

# North Carolina Pest News

Departments of Entomology and Plant Pathology



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### CAUTION !

*The information and recommendations in this newsletter are applicable to North Carolina and may not apply in other areas.*

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See current and archived issues of the *North Carolina Pest News* on the Internet at: [http://ipm.ncsu.edu/current\\_ipm/pest\\_news.html](http://ipm.ncsu.edu/current_ipm/pest_news.html)

## FIELD AND FORAGE CROPS

From: Jack Bachelier, Extension Entomologist

### Rainfall and Thrips on Cotton

With the plentiful to excessive rainfall throughout most of the state this past week, although bad news for weed management, this is good news for limiting thrips levels and their damage. High rainfall amounts can both result

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in significant thrips mortality and put adult flights from alternative hosts on hold. Our rainfall also comes at a time when much of our early May-planted cotton is approaching, and in some cases beyond, the “thrips safe” 5 true leaf stage. Fortunately also, western flower thrips and their control headaches are typically less common when moisture levels are high.

### Assessing Thrips End Game

When assessing the status of cotton seedlings against further thrips damage, several observations should be made. When counting the number of true leaves, remember not to count the cotyledon or seed leaves. However, be sure to include even the battered true leaves in your counts, even if they are severely damaged and significantly reduced in size. Previously-damaged leaves, particularly down from the bud area, have little to do with a possible present infestation. If the newest leaf or leaves in the bud area are coming out area shiny and undamaged and the cotton is at four true leaves, the “thrips season” is probably over in that field. Any cotton seedlings that are beginning to show the fifth true leaf are also safe, even if thrips are present.

As can be seen from the images taken in Wilson County, the differences in early seedling growth between the untreated check, the Avicta seed treatment alone, and the seed treatment plus Admire Pro in-furrow are dramatic. All pictures were taken from the same height! Oddly, even some plants in the battered untreated check were beginning to show the fifth true leaves, had very few thrips and would not benefit from a further “revenge” or “recreational” spray. A foliar spray two weeks ago would have helped significantly, however.



**No seed treatment; Wilson County, 31 DAP. Image by Dan Mott.**



**Avicta-treated seed; Wilson County, 31 DAP. Image by Dan Mott.**



**Avicta seed treatment plus Admire Pro in-furrow; Wilson County, 31 DAP. Image by Dan Mott.**

### **Cotton Development Accelerating**

As all cotton producers know, once cotton reaches the fifth or sixth true leaf stage, it really seems to jump in development if moisture conditions are adequate. With wet soils throughout most of North Carolina, cotton growth should really take off during the next few weeks. The downside with this moisture for many however is both cotton's presently limited root system and not being able to get back into some fields to manage rapidly growing weeds.

### **Cotton Pests on the Horizon?**

For cotton, with additional thrips damage thankfully over for most cotton producers, the next possible pests on the horizon are probably plants bugs, cotton aphids and spider mites. We appear to presently have a lot of nice green vegetative weed and other host material that could result in higher than normal migrating flights of adult plant bugs. We'll pass along reports and our own observations about the status and outbreaks of these and other pests in the coming weeks.

### **Cotton and Soybean Scouting School**

Bertie County: Windsor Community Building, Windsor, NC beginning at July 18, 9:00 a.m. Indoor and outdoor components and lunch provided. Contact Richard Rhodes ([richard\\_rhodes@ncsu.edu](mailto:richard_rhodes@ncsu.edu) or 252-794-5317) for details.

We'll post additional schools at this site in the coming weeks.

### **Kudzu Bugs**

With kudzu bugs, we have the good fortune of hearing about the developments in South Carolina and Georgia. Fortunately, in most areas of North Carolina, our levels are generally lower than in South Carolina and Georgia. We do continue to get reports of folks seeing more than one kudzu bug per soybean plant in some areas. We recommend a tentative threshold of 15 adults 15 sweeps as a treatment threshold at this time. Earlier this week, we had a report from a consultant that the perimeters of a handful of early-planted soybean fields had been treated. Another call and pictures confirmed the presence of kudzu bugs in an early-planted Group IV field in Johnston County at a level of 40 to 50 bugs per 15 sweeps. This field was treated. We recommend that producers and scouts assess early planted fields to at least get a rough idea if damaging levels may be present and for the possible presence of other pests (see Dominic Reisig's update).

