

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 World Wide Web at:

http://ipm.ncsu.edu/current_ipm/pest_news.html

FIELD AND FORAGE CROPS

From: Jack Bacheler, Extension Entomologist

Upcoming Cotton Insect Pests

Although we've had some welcome relief from the recent hot 95 to 100 degree weather of the past week, our continued dry weather over most of the state isn't doing us any favors. Cotton can still tolerate dry weather reasonably well for the next week or so. Corn is another story, and is suffering as tasseling gets underway. Cotton growth over much of the state has advanced well, and initiation of blooming is getting close for some. Blooming will be a period of accelerated water demand, so we hope that rainfall events become more generous with July fast approaching. We are hopeful that this weekend may provide some relief, though possible showers and/or thunderstorms will likely be scattered.

Even in conventional cotton, bollworms and tobacco budworms should leave cotton alone until the major moth flights into cotton in mid to late July. Bollworms prefer corn at this time of year, and the pre-bloom generation of budworms typically does not reach treatable levels on conventional cotton in North Carolina. In any *Bt* technology cotton (Bollgard, BG II, or Widestrike), pre-bloom damage from bollworms is unusual. With tobacco budworms, damage to *Bt* cotton lines at any time during the growing season has not yet been found in the U.S. Be aware that the 5 percent unsprayed refuge (or the 5 percent embedded non-*Bt* cotton that can be spraying along with the Bollgard line) and the 20 percent sprayed refuge requirement is still in place for Bollgard cotton, but no refuge is needed for BG II or Widestrike cotton. Unlike conventional and Bollgard cotton, Widestrike and BG II lines are resistant to damage from cabbage and soybean loopers and beet and fall armyworms.

Although we have had only a few reports of light infestations of spider mites and cotton aphids, both of these pests can build up quickly, and the weather appears to be conducive for mite outbreaks. Scouts and producers should be on the lookout for speckled or bronzy leaves indicating spider mites (Fig. 1).



Fig. 1. Spider mite damage to cotton. Image by Jack Bacheler.

Drooping terminals are often indicative of a cotton aphid infestation (Fig. 2).



Fig. 2. Cotton aphid damage to cotton. Image by Jack Bacheler.

Both of these pests are relatively easy to scout for – but only if you’re looking. However, treatment decisions can be complicated. I’ll provide updates on managing these two pests as problems arise. You can also “brush up” on these and other pests by looking over our illustrated *Cotton Scouting Guide* at: http://ipm.ncsu.edu/cotton/insectcorner/scouting_guide.htm.

At this time, I would also recommend taking weekly square retention counts as an indication of plant bug activity. The percentage of retained square provides us with a quick and easy way to determine if further sweep net or ground cloth samples are needed. Black, brownish, yellowish upper small squares may be indicative of plant bug feeding and suggests a more detailed assessment. If square retention is above 80 percent, however, no further sampling is needed for 5 to 7 days. Details on taking square retention counts and additional sampling for plants bugs and their damage can also be found in the *Cotton Scouting Guide* (see the web site above).

Remember that you can keep up with our weekly Thursday *Cotton Insect Updates* in North Carolina by calling 1-800-662-7301, or hear an mp3 tape version and associated script online at <http://ipm.ncsu.edu/cotton/insectcorner/radio/index.html>.

Cotton Scouting Schools

This year it looks like we will provide cotton scouting schools at locations in Northampton County, Halifax County, Scotland/Hoke/Robeson counties, and Nash/Wilson/Edgecombe counties, and perhaps a few other locations. Venues, dates and times will be posted in next week’s newsletter.

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

Current Status of Soybean Rust in North America – Mid-June 2008

Soybean rust (SBR) is viable on kudzu in 8 or 9 Florida counties (two or three that border on Georgia), Alabama, Louisiana, and Texas at this time. South Georgia is hot and dry and no SBR has been found in Georgia to date. Rust may be active in Mexico on volunteer soybean growing in corn on a limited acreage, but there is a good chance that these volunteer soybeans have since been killed with herbicides. Soybean rust on **jicama** (yam bean, a crop grown in Mexico on as much as 100,000 acres) was sporulating, but has probably been harvested. All sentinel plots in Mississippi are at reproductive stages and a late crop is currently being planted.

Inoculation of Soybean in Florida at Quincy

Soybean is being inoculated with rust this week in Florida for experimental purposes. This poses little threat to soybean production since the inoculated soybeans are inside tents. This is a good sign for North Carolina soybean producers (that they have to inoculate), meaning they cannot count on natural infection!

Before these plots were inoculated, rust was found on one soybean leaf in the plot area, apparently a result of natural infection. This is the first find of Asiatic Soybean Rust on soybean in the continental U.S. in 2008. This location (Gadsden County, Florida) is about 305 miles south of Murphy and 390 miles southwest of Charlotte.

If anyone knows where there is some coral bean (see article below), please contact Steve Koenning or Jim Dunphy with information on the location!

