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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

FIELD AND FORAGE CROPS

From: Jack Bacheler, Extension Entomologist

Cotton Aphids and Spider Mites Behaving

So far, cotton aphids and spider mites have not tipped their hands, as we have not received reports of economic levels of either pest through today. A number of folks have reported low levels of spider mites in many cotton fields.

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Plant Bugs Arriving?

Out 2013 plant bugs scene could get interesting. We mentioned last week that plant bug levels on weedy host vegetation and on field corn seemed to on the high side for us so far this year. This week, several cotton fields in eastern and east-central North Carolina have or are being treated. A few of these fields had upper square retention rates in the 60% range, as opposed to the 90 to 100% retentions more commonly seen in North Carolina cotton fields at this time of year. If we get a return to hot drier weather and the rapid drying down of plant bug hosts, further movement into cotton in some areas can be expected.

If sweep numbers are just at the threshold of 8 per 100 sweeps or perhaps at or less than 12 per 100, a chloronicotinoid like Centric (4.3 out of 5 rating - http://ipm.ncsu.edu/cotton/insectcorner/PDF/Insecticide.Performance.Survey.2013.pdf) might be worth considering. The heavy hitters like acephate (4.5 out of 5 rating) and Bidrin (5.0) are slightly more effective than the most active nicotinoid for plant bugs, but also more disruptive, sometimes resulting in the establishment of later cotton aphid or spider mite outbreaks. With Bidrin, be careful of this product's high mammalian toxicity and its 6-day field reentry interval. If a nicotinoid is used, be sure to come back with another chemical class if a subsequent application is needed (see Dominic Reisig's blog of last week - http://www.nccrops.com/2013/06/22/insecticides-for-plant-bugs/). In addition to the list of plant bug products listed in the *North Carolina Agricultural Chemicals Manual*, Transform (4.5) now has a federal label for plant bugs. This product offers plant bug effectiveness in the range of acephate, but should be less disruptive on beneficial insects. The cost of this new product will likely be in the range of $10-11 per acre for most producers.

It'll be interesting to find out how the plant bug situation develops during the next few weeks. **Remember that stink bugs cannot cause economic damage to pre-blooming cotton**.

Cotton and Soybean Insect Scouting Schools Being Scheduled

Dominic Reisig, Extension Entomologist, and I are beginning to schedule our annual soybean/cotton scouting "schools". Each school will cover both cotton and soybean insect ID, biology, crop damage, scouting procedures and the use of correct thresholds. Preliminary information will be reported on below dates:

July 15: Onslow County area
July 16: Greene County area
July 18: Bertie County area
July 17 or 19: Northampton and Halifax (separate schools)

From: Steve Koenning, Extension Plant Pathologist

Ascochyta Leaf Spot on Cotton

The *Plant Disease and Insect Clinic* (http://www.cals.ncsu.edu/plantpath/extension/clinic/) at North Carolina State University received a cotton sample on June 27, 2013 thought to have target spot caused

by Corynespora. *Ascochyta* spp. was the only fungus found. This does not warrant fungicide applications. This is a fungus common in wet, relatively cool weather and does not impact cotton yield unless it infects the stem. Stem infection is not likely at this time. More information on wet weather blight (Ascochyta leaf spot) can be found at:
http://www.ces.ncsu.edu/depts/pp/notes/Cotton/cdin2/cdin2.htm

Wet weather blight on cotton.

From: Barbara Shew, Extension Plant Pathologist

Peanut Disease Advisories Will Start Soon

Peanut growers will begin foliar disease control programs soon. In well rotated fields, the first fungicide spray for leaf spot control should be applied when peanuts reach R3, or when about half the plants in a particular planting have at least one pod starting to develop. In most years, peanuts will reach R3 around July 7. Reapply foliar fungicides every two weeks, or follow the *Peanut Leaf Spot Advisory*.

The *North Carolina Peanut Leaf Spot Advisory* is a cooperative effort by the State Climate Office of North Carolina and the Department of Plant Pathology at North Carolina State University. The advisory is a safe way to minimize fungicide applications by spraying only when weather conditions favor disease.

We also provide spray advisories to warn growers when conditions are right for Sclerotinia blight. Sprays for Sclerotinia blight control are necessary only in fields with a history of disease. Growers should start scouting for Sclerotinia blight in early July and follow advisories to determine whether sprays are necessary.