Of additional importance will be if the migrating adult bugs continue to build during the next few weeks and if significant levels of eggs masses develop into large numbers of damaging nymphs. We still expect a major late July to early August flight into soybean throughout most of North Carolina. We'll try to keep North Carolina producers informed about the status of the kudzu bug throughout the growing season.

From: Dominic Reisig, Extension Entomologist

### **Kudzu Bug Nymphs are Here on Soybeans**

We've been waiting for some eggs to hatch on soybeans where the kudzu bug has laid eggs. One reason you may be reluctant to treat, in addition to not knowing anything about kudzu bug's impact on early season soybeans, is the inability to find nymphs. Our treatment recommendation for second generation soybean is to wait until nymphs are present until making an insecticide application. One question growers are asking is the impact that re-invasion might have on early season soybeans if a treatment is

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applied at this point in the season. Although kudzu bugs may still be migrating, we do have evidence that some eggs that were laid in the field earlier this year have hatched into nymphs. Based on the presence of nymphs, I am hoping the main migration of overwintering adults is done. We'll learn a lot from this year's experience.



First instar kudzu bug nymphs near eggs on the bottom side of a soybean leaf. Image from D. Reisig.

### **Scout Soybeans Now - What to Look For**

It's probably a good idea to scout full-season soybeans sometime this week. Insects of particular note to watch for are threecornered alfalfa hopper and kudzu bug. See below for some of the more common pests you might find this time of year.

### **Stand Reducers**

Possible critters that are out in the system right now that can reduce stands or chew parts of plants in seedling soybeans, are slugs and grasshoppers. For pests that may reduce stand levels, try to ensure that the stand stays above Dr. Jim Dunphy's recommended densities for a replanting decision. These are 50,000 plants per acre or more of May-planted soybeans or 75,000 plants per acre of June-planted

soybeans. He also recommends replanting stands of lower densities only if the grower can get seed of an equally acceptable variety.

Slugs like to harbor in fields with lots of residue. They feed at night or on cloudy days and are favored by lots of moisture. During the day, their presence can be indirectly detected by shiny slime trails. These can be washed off by rain, so dig around in the residue to look for them. Insecticides are ineffective against these pests, so our best recommendation is a product called Deadline M-P's. A trial in Mississippi (<http://www.msucare.com/newsletters/pests/cis/2009/mcs06-09.pdf>) showed that this product could provide excellent control. Dr. Scott Stewart, University of Tennessee, recommends an evenly spread distribution at 10 pounds per acre (<http://news.utcrops.com/2012/04/slugs-in-corn-and-other-crops-armyworms-in-corn/>), as this product is relatively expensive. Also, he mentioned that it is not often in stock at the local dealer. Slugs are generally an early season phenomenon, as warm and dry weather is not favorable for their development. Under good growing conditions the plants should be able to outgrow this injury.

Grasshoppers can reduce stands by clipping seedling plants, but can also eat a lot of foliage. These are more of a problem later in the year, but by this time, plants should be large enough to tolerate the feeding injury. Grasshoppers are generally more of a problem near field edges and if a treatment is applied, sometimes a border treatment can be effective. Adult insects are difficult to kill and pyrethroids or acephate (Orthene) are equally effective. Nymphs can be killed with Dimilin.

Cutworms have not been an issue this year, but will feed at night and are difficult to find. You might suspect cutworms are a problem based on their feeding habit of cleanly clipping plants. They rarely are an economic problem, but are more of an issue in no-till fields.

### **Foliar Feeders**

Fortunately the threshold for foliar-feeding pests of soybeans is easy - 30% defoliation throughout the entire canopy up to two weeks before blooming. Pests to watch for this time of year are bean leaf beetles, southern corn rootworms and various caterpillars. As of this time, I have not heard of a treatable situation for any foliar-feeding pests of soybeans in 2012.

