NC STATE UNIVERSITY COLLEGE OF AGRICULTURE & LIFE SCIENCES

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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In This Week's Issue . . .

See current and archived issues of the *North Carolina Pest News* on the Internet at: http://ipm.ncsu.edu/current_ipm/pest_news.html

ANNOUNCEMENTS AND GENERAL INFORMATION

Integrated Pest Management and Pesticide Information Available on the Internet

The North Carolina Extension Integrated Pest Management Program web site (http://ipm.ncsu.edu) offers crop production, integrated pest management (IPM) and pesticide information for county Extension agents, growers, pesticide applicators, agricultural consultants, pest control operators, landscapers, homeowners and other interested persons. The *IPM Resources* page (http://ipm.ncsu.edu/resources/) provides links to advisories, fact sheets, manuals, newsletters, etc. for crops/sites and pests in North Carolina from the Cooperative Extension Service and other reliable sources.

NC State University A&T State University COOPERATIVE EXTENSION
Empowering People • Providing Solutions

The *Pesticide Environmental Stewardship* web site (http://pesticidestewardship.org) is "designed for anyone who applies, sells, stores, or disposes of pesticides; provides advice or training on pesticide use; or is involved in pesticide stewardship or regulation." Topics addressed on the site include pesticide handling, calibration, storage, disposal, spills, drift, surface, groundwater and wildlife protection, recordkeeping, and integrated pest management. A section specifically geared to homeowners is also provided. The site was developed through the efforts of land-grant university pesticide safety education specialists and support from the pesticide industry.

Bookmark these web sites on your computer for timely, up-to-date information on integrated pest management and pesticides in North Carolina.

FIELD AND FORAGE CROPS

From: Jack Bacheler, Extension Entomologist

Thrips Enjoying Banner Year on Cotton

Our recent hot, dry weather has been both a blessing and a curse. The good news is that where soil moisture is adequate, cotton seedlings will more quickly grow out of their thrips-susceptible cotyledon to three true leaf stage. The other side of the coin is that thrips hosts are drying out quickly across much of the state. This has begun to translate into much higher numbers of adult thrips migrating into cotton. These conditions in the past have favored the appearance of difficult-to-control western flower thrips. The level of immature thrips, an indication of unprotected cotton due to the loss of seed treatment or Temik activity, has increased sharply over much of the state in the past few days, with a number of cotton fields meeting our suggested threshold of an average of one or more immature thrips for each true leaf per plant.

Depending on the amount of rainfall, it appears that the weather system moving through much of the state on the afternoon of May 27 may bring significant precipitation. In those areas, the "thrips situation" should be considerably better, both through enhanced cotton seedling growth, general thrips mortality, and hopefully a lessening of the threat of western flower thrips. Even in areas receiving significant rainfall, the predicted hot, dry weather for next week will likely result in renewed high thrips levels until cotton outgrows the potential for damage.

In our untreated check plots at Rocky Mount on May 25, we found an average of 2.5 adults and 23-plus immature thrips per plant only three weeks after planting; that's a high level of thrips at this time. In our thrips tests conducted over the past 10 years, week four after planting has traditionally been our highest immature thrips challenge for early May planted cotton.

In two far eastern fields, approximately 1 and 0.65 immature thrips per plant were found only 5 days after treating with Orthene (acephate) at a relatively high rate (8 ounces of product per acre, or 0.5 pound of active ingredient per acre). Fortunately, no western flower thrips were present in this sample. Although this level of immature thrips was under threshold, it was apparent that the longevity of the foliar spray only lasted for 5 to 7 days. In cases of high thrips levels (probably common during the coming week and possibly beyond), expecting more than 5 to 7 days of control following a foliar spray may be unrealistic.

Experience both here and elsewhere has shown that five true leaf stage cotton seedlings can tolerate thrips feeding without an economic yield loss, though only a few fields have reached this stage of development as of May 25. With the later expected thrips adult peak this year, the "thrips season" for most cotton is not over.

