

# North Carolina Pest News

Departments of Entomology and Plant Pathology



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## In This Week's Issue . . .

### 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)

## ANNOUNCEMENTS AND GENERAL INFORMATION

### Landscape Color Field Day Scheduled for June 27 in Raleigh

The 2013 Landscape Color Field Day, co-sponsored by the North Carolina State University's College of Agriculture and Life Sciences and North Carolina Commercial Flower Growers Association, will be held on Thursday, June 27, 2013 at the Horticulture Field Laboratory and JC

Distributed in furtherance of the acts of Congress of May 8 and June 30, 1914. North Carolina State University and North Carolina A&T State University commit themselves to positive action to secure equal opportunity regardless of race, color, creed, national origin, religion, sex, age, or disability. In addition, the two Universities welcome all persons without regard to sexual orientation. North Carolina State University, North Carolina A&T State University, U.S. Department of Agriculture, and local governments cooperating.

Raulston Arboretum, 4415 Beryl Road, Raleigh, North Carolina. More information, including the schedule of events and a registration form, is available at [http://www.cals.ncsu.edu/agcomm/writing/Field\\_Days/landscape-color-2013.pdf](http://www.cals.ncsu.edu/agcomm/writing/Field_Days/landscape-color-2013.pdf).

## FIELD AND FORAGE CROPS

From: Jack Bachelier, Extension Entomologist

### Western Flower Thrips: Here Today and Gone Tomorrow?

Due at least in part by the hot dry weather during the last week in May in many areas of the state, we had a number of reports of acephate (that is, Orthene and other brand names), failures for thrips control. On the other hand, a number of producers had been getting good control with acephate. When control failures occur during prolonged dry weather, this is most likely due to the presence of hard-to-control (and difficult to identify in the field) western flower thrips. In one cotton field in far eastern North Carolina, a producer had a control failure after using acephate (Orthene). Dominic Reisig, Extension Entomologist, identified the adults in the sample as 95% western flower thrips (19 western flower thrips and one tobacco thrips!). Radiant is the only western flower thrips-active insecticide labeled on cotton. That's the good news. On the other hand, the 6 oz of Radiant that is very active on all thrips species found on cotton would set producers back approximately \$35 per acre. However the 1.5 to 2 oz product rate (\$8.75 to \$11.66) tank mixed with Dyne-Amic 0.625% (volume/volume) looked acceptable against both western flower thrips and other thrips species (primarily tobacco thrips) in a 2012 thrips test at the Upper Coastal Plain Research Station near Rocky Mount. Although the use of Radiant would probably not be a wise choice for routine thrips foliar applications, this product may be a good one-time option in situations where western flower thrips are suspected following a prior control failure.

However, due to June 6 and 7 high to rainfall accumulations throughout our cotton production area, we do not expect westerns to be a further problem on cotton. Western flower thrips seem to thrive in hot dry weather and "suffer" population declines during rainy spells. Our excessive widespread rainfall will likely result in high thrips mortality, especially for western flower thrips. If my back yard is any example, cotton fields under water and lack of field accessibility for weed control may be the most pressing problems for some producers in the coming days.



Bachelier's backyard creek usually 12 feet behind the tree line and 5 feet lower (June 7, 2013). Image by Jack Bachelier.

**One final note:** In the coming days, be sure to observe the "5 True Leaf Rule". Even if leaves are moderately to severely damaged by earlier thrips feeding, cotton plants can no longer be economically damaged by thrips when seedling reach the 5 true leaf stage.

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

### **Soybean Rust Update: June 3, 2013**

Asiatic soybean rust has been found on a soybean in a sentinel plot in Jackson County, Florida. The plant was at stage V6 (6 trifoliolate leaves), and only one of the 128 leaves inspected was infected. Jackson County is in the panhandle of Florida, and is approximately 310 miles from Murphy, 400 miles from Charlotte, 535 miles from Fayetteville, and 465 miles from Winston-Salem, North Carolina.