### **Suckers and Girdlers**

Threecornered alfalfa hopper has been a recent problem in Mississippi cotton and Mississippi and Tennessee soybeans. Last year, they caused lodging issues in the North Carolina Piedmont from girdling done during the early season (see <http://www.nccrops.com/2011/07/22/lesser-cornstalk-borer-vs-threecornered-alfalfa-hopper-in-soybean/> for description of injury). Unfortunately, once you notice the girdling on the plant - generally later in the season - the damage has been done. Now is the time to scout for these insects in soybeans. Although sampling beans with a sweep net is difficult early in the season, do your best to sweep the foliage. The treatment threshold for threecornered alfalfa hopper is one per sweep in beans less than 10 inches tall. Pyrethroids do a fair job of managing this insect, with bifenthrin looking a little better than most.

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Kudzu bug is widely distributed across the state, albeit generally in low abundances on soybeans. There have been a few cases where treatments have been made. These were very early planted soybeans that were an early maturing variety (Group IV's). See <http://www.nccrops.com/2012/05/24/early-season-kudzu-bug-threshold-recommendation/> for threshold recommendation levels in early season soybean.

From: Steve Koenning, Extension Soybean Pathology Specialist, and Jim Dunphy, Extension Soybean Specialist, Crop Science

### **Current Status of Soybean Rust in North America, Tropical Storm Beryl Update**

Soybean rust has been detected on kudzu in the panhandle of Florida, Louisiana, Alabama and Texas. Texas has the first report of rust on soybean for 2012, but south Texas is unlikely to be a source for rust at this time. Relatively mild winter weather has allowed for some survival in the continental U.S. Sentinel plots have been planted in Mississippi, Georgia, Louisiana, Arkansas and a few in North Carolina with no rust detected at this time on soybean.

### **Potential for Soybean Rust in North Carolina in 2012**

At this time there is little risk from soybean rust in North Carolina. We did not detect soybean rust in North Carolina in 2011, and found it only in Lenoir County in 2010. Though tropical storm Beryl did pass through the area from which we typically receive our inoculum, the limited soybean acreage in this area and the limited development of soybean rust on kudzu means the storm was unlikely to provide transport of soybean rust. Still, vigilance is the key word for 2012! We are in the process of planting sentinel plots and will have about 14 this year. Storms following a track similar to Beryl's could bring rust to North Carolina later in the year.

### **Resources for Soybean Rust in 2012**

Some sources for more detailed information on Asiatic soybean rust and Southern corn rust are listed below:

USDA soybean rust web site: <http://www.sbrusa.net/>

North Carolina Agricultural Chemical Manual: <http://ipm.ncsu.edu/agchem/agchem.html>

Soybean Rust Management in Mid-Atlantic Region: <http://cipm.ncsu.edu/ent/SSDW/RustBulletin08.pdf>

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## ORNAMENTALS AND TURF

From: Steve Frank, Extension Entomologist

### Red Headed Flea Beetles in the Nursery

Flea beetles have been an increasing problem in nurseries and landscape in the past couple years. We do not know the reasons why but clinic reports have increased as well as phone calls and other reports from growers. The red-headed flea beetle has been the main culprit attacking roses, hydrangeas, and other nursery crops. The adults are small (2 to 4 mm) and black or iridescent and feed on leaves. Larvae feed on plant roots and are small and cream-colored. Their most notable feature is how hard they are to catch when you want to submit a sample to the North Carolina State University Plant Disease and Insect Clinic. As their name implies they are very good jumpers. Feeding by these beetles produces shot holes in leaves though heavy infestations can skeletonize leaves.



Flea beetle on rose leaf. Photo by Steve Frank.

Flea beetles are active now as adults and larvae. They are more likely to cause aesthetic or economic damage in nurseries where many plants are grown in close quarters. In that case, treatment is needed. Available chemicals include spinosad (Conserve), imidacloprid (Merit, Marathon), thiamethoxam (Flagship) and acephate (Orthene).

*Recommendations for the use of chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by North Carolina State University, North Carolina A&T State University or North Carolina Cooperative Extension nor discrimination against similar products or services not mentioned. Individuals who use chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage regulations and examine a current product label before applying any chemical. For assistance, contact an agent of North Carolina Cooperative Extension.*