Leaf spot and Sclerotinia advisories are delivered by daily e-mails throughout the summer. Contact Barbara Shew or your county Extension office if you would like to receive peanut disease advisories. Advisories are also available on-line at http://ncsupeanut.blogspot.com/.

For more information about peanut diseases, see *2013 Peanut Information* (http://www.peanuts.ncsu.edu/PDFFiles/005279/2013_Peanut_Information_%28NC%29.pdf).

From: Jim Dunphy, Extension Soybean Specialist, and Steve Koenning, Extension Plant Pathologist

Soybean Rust Update

Asiatic soybean rust has now been confirmed in 2013 on soybeans in three states - Avoyelles and Rapides parishes in Louisiana, Gadsden and Jackson counties in Florida, and Baldwin County, Alabama. The closest rust to our North Carolina soybeans is approximately 390 miles from Charlotte, 620 miles from Elizabeth City, 450 miles from Fayetteville, 310 miles from Murphy, 495 miles from Raleigh, 550 miles from Washington, 460 miles from Wilmington, and 455 miles from Winston-Salem, North Carolina.

We do not recommend spraying soybeans with a fungicide to control Asiatic soybean rust at this time. Such pre-bloom applications have seldom improved yields.

The current status of soybean rust in the U.S. can always be found at http://sbr.ipmpipe.org/cgi-bin/sbr/public.cgi**.**

FRUIT AND VEGETABLES

From: Lina Quesada-Ocampo, Extension Plant Pathologist

New Cucurbit Downy Mildew Report in Cucumber from Franklin County and Several Cucurbits in Johnston County

Cucurbit downy mildew was reported on cucumbers in Franklin County on June 22 and on cantaloupe and pumpkin, June 25, through the cucurbit downy mildew IPM pipe website (http://cdm.ipmpipe.org/index.php?option=com_wrapper&view=wrapper&Itemid=65). Cucurbit downy mildew has also been reported in watermelon and squash in Charleston County, South Carolina. Now that several cucurbits are being affected in North Carolina and neighboring states it's important that growers scout their fields twice a week and protect their crops. The forecast for cucurbit downy mildew risk (http://cdm.ipmpipe.org/index.php?option=com_content&view=category&layout=blog&id=38&Itemid=61) in North Carolina continues to be high due to the wet weather we have experienced.

For control recommendations and who to contact for assistance, please refer to the first North Carolina report from Wayne County (http://plantpathology.ces.ncsu.edu/2013/06/pest-news-5313/), or check our factsheets in English and Spanish (http://projects.cals.ncsu.edu/veggiepathology/disease_factsheets).

Follow us on Twitter and Facebook for more veggie disease alerts (https://twitter.com/QuesadaLabNCSU and https://www.facebook.com/QuesadaLabNCSU).

Cucurbit downy mildew symptoms on cucumber leaf. Photo: Lina Quesada, North Carolina State University Vegetable Pathology.

Cucurbit downy mildew dark sporulation on back side of cucumber leaf. Photo: Lina Quesada, North Carolina State University Vegetable Pathology.

Cucurbit downy mildew symptoms on cantaloupe. Photo: Lina Quesada, North Carolina State University Vegetable Pathology.

ORNAMENTALS AND TURF

From: Mike Munster, Plant Disease and Insect Clinic

Emerald Ash Borer Detected in North Carolina

The emerald ash borer (EAB), a destructive exotic insect pest, has now been detected in North Carolina. These beetles feed under the bark of ash trees (*Fraxinus* spp.), eventually killing them. The detection is not unexpected, as EAB was already present in Virginia and Tennessee. In North Carolina, Person, Granville, and Vance counties are under quarantine. No movement of ash trees or ash wood products, or

of hardwood firewood, is allowed from these counties. The reason is that EAB can be present inside these materials and inadvertently moved long distances by people.

For more, including contact information if you suspect you have found this pest, see the North Carolina Department Agriculture & Consumer Services Press Release 17-Jun-2013 (http://www.ncagr.gov/paffairs/release/2013/6-13emeraldashborer.htm).

Further information is found on the North Carolina Forest Service Emerald Ash Borer FAQ page (http://www.ncforestservice.gov/forest_health/fh_eabfaq.htm).

Note: At the time of this writing, that FAQ page still had not been updated to reflect the fact that this is now in North Carolina.

The adult of the emerald ash borer is about a half-inch long, and metallic green in color. Photo: Matt Bertone.