Hopefully, some of the new seed treatments, in-furrow and foliar sprays, nitrogen placement studies, and planting date studies underway this growing season as part of a SE Thrips Working Group initiative supported by Cotton Incorporated can provide some answers in more effectively managing thrips in the coming years. For now, basing foliar sprays on finding an average of approximately one immature thrips for each true leaf is as good an indication of any of the need to spray. Do not base sprays on old damage.

Our rain event will hopefully go a long way toward lessening the impact of thrips for some.

Cotton Pest Tape Updates

The cotton project's weekly Wednesday pest updates are available from several sources:

- *Cotton Pest Patrol*: Toll-free hotline for updates on insect problems from around the Cotton Belt are available at **877- 285-8525.** Just select the state update you would like to hear. For North Carolina**,** select **3** for the Southeast and select **3** again to hear my message.
- North Carolina State University *Teletip* Updates: Call **1-800-662-7301**, and press **2** for cotton.
- On-line cotton insect updates and scripts: http://ipm.ncsu.edu/cotton/insectcorner/radio/index.html

Cotton Scouting Schools

We plan to hold several scouting schools probably in early July just prior to the time when stink bugs can damage cotton and when our major moth flight has begun. We will have more information on the dates and locations of these schools in the coming weeks.

From: Dominic Reisig, Extension Entomologist

The Kudzu Bug Now Found in Transylvania and Union Counties

Kudzu bug (a.k.a. bean plataspid, *Megacopta cribraria* Fabricus, Fig. 1) has recently been confirmed on kudzu in Union County and has potentially been found on wisteria in Transylvania County, North Carolina (Fig. 2). I am awaiting the samples from Transylvania to confirm this identification. It is likely in other parts of the state, but because we have not done a concentrated search, its distribution in North Carolina is largely unknown.

Kudzu bug is a legume feeder and will feed on soybean in large numbers. We are concerned that this new invasive insect will become a major yield reducer in the future. Confirmed hosts are mainly legumes, but include cotton, wheat, and potato. Although many plants are confirmed hosts, kudzu bug may not feed extensively on them or may not reproduce on them. Soybean is the main agronomic host for this insect.

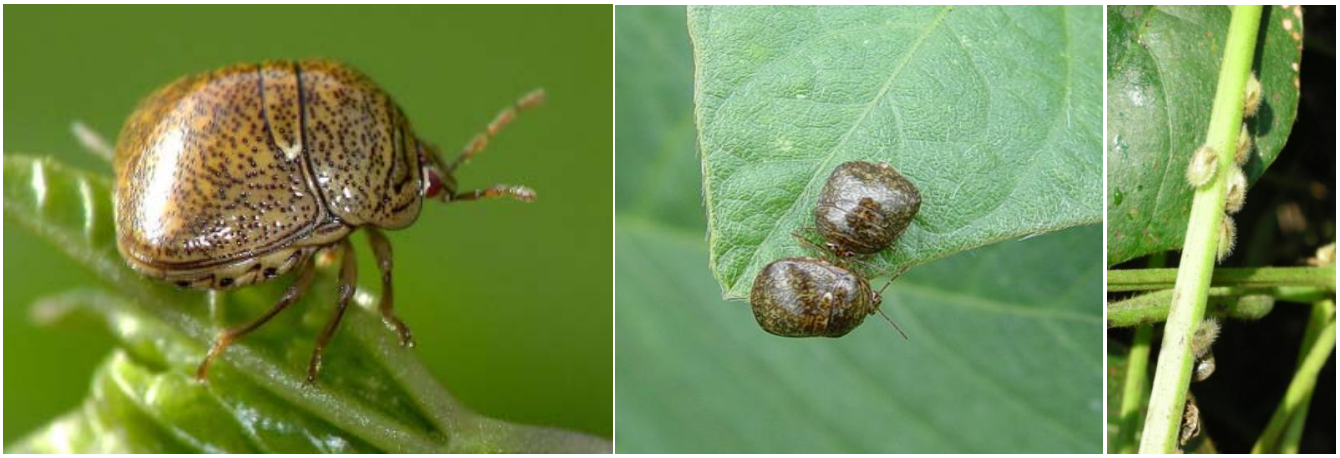

Fig. 1. Kudzu bug adults (in the two pictures on the left) and nymphs (picture on the right). Images from P. Roberts.

