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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

Welcome to the 2012 *North Carolina Pest News*

Welcome to the first issue of *North Carolina Pest News* for 2012. *North Carolina Pest News* is a newsletter published in electronic form by the Departments of Entomology and Plant Pathology at North Carolina State University, and contains up-to-date information on the status of disease and insect pests in North Carolina from Extension specialists in the two departments. Steve Toth, Extension Entomologist and Integrated Pest Management Coordinator, is the editor of the newsletter.

From now until the middle of September, new issues of *North Carolina Pest News* will be available every Monday morning at 8:00 a.m. via electronic mail to county Extension agents, University specialists, and others. By Monday afternoon, the newsletter will be available on the Internet at http://ipm.ncsu.edu/current_ipm/pest_news.html.

We hope that *North Carolina Pest News* will meet your individual needs for information on the occurrence of diseases and insect pests in North Carolina. Please direct any suggestions or comments to Steve Toth (steve_toth@ncsu.edu).

FIELD AND FORAGE CROPS

From: Jack Bacheler, Extension Entomologist

Cotton Insect Season Getting Underway

With cotton planting just around the corner for most producers, and with thrips eagerly awaiting the emergence of the first cotton seedlings, beginning next week we will turn our attention to cotton insects. However, this short column will be devoted to listing resources intended to keep you updated on the status of economically damaging insects and their management throughout the growing season. Between our blogs, *Cotton Insect Corner* web accessible audio files and scripts of insect updates, toll free insect hotline tapes and *North Carolina Pest News* articles, we hope that updates and management tips will be frequent and convenient.

Cotton Insect Corner

Our *Cotton Insect Corner* (http://ipm.ncsu.edu/cotton/insectcorner/) maintains a number of resources for producers, county agents, industry personnel and producers, including easy access to all of our project's major publications, selected PowerPoint presentations, early postings of popular press articles, downloadable cotton insect-related and other images, and real time (well, almost) light trap counts of bollworm/podworm moth counts during the production season. To keep stakeholders current on outbreaks and management advice, we also post and archive in MP3 and script formats during the production season (http://ipm.ncsu.edu/cotton/insectcorner/radio/index.html).

Field Crops Blog

In addition to timely practical information on primarily soybean, wheat, corn and tobacco insect issues, Dominic Reisig's and Hannah Burrack's *NC Entomology Field Crops* (http://www.nccrops.com/) blog will also include cotton-related postings from Dominic and me. Posts include advice on managing thrips (http://www.nccrops.com/?p=495) and the possible impact of our warm winter on upcoming cotton pest status (http://www.nccrops.com/?p=446).

Pest Patrol

As part of their Farm Assist program, Syngenta is again sponsoring their Pest Patrol (http://www.farmassist.com/promonet/indexnw.aspx?q=213) cotton insect hotline alerts. These updates can be assessed by either calling toll-free, 1-877-285-8525 or by signing up for Hotline Text Alerts to your mobile device. I find that one handy feature of this service is the availability of cotton insect updates from specialists from all over the Southeast Cotton Belt, including Virginia, South Carolina, Georgia and Alabama.

Pest News

We will again be submitting weekly articles at this site in 2012 and archiving the articles on our *Cotton Insect Corner* web site. A number of these articles and those from the Field Crops Blog will be captured by Owen Taylor's big international *AgFax* (http://agfax.com/) site of daily agriculture-related postings, including insect-related updates on major crops across the U.S.

Cotton Scouting Schools

Our project and Dominic Reisig's will provide several cotton/soybean scouting schools in 4 to 5 cotton production areas of the state in 2012. These sessions are designed to familiarize county agents, industry personnel, consultants, producers and summer employees with pest and beneficial insect ID, pest biology and correct scouting procedures in both indoor and outdoor settings. We'll post upcoming scouting schools beginning in mid-June (Fig. 1).

Fig. 1. Field session of cotton scouting school. Image by Dan Mott.