Another Host for Soybean Rust

A new host for soybean rust in the U.S. is **coral bean**, grown in many areas especially along the East Coast. Pictures of this plant can be found at <http://www.floridata.com/ref/E/erythrin.cfm>. Coral bean is most likely to serve as an additional overwintering host for soybean rust in the Gulf Coast states, and its contributions to the epidemiology of soybean rust have not been assessed at this time.

Resources for Soybean Rust in 2008

A soybean teletip message for North Carolina has been set up at **1-800-662-7301** (the same number as for the cotton insect update), with a message updated as necessary.

There are more resources for information on Asiatic soybean rust available this year than in past years. North Carolina will receive 2,000 copies of the booklet *Soybean Rust Management in the Mid-Atlantic Region*. These will be distributed to county offices on the basis of soybean acreage. The older version of the *Soybean Rust Management in the Mid-Atlantic Region*, as well as the *Soybean Disease Atlas*, can be found at the Southern Soybean Disease Workers web site <http://cipm.ncsu.edu/ent/SSDW/>. A PDF version of the newer *Soybean Rust Management in the Mid-Atlantic Region* guide will be posted there soon. We will receive 600 copies of the

Fungicide Manual, and these will be distributed to county agents, CCAs and dealers as long as supplies last, though a PDF version can be obtained from <http://oardc.osu.edu/soyrustr/>. The *Fungicide Manual* actually contains more information than most growers are likely to need.

Some sources for more detailed information on soybean rust are listed below:

- USDA soybean rust web site: <http://www.sbrusa.net/cgi-bin/sbr/public.cgi>
- *North Carolina Agricultural Chemicals Manual*: <http://ipm.ncsu.edu/agchem/6-9.pdf>
- *Fungicide Manual*: <http://oardc.osu.edu/soyrustr/>

ORNAMENTALS AND TURF

From: Steve Bambara, Extension Entomologist

Japanese Beetles are Back in Action

These last thunderstorms have triggered the release of Japanese beetles. If you haven't seen them yet, you will soon. Japanese beetles are very dependent upon soil moisture at the time of egg-laying. Considering last year's drought, it will be interesting to see what this year's population is like. The standard recommendation for insecticide treatment has been Sevin, which works great, but needs reapplication every 5 to 7 days. Pyrethroid insecticide sprays will give about 12 days of protection. Neem products seem to give some protection for those seeking a milder poison. Imidacloprid products are gaining wider use and may be a feeding deterrent. Be sure to check the label for use on your particular site if you wish to use imidacloprid.

Homeowner Borer Protective Bark Sprays

In past issues of the *North Carolina Pest News*, we've published a list of "preventive" borer sprays that can be used on bark to deter new infestations. The old standards of Dursban and lindane are long gone. For commercial applicators, Astro and Onyx have largely taken their place. For the homeowner, at the moment what we largely recommend are products off the shelf that contain permethrin or other pyrethroids. Timing is important for your particular borer, but here is an updated list of products which has drastically changed from the 2004 list.

PRODUCT - (active ingredient) - borers listed on the label

- GREEN LIGHT BORER KILLER - (permethrin) - lesser peachtree borer, peach twig borer, pine beetles.
- HI-YIELD INDOOR/OUTDOOR BROAD USE INSECTICIDE INCLUDING TURF GARDENS - (permethrin) - bark beetles, bark boring insects, ash borer, bronze birch borer, dogwood borer, elm bark beetles, lesser peachtree borer, lilac borer, peach twig borer, pine beetles, rhododendron borer, roundheaded wood borers, turpentine beetles, and wood boring beetles.

- BASIC SOLUTIONS LAWN & GARDEN INSECT KILLER CONCENTRATE (also as Ready to Spray) - (permethrin) - lesser peachtree borer, and pine beetles.
- BONIDE BORER-MINER KILLER CONCENTRATE - (permethrin) - peach twig borer, lesser peachtree borer, and pine beetles.
- BONIDE EIGHT INSECT CONTROL GARDEN DUST - (permethrin) - peach twig borer, and lesser peachtree borer.
- HI-YIELD PERMETHRIN CONCENTRATE LAWN, GARDEN, PET & LIVESTOCK INSECT - (permethrin) - bronze birch borer, bark beetles, lesser peachtree borer, peach twig borer, wood boring beetles and turpentine beetles.
- ORTHO BUG B GON GARDEN & LANDSCAPE READY TO USE INSECT KILLER - (esfenvalerate) - peach twig borer, peachtree borer and lesser peachtree borer.
- BAYER ADVANCED COMPLETE INSECT DUST FOR GARDENS - (permethrin) - lesser peachtree borer and peach twig borer.
- PYGANIC - (pyrethrum) [OMRI] - This product is listed for all ornamental tree and shrub sites. It breaks down more quickly in sunlight and air than the synthetic pyrethroids and would be expected to last only a few days in the best conditions.

Disclaimer: This list is in no particular order, may not be complete, and is not an endorsement of any product over another. (Some borers may also respond to certain systemic pesticides.)