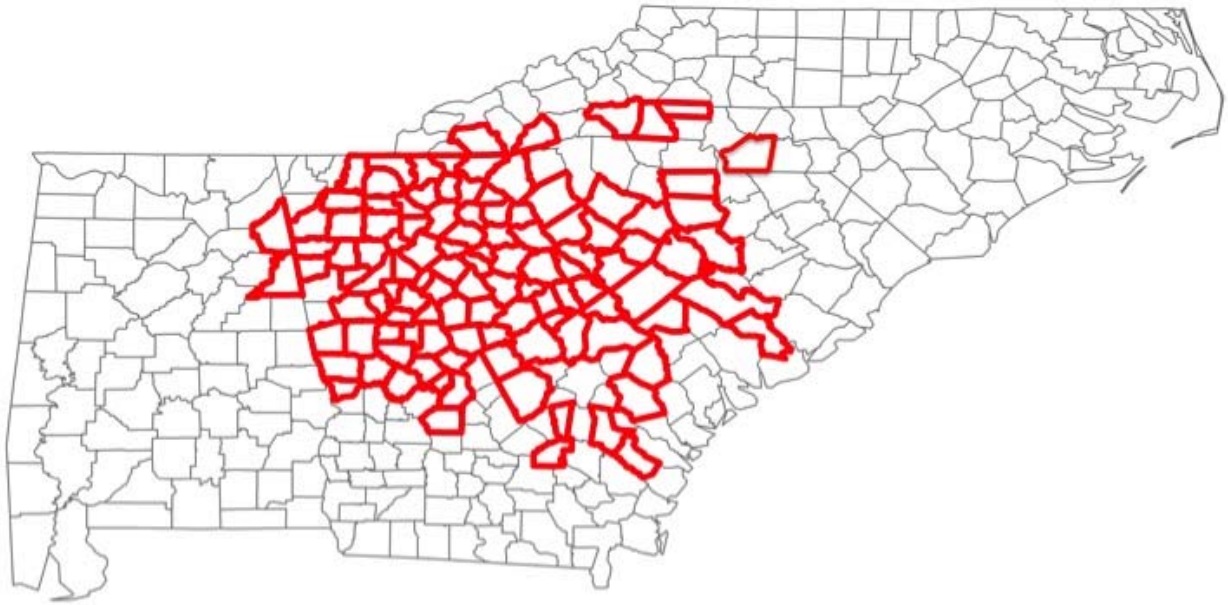

Fig. 2. Current known distribution of the kudzu bug.

We are tracking this pest and would appreciate your contacting Dominic Reisig by electronic mail (*dominic_reisig@ncsu.edu*) or telephone (252-793-4428 x133) if you find this pest in a non-confirmed county. If you can also provide GPS coordinates, **as well as the plant on which it was found**, it would enhance our ability to respond to this new threat. Please use caution not to spread this pest from field to field if you find it.

Sugarcane Beetle Feeds on Cotton

In last week's edition of the *North Carolina Pest News* (http://ipm.ncsu.edu/current_ipm/11PestNews/11News6/pestnews.pdf), I described the sugarcane beetle (Fig. 3) as a sporadic pest of corn. In addition to corn, it can also injure cotton (Fig. 4), other grasses, such as sugarcane and sod, strawberries and roses. Although this has been reported in the literature, to my knowledge it has not been confirmed on cotton in North Carolina. This is likely because the beetle is cryptic and is not around in large numbers

every year. This year is an exception and this beetle has been reported on corn throughout the Southern U.S.

The cotton pictured in Fig. 4 was planted behind corn and next to a pasture in a field on the Tidewater Research Station in Plymouth. Sugarcane beetles are mainly grass feeders and are often associated with sod. I first became aware of the injury in cotton when these seedlings (Fig. 5) were brought to me by my summer employees who were sampling cotton seedlings for thrips. The injury resembled "sore shin", due to the damping off and discoloration on the upper roots. However, there were the obvious chew marks and the weather had been hot and dry, which is not conducive to this sort of disease development.

Fig. 3. Sugarcane beetle adults (the size is around 1/2 inch). Image by Alan Meijer.