From: Dominic Reisig, Extension Entomologist

Stink Bugs Are a Non-Issue in Wheat, but Watch Neighboring Corn

For the past couple weeks I have had questions on stink bugs in wheat. Specifically questions have focused on 1) what sort of damage stink bugs might cause to the wheat and 2) if treating stink bugs in wheat might reduce their abundance as they move into corn. However, I haven't heard or seen any cases where I think treatment would be beneficial, much less needed.

By and large, brown stink bug (Fig. 2) is the main stink bug in North Carolina wheat, but rice stink bug (Fig. 3) can also be prevalent. Green stink bug (Fig. 4) does not prefer wheat, but I had an odd call from Pamlico County about some wheat fields with extremely high densities. By the time I could make it out to the fields (April 12 - one week after the report), I could not find a single stink bug. In 2011, I picked up a few green stink bugs in wheat on April 21, but they are generally only a small proportion of the population.

Fig. 2. Brown stink bug adult.

Fig. 3. Rice stink bug adult. Russ Ottens, University of Georgia, Bugwood.org.

Fig. 4. Green stink bug adult.

1) Stink bugs can damage wheat, but only in very high numbers. Thresholds from other states are as high as two stink bugs per ten grain heads and the North Carolina threshold is one per ten grain heads (all field crop insect pest thresholds for North Carolina are published here (http://www.ces.ncsu.edu/plymouth/ent/Threshold.htm)). Seed producers might consider a more aggressive threshold, like one per 20 grain heads. Stink bugs feed on the developing tissue and will damage wheat as the grain is filling. The milk and dough stages are known to be especially susceptible. Germination will be affected before yield, so seed producers will want to treat at lower population abundances than those listed.

Although I have heard reports of treatments going out for stink bugs, often as a tank mix with a fungicide, I have not heard of populations in the state anywhere that are close to threshold levels. Although stink bugs are easy to kill in wheat with a pyrethroid- even the more pyrethroid-tolerant browns can be effectively managed - save your money. Last year (2010) I had a large-plot experiment (one acre plots), where I eliminated stink bugs with a pyrethroid. At four days after treatment, although I did not find a single stink bug in treated plots, I picked up about one brown stink bug in 15 sweeps in untreated plots. This meant that I effectively killed stink bugs. Two trials in 2009 confirmed that brown stink bug can be killed with pyrethroids in wheat, as well. However, at harvest time, I averaged 55.5 bu/A in treated plots and 55.9 bu/A in untreated plots. I drove through the untreated plots, so all plots

had wheat that was knocked down due to tire traffic. **Treating stink bugs at low abundances in wheat is a negative profit situation**.

2) From a corn perspective, brown stink bugs are the species that can be the most damaging (Fig. 5). Brown stink bugs can complete a generation in wheat. Perhaps the adults can be killed in wheat before they can reproduce. Brown stink bug adults are very mobile and they feed on lots of other hosts (like weeds in the ditch bank). I think that more stink bugs would move in from surrounding areas if a treatment were applied now. Remember that most of our insecticides registered on wheat have a 30 day pre-harvest interval. A lot can happen in that time. Also, think about what your neighbors are doing. Is there a concerted effort to eliminate stink bugs in wheat across the landscape? As a result, I do not think that treating wheat for stink bugs at this stage will have a major impact on corn.

Fig. 5. Corn injured by stink bug. Note the purplish staining as a result of the cells ruptured from feeding punctures.

From: Steve Koenning, Extension Plant Pathology

Plant Disease and Insect Clinic 2012

Agents with responsibility for corn, cotton, soybean and small grains will again receive a limited number of free samples for these crops. The funding comes from the North Carolina Corn Producers, North Carolina Cotton Quality Improvement Committee (Cotton Incorporated), North Carolina Soybean Producers Inc., and North Carolina Small Grain Producers through check-off funding. Please submit samples for these crops as needed.

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

Current Status of Soybean Rust in North America

Soybean rust has been detected on kudzu in the panhandle of Florida, Louisiana, Alabama, and Texas. Relatively mild winter weather has allowed for some survival in the continental U.S. Sentinel plots have been planted in Mississippi, with no rust detected at this time.

