in the need for additional sprays with pyrethroid insecticides. One uniqueness of sucking pests is that these insects are prone to behavioral manipulation through habitat modification, e.g., management with the use of trap crops, ground cover, etc. Table 1 (page 3) shows the nymph and adult stages of common stink bug species that one may encounter in crop fields. Use the pictures of stink bugs to correctly identify plant-feeding and predatory stink bugs (Table 2, page 4) in order to avoid misidentification. For stink bug control recommendations, refer to the 2010 SE Vegetable Production Handbook at https://sites.aces.edu/group/commhort/vegetable/vegfactsheets/default.aspx or get a paper copy from the nearest Extension office.

IPM INSECT MONITORING PROJECT WILL CONTINUE IN 2010

In 2009, the first effort to comprehensively monitor insect pest activity for 14 pest species using various types of pheromone traps was a great success. As of October 31 2009, this team project accounted for 8,500 insect specimens from 500+ samples (trap bottoms). More specifically, 3586 lesser cornstalk borers, 1386 fall armyworms, 1377 beet armyworms, 393 southern armyworms, 589 corn earworms, 342 tobacco budworms, 230 soybean loopers, 223 cabbage loopers, 125 black cutworms, 65 diamondback moths, and 266 corn rootworms were collected and identified; these numbers provide an idea about the species prevalence and the effectiveness of traps in detecting closely related insect species, such as the corn earworm (CEW) and tobacco budworm (TBW). Peanut producers should note that chemical control recommendations for CEW and TBW are different (refer to Alabama IPM Guide ANR-500); hence, knowing the correct insect species present in field is vital in choosing the correct treatment. IPM pheromone traps are also effective in developing site-specific control measures and reduce injudicious use of insecticides. Low insect numbers in trap do NOT mean that the insect is inactive; those numbers may have been influenced by weather patterns, trap type and placement method, lure quality, and pesticide usage near the sampling area. Using insect traps in conjunction with actual crop scouting could reduce ‘surprises’ and prevent crop failure due to delayed action by farmers. Although the trap project will continue in 2010 as a unique team project to educate and motivate, it is really up to growers to adapt the technology into their IPM plan. Results of 2010 IPM trap network will be posted on www.aces.edu/go/85 and also on the IPM hotline 1-800-446-0375.

PROBABLE INSECT ACTIVITY IN ALABAMA BASED ON DEGREE DAYS

<table>
<thead>
<tr>
<th>Accumulated degree days in some locations in Alabama*</th>
<th>Degree days (DD) for some critical insect pests</th>
<th>WATCH OUT FOR…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belle Mina: 86</td>
<td>First activity of Colorado Potato Beetle larvae = 185DD</td>
<td>Flea beetles in southern AL</td>
</tr>
<tr>
<td>Cullman: 92</td>
<td>Black cutworm egg hatch at 310 DD</td>
<td>Early season soil insects that may affect plant establishment</td>
</tr>
<tr>
<td>Birmingham: 114</td>
<td>Squash vine borer, egg laying = 900+ DD</td>
<td></td>
</tr>
<tr>
<td>Montgomery: 122</td>
<td>European corn borer, first spring moths = 375 DD</td>
<td></td>
</tr>
<tr>
<td>Bay Minette: 133</td>
<td>Corn rootworm = 1300 DD</td>
<td></td>
</tr>
<tr>
<td>Headland: 133</td>
<td>Flea beetles, first activity = 150+ DD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Imported cabbageworm, first butterflies at 150 DD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cabbage maggots, first generation = 300 DD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cutworms, start scouting after 300 DD for damage</td>
<td></td>
</tr>
</tbody>
</table>