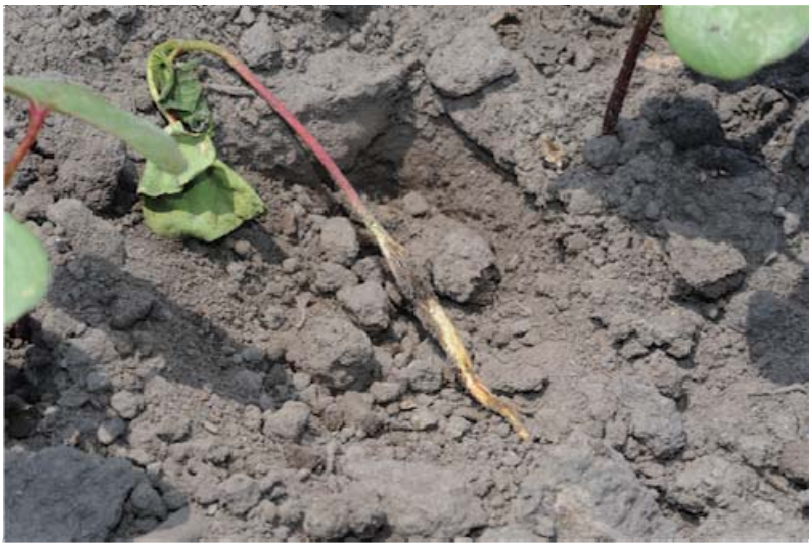

Fig. 4. Sugarcane beetle-damaged cotton seedling that has been dug-up. The seedling was damping off and the top of the root just below the soil surface has been chewed. Image by Dominic Reisig.

Fig. 5. Cotton seedlings injured by sugarcane beetle adults. Image by Dominic Reisig.

Fig. 6. Dead adult sugarcane beetle next to injured cotton seedling. The beetle's position was not staged for the photograph. Image by Dominic Reisig.

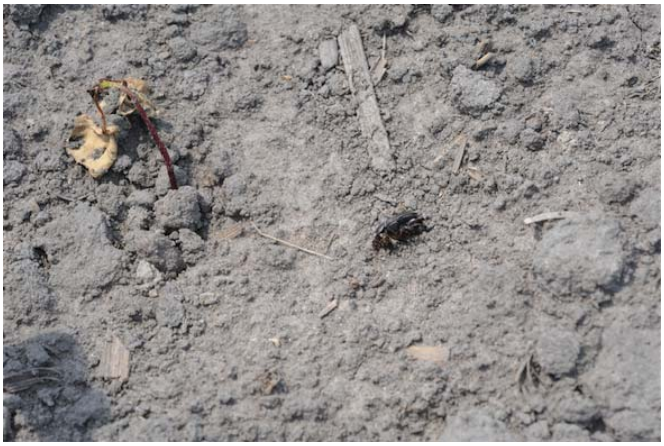

Fig. 7. Most of the cotton seedlings injured by the sugarcane beetle eventually died. Image by Dominic Reisig.

Fig. 8. Injury on corn due to sugarcane beetle. Notice the streak due to damage in the vascular tissue as a result of chewing beneath surface of the soil. Image by Dominic Reisig.

When I visited the field, there were some scattered dead seedlings and I found some dead adult sugarcane beetles (Figs. 6 and 7). This also explained injury that I had seen the previous week in a corn test that was planted in the same field (Fig. 8). Because there was some scattered billbug and stink bug injury, I had assumed that the injury had been caused by one of these pests. However, upon finding the injury and dead beetles in the cotton (and checking with others, including Jack Bacheler), it was likely due to the sugarcane beetle.

This corn had been treated with neonicotinoid insecticide seed treatments ranging from the 250 to 1,250 rate (both Cruiser and Poncho). To reduce injury from seedling pests, I had also applied 10 pounds per acre of Counter at planting. However, the sugarcane beetle injury was evident throughout the test, demonstrating the tenacity of this pest. Preventative measures are the only way to manage sugarcane beetle. Remember that the adults, not the larvae, cause the injury; treatments applied after planting will likely be wasted money and effort.