Potential for Soybean Rust in North Carolina in 2012

At this time there is no 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. Rust did not spread within the state from the Lenoir County location because of a hot dry fall in 2010. With rust overwintering in the U.S. the chance of soybean rust affecting soybean is somewhat higher in 2012 than in the past two years, but the chance of rust affecting the crop is probably only 10% in 2012. We will continue to operate sentinel plots in 2012 though the number has been reduced to about 15. Mobile surveys will be conducted as warranted.

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 the Mid-Atlantic Region:
http://cipm.ncsu.edu/ent/SSDW/RustBulletin08.pdf

ORNAMENTALS AND TURF

From: Steve Frank, Extension Entomologist

Pest News, April 13, 2012

This has been an early and fast-paced spring for ornamental pests. Many scale insects, mites, and other pests are 3 to 4 weeks early compared to previous years.

Cottony Maple Leaf Scale Eggs Hatching

Cottony Maple Leaf Scale is one of several cottony scales in the genus *Pulvinaria* (Fig. 6). You can find these now on their most common host: maple and dogwood. Stand under a tree and look up and you will see cottony masses about the size of a cotton swap stuck to the bottom of leaves. These are the egg masses. They each contain many hundred eggs that are hatching as we speak. The crawlers will settle and feed on the leaves all summer then migrate back to branches in fall before leaf-drop.

Fig. 6. Cottony maple leaf scale ovisacs on a maple leaf. Photo: Steve Frank.

Fig. 7. Cottony cushion scale on Euonymus stems. Adult ovisac is present behind a darker less cottony juvenile. Photo: Steve Frank.

Cottony Cushion Scale Eggs Hatching

Cottony Cushion Scale (Fig. 7) is an exotic pest that became a very important pest of citrus. However, it is quite generalist and does affect several ornamental plants such as Nandina, Euonymus, Boxwood, Rose and others. Cottony cushion scale is very noticeable when female egg sacs are present. They are present now and most of the time, since there are several overlapping generations per year. Cottony cushion scale is an example of a relatively successful biological control program in the U.S. The Vedalia Beetle was captured in its homeland of Australia and released to bring the pest under control. Although cottony cushion scale can still be found and remains a pest it is often kept in check by this wide-spread beetle. These are in a different family (Mararodidae) than other soft scales (Coccidae). However, control measures are similar to those outlined in the soft scale management note posted here: http://www.ces.ncsu.edu/depts/ent/notes/O&T/shrubs/note156/note156.html.

Oak Eriococcin Scale Active

Oak Eriococcin, *Acanthococcus quercus*, is not very well known. Not much research has gone into understanding its biology or control. It is another scale insect outside of the two major families or Armored (Diaspidae) and Soft (Coccidae) scale we usually worry about. It is in the family Eriococcidae which includes several felt scales including Azalea bark scale. This scale is quite common around Raleigh and is very apparent this time of year. As the name implies its primary hosts are oak trees. I find

it primarily on willow oaks along streets (Fig. 8). The oaks on Hillsborough by campus are literally covered head to toe. The scale produces cottony white egg masses that are often in the crotches of twigs. Very little efficacy data is available but there are reports that imidacloprid and other treatments for soft scale work for these as well. See *Ornamentals and Turf Insect Information Note ENT/ort-156* at http://www.ces.ncsu.edu/depts/ent/notes/O&T/shrubs/note156/note156.html.

Fig. 8. Willow oak trunk infested with Oak Eriococcin scale and close up of scale ovisacs in the crotch of twigs. Photos: Steve Frank.

Cankerworm Update

This year we had more cankerworms (Fig. 9) than in recent years. Speculation exists as to why but it is likely due to the warm winter. I have discussed the biology and control of these on my website http://ecoipm.com/. So you can visit there for more information but two important points. First they are done. Cankerworms only feed for a few weeks then pupate in the soil so any action now if fruitless. Second, the best control will be sticky bands placed around your trees in late October. The adults of fall and spring cankerworms are wingless and climb up trees to lay eggs in late fall and early spring respectively. By placing a burlap band around your trees covered in tanglefoot you prevent the adults from reaching the canopy and laying eggs.