*Source: AL Crop & Weather Report, May 10, 2010

Ayanava Majumdar
Extension Entomologist
bugdoctor@auburn.edu
<table>
<thead>
<tr>
<th>Species</th>
<th>Nymph</th>
<th>Adult</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brown stink bug, <em>Euschistus servus</em></strong></td>
<td>![Image](source: UFL)</td>
<td>![Image](source: UFL)</td>
<td>Common statewide, pheromone lure for insect trapping is under test in AL.</td>
</tr>
<tr>
<td><strong>Green stink bug, <em>Acrosternum hilare</em></strong></td>
<td>![Image](source: Iowa State U)</td>
<td>![Image](source: Iowa State U)</td>
<td>Has more northerly presence in continental United States, unlike the southern green stink bug (see below).</td>
</tr>
<tr>
<td><strong>Southern green stink bug, <em>Nezara viridula</em></strong></td>
<td>![Image](source: U of Arkansas)</td>
<td>![Image](source: Texas A&amp;M U)</td>
<td>More southern distribution, very prevalent in AL. Nymphs of southern green look different from the green stink bug.</td>
</tr>
<tr>
<td></td>
<td>Nymph</td>
<td>Adult</td>
<td>Remarks</td>
</tr>
<tr>
<td>-----------------------</td>
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<td>--------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Predatory stink bug,</td>
<td><img src="image1.png" alt="Image" /> <strong>Euthyrhynchus</strong></td>
<td><img src="image2.png" alt="Image" /> <strong>floridanus</strong></td>
<td>Feeds on plant hoppers, other stink bug nymphs, small caterpillars. Commonly found in orchards, ornamentals, and vegetables. May be more prevalent on southern counties of AL. <strong>Look for short stout beak or proboscis on predatory stink bugs.</strong></td>
</tr>
<tr>
<td>Stiretrus ancharago</td>
<td><img src="image3.png" alt="Image" /> Not available</td>
<td><img src="image4.png" alt="Image" /></td>
<td>Appears to be more prevalent in field crops and feeds on many caterpillar and aphid species. Look for short stout beak or proboscis on predatory stink bugs. Plant feeding stink bugs have proboscis that is nearly as long as their body.</td>
</tr>
<tr>
<td>Two-spotted stink bug,</td>
<td><img src="image5.png" alt="Image" /> <strong>Perillus</strong></td>
<td><img src="image6.png" alt="Image" /></td>
<td>Could be more northern species. Feeds voraciously on Colorado potato beetle larvae. <strong>Notice the bright color of the predatory stink bugs compared to monochromatic coloration of most plant-feeding stink bugs.</strong></td>
</tr>
<tr>
<td>Podisus maculiventris</td>
<td><img src="image7.png" alt="Image" /> Source: Texas A&amp;M</td>
<td><img src="image8.png" alt="Image" /> Source: U of Kentucky</td>
<td>Notice the short stout beak (proboscis) of predatory bug nymph (arrow).</td>
</tr>
</tbody>
</table>

Ayanava Majumdar  
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bugdoctor@auburn.edu
SUGARCANE BEETLES IN ALABAMA

Some of you have been busy taking calls about damage to corn from adult sugarcane beetles. I looked back on my trapping records and found that the peak time of occurrence of adult sugarcane beetles is about over. While we caught sugarcane beetle in light traps off and on from March until Fall, the peak times for beetle activity were in April, through about the 10th of May. If corn has to be replanted, the beetles may well e gone by the time the new corn comes up. But there is no guarantee, so growers should scout their replanted corn as it comes up. If signs of beetle activity are found, growers can try spraying with a maximum rate of one of the longer residual pyrethroids, such as lambda-cyhalothrin, gamma-cyhalothrin, or bifenthrin, to prevent further damage.

In future years, using a high rate of the insecticide seed treatment (1250 mg a.i./kernel) at planting may be warranted. Growers should assess the risk of a field getting sugar cane beetles and weigh that against the added cost of the high rate of the seed treatment. Fields at highest risk are those where corn has been planted into former pastureland. Corn after corn fields may also be at risk. Sometimes growers know that certain fields tend to be damaged by this creature. Sometimes it is the small fields that are surrounded by woods that tend to have problems, according to Dr. Smith. It is these high risk fields where a high rate of the seed treatment would be warranted.

Sugar cane beetles also damage other crops such as sweet potatoes. The grubs feed on grass roots and can damage lawns, and forage grass sod. They are also urban pests, because the beetles tend to bore into roofs and window caulking.