From: Steve Frank, Extension Entomologist

Emerald Ash Borer

Since emerald ash borer (EAB) arrived in Michigan in 2002 a lot of great research has been done to understand how to manage trees with EAB present. This work has also resulted in Extension publications that will help us deal with EAB here in North Carolina. I will link to these important publications and develop new publications specific to North Carolina if they become necessary.

The ultimate source for EAB information is the website EmeraldAshBorer.info which is a collaborative effort of the U.S. Department of Agriculture Forest Service, Michigan State University, Purdue University and Ohio State University. On this site you can find out how to diagnose infested trees, learn about treatment options, and see what research is being on to help control EAB.

Diagnosing infested trees an important because trees can die quickly and become hazards. If you have a tree that shows signs of decline first be sure it is an ash tree. There is a publication to help you distinguish ash from other trees and distinguish EAB from other ash pests (http://ecoipm.files.wordpress.com/2013/06/commonashproblems.pdf).

Another publication will help to zero in on specific EAB signs and symptoms (http://ecoipm.files.wordpress.com/2013/06/signssymptomseab.pdf). In general trees will show branch dieback and sucker growth within the canopy and near the ground. D-shaped exit holes will be present on trees from which a generation of adults has already emerged.

There are insecticide treatments that will help protect trees from EAB. See "Insecticide Options for Protecting Ash Trees from Emerald Ash Borer" (http://ecoipm.files.wordpress.com/2013/06/multistate_eab_insecticide_fact_sheet.pdf).

There are a few products available to homeowners for protecting ash trees. But there are many considerations before committing to protecting a tree. See the "Emerald Ash Borer: Homeowner Guide to Insecticide Selection, Use, and Environmental Protection" (http://ecoipm.files.wordpress.com/2013/06/eabtreatmentguide2.pdf).

The goal of this *North Carolina Pest News* was to alert you to some basic resources and our new website. I will start summarizing important information on the blog, http://ecoipm.com, so we can learn about this pest in bite-sized pieces. There are also a lot of regulatory issues that have not been cleared up yet. I have been in contact with North Carolina Department Agriculture & Consumer Services to try and figure out if infested trees need to be reported and what disposal requirements will be. Stay tuned . . .

Bee Research

A graduate student, Holden Appler, working with Dr. David Tarpy and me is looking for beehives to sample. He is investigating how urbanization affects honey bees and is looking for feral and managed hives from which he can collect bees. If you keep bees and would like to contribute to this research please contact me (sdfrank@ncsu.edu). Holden Appler would need to come and collect 60 bees from your hive. That's it. We are also very interested in feral hives so if you know of a hive in a tree or a house or other place, please let us know. We are **NOT** in the business of bee removal. We would just collect 60 bees. Thanks.

INSECT TRAP DATA

From: Alan A. Harper, Lenoir County

Light Trap Data from Lenoir County

June

Date	Number of Adult Insects							
	HW	CEW	ECB	AW	AWC	GSB	BSB	TBW
June 1	---------- Put up light trap ----------							
June 2	0	0	0	0	0	7	0	0
June 3	0	1	1	0	0	10	0	0
June 4	0	0	0	0	0	5	0	0
June 5	0	0	1	0	0	2	0	0
June 6	0	0	0	0	0	0	0	0
June 7	0	0	0	0	0	3	1	0
June 8	0	0	0	0	0	3	0	0
June 9	0	0	1	0	0	12	1	0
June 10	0	0	0	0	0	4	0	0
June 11	0	0	0	0	0	0	0	0
June 12	0	0	0	0	0	2	0	0
June 13	0	0	0	1	0	4	1	0
June 14	0	0	0	0	0	0	0	0
June 15	0	0	0	0	0	0	0	0
June 16	0	0	1	0	0	0	1	0
June 17	0	0	0	0	0	1	0	0
June 18	0	0	0	0	0	0	1	0
June 19	0	0	0	0	0	0	0	0
June 20	0	0	0	0	0	0	0	0
June 21	0	0	2	0	1	0	0	0
June 22	0	0	0	0	0	1	0	0
June 23	0	0	0	0	0	0	0	0
June 24	0	0	0	0	0	0	0	0
June 25	0	0	0	0	0	1	0	0
June 26	0	0	0	0	0	0	0	0
June 27	0	0	0	0	1	0	0	0
June 28	0	0	0	1	0	0	0	0

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