Fig. 9. Cankerworm on willow oak trunk and cankerworm egg mass. Photos: Steve Frank.

Extension Resources Online

We have many extension resources such as factsheets, articles, pest news and presentations consolidated as links on my website http://ecoipm.com/. In addition you can visit the site to read my blog or twitter feeds. You can also sign up to follow my pest alert Twitter feed *@OrnaPests* and my general ecology and IPM twitter feed *@ecoIPM* via Twitter or by clicking the 'Follow' buttons on my website. *@Ornapests* provides short timely alerts when new pests become active in the field accompanied by pictures and links to management information.

RESIDENCES, STRUCTURES AND COMMUNITIES

From: Mike Waldvogel and Patty Alder, Extension Entomology

Clover Mites – The "Red Menace"

Clover mites are quite common at this time of year. The adults are visible to the unaided eye and are dark reddish color with their front pair of legs noticeably longer than the other legs and other held out in front giving the appearance of "feelers". Immatures are a brighter red color. High populations of clover mites can cause some damage to lawns, clover and a few other plants, but the major problem is typically more the "nuisance factor" of the mites coming indoors. There is some anecdotal evidence that overuse of high-nitrogen fertilizers may increase the incidence of clover mite problems. This isn't to say that this is common but certainly the pursuit of the perfect lawn often leads people to over apply fertilizer. This is a good opportunity to tell people about the value of getting soil samples tested **BEFORE** they spend a wad of money on bags of fertilizer that may not be the appropriate type and/or may not even be necessary for their lawn. Also remind people that the red color in the clover mites is a pigment (they'll find that out anyway when they squish some mites indoors and they get that nice red stain). We do get a few callers who assume that the mites are blood-sucking parasites.

Indoors, control options are limited in terms of spraying. Most of the problems are typically around windows and doors. Spraying the window ledges will help for a while. Any of the common household insecticides should help but please remind people, particularly those with small children, to think twice about the idea of treating exposed surfaces where they or their children may rest their arms while looking out the window. A vacuum cleaner may do just as adequately indoors. We prefer that any pesticide applications be focused on outdoor areas to keep out the little red invaders. Treatments should target areas around the window/door frames, the foundation (the lower 18") and about 2 to 4 feet of the soil out from the foundation. In these cases, you can use any of the common pyrethroid insecticides (those containing cyfluthrin, bifenthrin and lambda-cyhalothrin are examples). Remind callers to read the product labels first because most of the recently-manufactured pyrethroid products will have labels limiting the use of product, except in very targeted amounts (no more broad exterior treatments of buildings). Particularly with the drier weather we've had, soil treatments require far more water than structural treatments so that you get thorough saturation. A garden hose sprayer probably works best in these situations.

Another non-chemical management practice for clover mites is to keep an 18 to 24" vegetation-free zone immediately adjacent to foundation. You can have ornamentals in this area (although shrubs should be out further than that), but not grass, weeds or organic mulch. Decorative gravel works well in these

situations. This approach is not 100% guaranteed to work, but it is somewhat preferable to all-out chemical warfare. The problem typically stops in about 7 to 10 days, which is still longer than most people's patience endures.

We have information about clover mites online at:
http://www.ces.ncsu.edu/depts/ent/notes/O&T/lawn/note124/note124.html.

Kudzu Bugs Still Bugging People

We are still getting reports of bean plataspid (aka, “Kudzu Bug”) activity particularly in southeastern North Carolina. Several of these findings have been with the bugs on wisteria although we don’t know for certain that they are feeding and laying eggs there. If any of you in counties with kudzu bug infestations happen to find eggs or nymphs on plants like wisteria, we would appreciate hearing from you. Just last week, we received a sample from Supply down in Brunswick County which filled in the last missing piece of the puzzle for that area. The bugs are attracted to light-colored surfaces and may congregate in those areas. Pesticide applications are moderately successful (or moderately unsuccessful if you’re a pessimist) in killing/deterring the bugs.