Dr. Blake Layton from Mississippi has written a really good publication about sugarcane beetles. Please take the time to read the publicatin at this link:

It is always a good idea to scout corn during the first month or so after emergence for pests such as sugarcane beetle. Seed treatments at the typical 250 rate protect against most, but not all insects. With the current price of corn seed it is well worth keeping an eye on corn as it emerges to prevent damage from insects.

Some additional sugarcane beetle information from AL is available at https://sites.aces.edu/group/commhort/vegetable/vegetable/alabama_IPM_trap_network.aspx.

Kathy Flanders
Extension Entomologist
flandkl@auburn.edu
TELL EPA ABOUT STORCIDE II!

The EPA is currently reviewing the registration of chlorpyrifos-methyl, one of the active ingredients in Storcide™ II, which is used to protect stored wheat from insect damage. It is currently asking for comments about the use of Storcide II. If you use Storcide II, please contact the EPA by one of the methods listed below, and tell them that Storcide is important to you. If you have clients who use Storcide, please forward this to them so they can comment to the EPA. Deadline for comments is June 1. Below see the response I intend to send, and below that and attached, background information about the review process.

Include this reference number in your response: EPA-HQ-OPP-2010-0119

Please send your response to the EPA in one of the following ways:

- Email: To EPA Chemical Review Manager Katie Weyrauch at email weyrauch.katie@epa.gov
- Delivery: OPP Regulatory Public Docket (7502P), Environmental Protection Agency, Rm. S-4400, One Potomac Yard (South Bldg), 2777 S. Crystal Drive, Arlington, VA 22202.

Please let Alan Scarborough from Bayer know about your response:
Office: 919-549-2397
allen.scarborough@bayercropscience.com
This is what I am planning to send to the EPA:
"Comment RE: EPA-HQ-OPP-2010-0119

Storing wheat in Alabama is notoriously difficult, because of the intense insect pressure. Warm temperatures in summer favor insect development. Since wheat is stored in June then carried through the summer, it is essential that a grain protectant be applied to the wheat as it is loaded into the bin. There is no single insecticide product that can replace Storcide II. Storcide II is an essential product for producers who store wheat. Aluminum phosphide is not a suitable alternative, given the dangers associated with fumigation and the stringent legal requirements associated with its use. Diatomaceous earth is much more expensive, and has efficacy and clumping issues in the Southeast.

Given that there are no single product alternatives available, I encourage you to reregister Storcide II."

For additional guidelines or to consult please contact me as soon as possible by email or phone.

Kathy Flanders
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SEEDLING INSECT PESTS A THREAT TO COTTON

There are several insect pests that attack seedling cotton plants. Thrips will attack all cotton fields each year and are capable of causing significant injury. As a result, virtually every field in the state receives a preventative treatment for thrips either as a seed treatment or an in-furrow granular insecticide application. Nevertheless, under poor growing conditions, an additional foliar application is sometimes required. To receive the most benefit, the foliar application should be made early—generally between the first and second true leaf stage. It is most unusual for cotton with four or five true leaves to profit from foliar sprays. Numerous inexpensive options are available for foliar thrips control but these sprays can contribute to the flaring of other pests such as cotton aphids and spider mites.

The vegetable weevil is another early season pest of cotton that can reduce stands. The adult weevils frequently chew on the plant stem just below the cotyledons. In some cases they chew completely through the stem and in other cases they only eat partially through the stem. In both cases the plants will die. Vegetable weevils will also chew holes in the cotyledons. Damage caused by this pest could be easily mistaken for cutworm damage. The weevils can be found on the soil surface or on the plants feeding. They can also be found by digging up the soil around the plants. A light "worm rate" of a pyrethroid would be a good choice for control of vegetable weevil.

False chinch bugs (FCB) are another potential pest of seedling cotton. The FCB will suck juices from the plant and cause it to wilt. Close scouting will help ascertain the level of FCB damage and help determine if control measures are justified. FCB is very difficult to control with chemicals. FCB is often found in association with common groundsel, cutleaf evening primrose and other winter weeds.