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

Soybean Rust Update for May 20, 2011

Recently soybean rust has been detected on kudzu in three Florida Counties: Dade (Miami area), Marion and Hernando (South of Gainesville). Soybean rust has also been detected in Cuba (at Guantanamo) and in Puerto Rico. Rust appears to be active on yam bean in Mexico. The potential for spread from these regions at this time is unlikely. A few sentinel plots have been planted in North Carolina at this time and we will have about the same number of sentinel plots this year as in past years.

Prospects for Soybean Rust in North Carolina

The northward progression of soybean rust in Florida is 2011 appears to be faster than in recent years. The potential for an epidemic, however, is more related to spring and summer conditions. Watch for tropical storm events that bring moisture from the south. We learned last year that rust can and will

make large jumps distance wise over a relatively short period of time. The NOA forecast for temperature and moisture for the critical June through September 2011 time period is for average seasonal temperatures and above average precipitation. Thus we can expect the progress of rust up the east coast may be accelerated compared to previous years. Additionally, the national forecast is for an above average tropical storm season. Tropical storms, especially those moving through Florida and Georgia, may provide for transport of rust spores earlier in the season.

Rust spread very little in 2010, due in large part to the severe cold in the winter of 2010 and a relatively dry growing season, especially in the late season.

Resources for Soybean Rust

- *North Carolina Agricultural Chemical Manual*: http://ipm.ncsu.edu/agchem/agchem.html
- *IPM PIPE* web site: http://sbr.ipmpipe.org/cgi-bin/sbr/public.cgi
- Soybean Rust in the Mid-Atlantic Region: http://cipm.ncsu.edu/ent/SSDW/RustBulletin08.pdf

ORNAMENTALS AND TURF

From: Steve Bambara, Extension Entomologist

Bristly Roseslugs

The bristly roseslug (*Cladius difformis*) is a fly-like insect that is really a wasp (Fig. 9). This group of wasps has caterpillars that eat plants (Fig. 10). The adult wasp uses a saw-like ovipositor to pierce leaves while laying eggs inside the leaf.

Fig. 9. Adult *Cladius difformis* sawflies. Plant Disease and Insect Clinic photograph.

Fig. 10. Bristly roseslug caterpillar damage. Plant Disease and Insect Clinic photograph.

The caterpillars are called slug caterpillars because their prolegs lack tiny hooks that most other caterpillars have, and the prolegs are so short that some resemble slugs. Rose slugs should be relatively susceptible to pesticides. Orthene, Sevin or some pyrethroid insecticide labeled for use on roses should give adequate control. You could also scrape off or squish any you still find. There can be multiple

generations per year. We don't have an insect note on this insect, but the following web site has one that looks good: http://www.finegardening.com/pages/g00171.asp.

Goldenrain Tree Bugs

We had two reports of goldenrain tree bugs, *Jadera haematoloma* (Fig. 11), last week. This is one of the scentless plant bugs that feed on rose-of-Sharon, Chinaberry and goldenrain tree (*Koelreuteria paniculata*) (Fig. 12) seeds. It has no official common name. It also feeds in a minor way on some other plants.