The Dirt on Mud Daubers

This may be a stretch as an ornamentals topic, but I'll bet you've had mud (dirt) dauber wasps inside or around your garden shed. Most of these blue-black metallic-colored wasps sting specific kinds of spiders to provision the larvae in their mud constructed nests. The organ pipe mud dauber is probably the most commonly known (Fig. 3).

These critters can make the most annoying buzz-drill-vibration sound while sculpting their nests on the side of a wall. It is the insect equivalent to the dental drill. Spiders are great for the garden. But if you don't like spiders, then dirt daubers are your friends.



Fig. 3. Organ pipe mud dauber. Image by Steve Bambara.

You would have to work really hard to have one of these wasps sting you. You can knock down the nests with a stick. You may have to do this several times before they give up. You can also use your favorite non-chemical method of pest control, but I prefer to let them play their natural role in the garden.

Cicada Sayonara

The people in Buncombe County (Asheville) are beginning to wake up on their own again. Peace is settling back over the mountains as Brood XIV of the periodical cicada goes "back to sleep" for another 17 years. What may begin to show up is a large number of brown leaves and broken tips at the ends of branches in the hardwood trees (Fig. 4) and shrubs. This "flagging" is produced by excessive egg laying slits in the branches (Fig. 5) that, in effect, girdles the tip of the branch.



Fig. 4. Flagging on oak. Image by Linda Haugen (<http://www.forestryimages.org>).



Fig. 5. Oviposition scars. Image by James R. Baker.

Nothing really needs to be done on the average tree. A little tip pruning is okay every 17 years. Small trees in the yard might benefit from some pruning to maintain good shape. Some woody shrubs might also benefit from some pruning. Linda Blue, County Extension Agent, Buncombe County, reported that the Buncombe County Master Gardeners recorded more than 85 telephone calls. That's probably one call for every 1,000,000 cicadas in the county.

From: Mike Munster, Department of Plant Pathology

Fuligo septica, the “Dog-vomit” Slime Mold, in Landscapes

There’s been a bumper crop of slime molds in landscape beds this year, and we’ll see them throughout the summer and into the fall. By far the species most often noticed is *Fuligo septica*, a.k.a. the “dog vomit” slime mold. Despite the unpleasant name, it is completely harmless to humans, animals and plants.

Slime molds spend most of their lives as amoeboid cells or inconspicuous plasmodia that creep slowly through soil, leaf litter, mulch, etc. A plasmodium feeds by engulfing bacteria, spores, and bits of organic matter. It eventually moves out to a more exposed location on top of mulch, pine straw, a stump, a low-growing plant, or even the foundation of a building. There it stops moving and transforms into a fruiting (spore-producing) body (Figs. 6-8). This is when *Fuligo septica* first gets noticed as a bright yellow, frothy mass a few inches to up to a foot in diameter. It quickly fades to a dull orange and then a light tan as its surface dries to a crust. After a few days it breaks apart to release its dark-colored spores, which blow away to start the life cycle anew. Within a week or two, all that’s left is a dusting of leftover spores and bits of gray or yellowish crust.



Figs. 6-8. Fruiting bodies of the “dog-vomit” slime mold, *Fuligo septica*, at different stages of development. Images by M. J. Munster.

Control measures for *Fuligo septica* are neither effective nor necessary. If considered intolerably unsightly, they can be removed by hand or washed off with a hose, but there's a good chance that new ones will pop up at a later date, though probably not next year, unless new mulch is applied.

INSECT TRAP DATA

From: Alan A. Harper, Lenoir County

Light Trap Data from Lenoir County

June

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                        Number of Adult Insects
*****
Date      HW      CEW      ECB      AW      AWC      GSB      BSB      TBW
*****
June 1    0       2       0       0       0       0       0       0
June 2    0       3       0       0       0       1       0       0
June 3    0       1       0       1       0       3       0       0
June 4    0       1       0       0       0       3       0       0
June 5    0       2       0       0       0       2       0       0
June 6    0       3       0       0       0       0       0       0
June 7    1       1       0       0       0       2       4       0
June 8    1       2       1       1       0       1       1       0
June 9    0       2       0       1       1       4       2       0
June 10   1       2       0       1       1       2       1       0
June 11   1       2       0       1       1       1       1       0
June 12   0       1       0       1       1       0       0       0
June 13   0       2       0       1       1       0       0       0
June 14   0       1       1       0       2       0       0       0
June 15   0       2       2       0       0       2       2       0
June 16   0       3       1       0       0       1       0       1
June 17   0       0       0       0       2       1       0       0
June 18   1       2       0       0       2       1       0       1
June 19   0       0       0       0       1       0       0       0
June 20   0       2       2       0       1       0       0       0
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Abbreviations: HW = hornworms; CEW = corn earworms; ECB = European corn borers; AW = true armyworms; AWC = armyworm complex; GSB = green stink bugs; BSB = brown stink bugs; TBW = tobacco budworms

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.

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