Cutworms are also potential pests of seedling cotton and growers are advised to inspect fields closely for seedling mortality and if damage levels are sufficient control measures should be taken. Cotton planted into weedy fields, cotton produced under conservation tillage systems, and cotton produced on cool soils is most susceptible to cutworm infestations. Grasshoppers can also be pests in seedling cotton, especially in conservation tillage systems.

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Articles are invited from Specialists and Regional Extension Agents/Educators for this section. Please follow the author guidelines provided on the last page of this newsletter. Thank you.
COMMON DISEASES OF VEGETABLES

Blossom end rot, early blight, and powdery mildew are some common diseases you might find in your garden. Blossom end rot starts as a water-soaked spot near the blossom end of the fruit. This spot soon gets larger and turns dark, just as the green fruit begins to ripen. This darker area may become leathery and crack, which increase the chances of other diseases taking hold. Blossom end rot sounds like a disease that would be caused by an infection, but it is not. It is caused by a calcium deficiency and often associated with drought or too little water. It often occurs after rapid growth early in the season, followed by hot and dry weather, or conditions alternating between the two. This physiological “disease” is most common on the earliest plants to set fruit, put out early in cool soil, or plants spaced too close together.

Blossom end rot can often be prevented by:
- Keeping the soil’s pH at 6.0 to 6.5. Perform a soil test and apply the recommended rate of lime, using dolomitic or high-calcium limestone. Lime should be applied two to four months before planting crops.
- Keeping soils uniformly moist, and deeply watered during drought. Using mulches can help.
- Avoiding root damage by not cultivating too close to plants.
- Spraying plants early in the season, especially after heavy rains, with a diluted calcium chloride solution at the rate of one level tablespoon per gallon of water.

Another disease which attacks stems, leaves, and fruit of tomatoes, but also those of potatoes and eggplant, is early blight. Early blight is caused by either of two fungal organisms, beginning as circular or irregular shaped spots ¼ to ½ inch in diameter. If the spots have a yellow halo on the outside and concentric lines inside, they are most likely from the fungus Alternaria. This fungus can also cause dark, sunken areas (cankers) in stems. Fruit that is infected will have dark, sunken leathery spots on the stem end.

If the leaf spots are gray with dark centers, they are likely from the fungus Septoria. This fungus may also infect stems. A secondary problem caused by this fungus is sunscald from the infected leaves dropping off and exposing the fruit to excess sunlight.

Ways to minimize or prevent early blight include:
- Selecting resistant varieties
- Growing tomatoes in a different part of the garden each year (crop rotation).
- Watering early in the morning if using overhead watering, to allow the leaves to dry during the day.
- Using fungicides labeled for this disease. If using fungicides, please make sure to read and follow all label directions for the best control, protecting the environment, and for your safety.

Powdery mildew can attack many plants, but is seen more often on cucurbits such as squash and pumpkins. High humidity conditions are favorable for this disease. Many diseases are spread by rain, but powdery mildew does not need rain to spread. Once a leaf is infected, it can produce tens of millions of spores. The symptoms of powdery mildew are a whit spotting or growth on the leaves, eventually causing them to turn yellow, then brown, and finally die.

Some methods for controlling this disease are:
- Choosing resistant varieties
- Planting in areas with good air circulation
- Proper use of the appropriate fungicides

More information about plant diseases, pests, and controls can be found at: [http://www.aces.edu/pubs/docs/indexes/anripm.php](http://www.aces.edu/pubs/docs/indexes/anripm.php)

Reference: Dr. Leonard Perry, Extension Professor, University of Vermont

Gerald McQueen
Regional Extension Agent
mcquegj@aces.edu
YOU’VE GOT QUESTIONS, WE’VE GOT ANSWERS!

When you want to know how to get that colorful annual bed installed and growing, to whom do you turn for advice? Are you at a loss for solutions to disease and insect problems? If you’ve got gardening questions, we’ve got answers! Call the Master Gardener Helpline. Trained volunteers are ready, willing, and waiting to help!