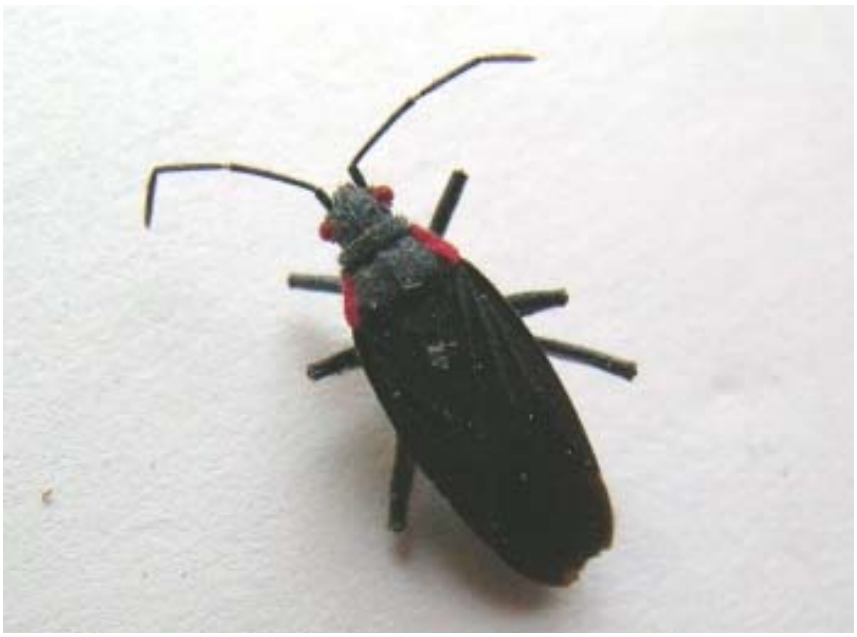

Fig. 11. Goldenrain tree bug, *Jadera haematoloma.* Image from Steve Bambara.

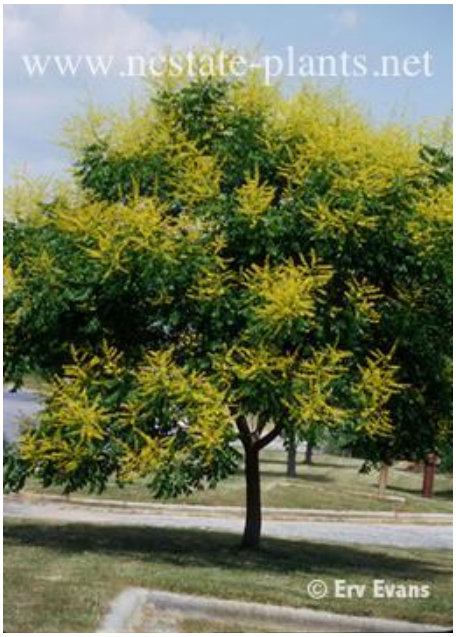

Fig. 12. Goldenrain tree. Image by Erv Evans.

This bug is in the same family of insects as the boxelder bug and like the boxelder bug, *Jadera haematoloma* sometimes becomes extraordinarily abundant. Nymphs have different coloration patterns. These bugs seek sheltered spots to overwinter. During the winter they will probably crawl out on sunny days and retreat during dark, cloudy, cold weather. Populations are often seen about August when fresh supplies of seeds are available. It is questionable whether control is necessary, though people with large numbers crawling on their house may disagree.

Chinch Bugs Ahead

Southern chinch bugs (*Blissus insularis*) are small (one-sixth inch), slender insects with black and white markings (Fig. 13). This bug is a severe pest of St. Augustinegrass in North Carolina. It also attacks Bermudagrass, bahiagrass, zoysiagrass and centipedegrass. The damage often appears first in small circular areas which get larger over time. Damage is sometimes confused with drought stress. The best way to find the culprit is to get down near the border edge where living and dying grass meet. Look near the soil and inside of the grass blades for small red nymphs and adults which will quickly burrow

underground when disturbed. Most of the damage is caused by the young, bright-red nymphs. Chinch bugs seem to be worse where there is a layer of thatch. Good thatch management helps by making the lawn less attractive to the bugs and by making it easier for pesticide to reach the chinch bugs when treated.

Fig. 13. Chinch bug nymphs and adult. Image from R. H. Cherry, University of Florida.

Astro, Sevin, and Tempo 2 insecticides are labeled for professional chinch bug management. It helps to water the lawn before treating, **but not afterward for two days**. However, label directions should be followed for any pesticide. Homeowner formulations of imidacloprid, cyfluthrin or Sevin insecticides are good choices for the homeowner.

There is additional information on chinch bugs in *Ornamental and Turf Insect Information Note No. 112* at http://www.ces.ncsu.edu/depts/ent/notes/O&T/lawn/note112/note112.html.

North Carolina State University entomologists are hoping to investigate the genetic diversity among *B. insularis*, especially between the local North Carolina populations and the highly adapted and resistant populations of Florida and Texas. If you have or know of any southern chinch bug populations (either in turf or forage) and would consider sharing a few bugs, it would be greatly appreciated. Please contact us by electronic mail at kmyoungs@ncsu.edu.