There are 15 Helpline locations throughout the state of Alabama and calls are answered at least one location year-round. In fact, as you read this, Master Gardeners are manning the phone lines in the Southwest and North Central regions of the state. Give ‘em a call! They’d love to help you with all your gardening needs.

Dial 1-877-252-GROW (4769) and select your location from the short menu to receive the most accurate, local information. Below is a list of the menu options so you will be prepared when you call. If you do not hear your location option in the menu, please select “3” and a Master Gardener will assist you.

<table>
<thead>
<tr>
<th>Option</th>
<th>Location</th>
<th>Included area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Southwest</td>
<td>from the Gulf Coast to Grove Hill and Greenville</td>
</tr>
<tr>
<td>2</td>
<td>Central and East</td>
<td>from Anniston to Phenix City; metro Montgomery</td>
</tr>
<tr>
<td>3</td>
<td>North Central/West</td>
<td>from Clanton to Birmingham, Hamilton &amp; Carrollton</td>
</tr>
<tr>
<td>4</td>
<td>Northwest</td>
<td>from Decatur/Huntsville to the Shoals &amp; Russellville</td>
</tr>
<tr>
<td>5</td>
<td>Northeast</td>
<td>from Pell City &amp; Gadsden to Cullman and Scottsboro</td>
</tr>
<tr>
<td>6</td>
<td>West</td>
<td>area of Demopolis, Greensboro, Selma, &amp; Lowndesboro</td>
</tr>
<tr>
<td>7</td>
<td>Southeast</td>
<td>area of Andalusia, Dothan, Troy, &amp; Eufaula</td>
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</table>

Ellen Huckabay
Administrator I, Outreach Programs
knighec@aces.edu

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Articles are invited from Specialists and Regional Extension Agents/Educators for this section. Please follow the author guidelines provided on the last page of this newsletter. Thank you.
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Articles are invited from Specialists and Regional Extension Agents/Educators for this section. Please follow the author guidelines provided on the last page of this newsletter. Thank you.
SEVERE LOSSES IN APPLE CROP

Apple growers in North Alabama have suffered a severe setback this year in that they have basically lost the 2010 crop. Apple fruit began falling off the trees last weekend and most varieties do not have any fruit left on the tree. This disaster is region-wide and apple growers from North Alabama to Southwestern Virginia are seeing the same thing. This also includes North Georgia and Western North Carolina.

A possible explanation came today from Dr. Steve McArtney at the Mountain Horticultural Research station in Fletcher, NC. After reviewing climate data for us from March 1 to present, Dr. McArtney says that it appears that unusually high night time temperatures on May 2 and May 3 caused an increased respiration rate and all the carbohydrates the trees made during the day were burned up during the night. When carbohydrates are in short supply, the tree tends to use what's left for shoot growth at the expense of fruit growth. The application of chemical thinners which is a normal procedure made this particular fruit drop worse. However, even where thinners were not used, the crop load is extremely light in Alabama. Please feel free to give me a call if you have any questions.

Doug Chapman
Regional Extension Agent
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ABOUT ALABAMA AG ALERT (contd.)

Archive: All editions of Ag Alert will be archived on ACES Publication, Alabama IPM Center, and many other public websites. Please contact the article author/s for additional information. The Editorial Board does not assume responsibility for any technical article or information published in this newsletter.

CALL FOR EXTENSION ARTICLES

Sections: Ag Alert will have sections such as Entomology, IPM in Forestry, IPM for the Home & Garden, IPM in Schools & Urban Areas, Plant Pathology, Weed Control, and News Around the State. All sections may not appear in each issue if there were no submissions that week. Additional sections can be created if requested by author to accommodate IPM-related articles.

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Articles should be written in easily understandable format; short articles will facilitate rapid reading by audience who typically scan publications for information. Long technical articles will not be published in Ag Alert. Color pictures can be included in the article if it enhances the readability; authors must provide pictures and send information about the image source.

Suggestions for improvement: Alabama Ag Alert is open to all suggestions. Please email or call 251-331-8416 to provide input to the Editorial Board. Thank you very much.

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