This is actually the second find of rust on soybeans in the continental U.S. in 2013. Rust was confirmed on a volunteer soybean in St. John Parish, Louisiana, on January 30 of this year. St. John Parish is approximately 510 miles from Murphy, North Carolina.

The disease has now been found in 26 counties of the U.S., including nine in Florida, eight in Louisiana, five in Alabama, and four in Georgia. All were on kudzu except the two mentioned above.

Although rust has been found in more counties earlier in the year than in past years, we don't think this increases the risk so much that we will have rust early enough to be an economic problem. Dry weather will discourage development of rust, as will hot weather (e.g. in the 90s). We could easily get both. And we would still need winds to blow spores from those areas that have rust to our North Carolina soybean fields. While we sometimes get winds in those directions, that is not a common direction for our winds in the summer.

An up-to-date map of where rust has and has not been found in the U.S. can be found at <http://sbr.ipmpipe.org>.

## **FRUIT AND VEGETABLES**

From: Lina Quesada-Ocampo, Extension Plant Pathologist

### **Downy Mildew Outbreak on Cucumbers in Southeast North Carolina**

Cucurbit downy mildew was reported June 4, 2013, in Wayne County, North Carolina, and confirmed by the Quesada Laboratory (<http://go.ncsu.edu/veggiepathology>) and the Plant Disease and Insect Clinic (<http://www.cals.ncsu.edu/plantpath/extension/clinic/>) at North Carolina State University. The disease appears to be just starting and only 1% of the field was affected at less than 1% severity. Immediate action to protect cucurbit crops in North Carolina is recommended. Typically cucumbers, watermelons and melons are more susceptible to the disease than squash and pumpkin; nonetheless, all cucurbits could be at risk especially if environmental conditions are conducive to disease.

For more information about the disease and how to control it see factsheets in English and Spanish ([Cucurbit downy mildew eng 2013a.pdf](#) and [Cucurbit downy mildew spn 2013a.pdf](#)) produced by Dr. Lina Quesada-Ocampo and Dr. Kelly Ivors at the Department of Plant Pathology. Control recommendations are also available in the Cucurbit downy mildew IPM pipe website

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(<http://cdm.ipmpipe.org/index.php>), where you can also register to receive text, e-mail and/or phone alerts when new disease outbreaks are reported.

If you think you have cucurbit downy mildew in your cucurbits please contact your local Extension agent and send photos and/or physical samples to the Plant Disease and Insect Clinic. If cucurbit downy mildew is confirmed in your samples by an expert, please make sure a report is sent to the Cucurbit downy mildew IPM pipe website

([http://cdm.ipmpipe.org/index.php?option=com\\_wrapper&view=wrapper&Itemid=65](http://cdm.ipmpipe.org/index.php?option=com_wrapper&view=wrapper&Itemid=65)).

Control strategies are provided in the factsheets for commercial growers. Homeowners can use gardening fungicides that contain chlorothalonil as an active ingredient. Organic growers can use copper-based products to slow down disease progression.



Cucurbit downy mildew symptoms on cucumber. Photo: Gerald Holmes, Valent USA Corporation (Bugwood.org).

### **Cucurbit Downy Mildew Found on Cucumbers in Northeast North Carolina**

A cucurbit downy mildew report came in June 5, 2013, from Nash County and was confirmed by the Quesada Laboratory at North Carolina State University. The disease symptoms observed so far are very subtle and the disease appears to be just starting. This is the second cucurbit downy mildew report for North Carolina. Cucurbit growers are encouraged to protect their crops immediately. Forecasts ([http://cdm.ipmpipe.org/index.php?option=com\\_content&view=category&layout=blog&id=38&Itemid=61](http://cdm.ipmpipe.org/index.php?option=com_content&view=category&layout=blog&id=38&Itemid=61)) indicate a high risk of cucurbit downy mildew infection for cucurbits in parts of eastern North Carolina during the next few days. For control recommendations please refer to the initial report in Wayne County (<http://plantpathology.ces.ncsu.edu/2013/06/pest-news-5313/>).

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## ORNAMENTALS AND TURF

From: Steve Frank, Extension Entomologist

### Hibiscus Sawfly Damage

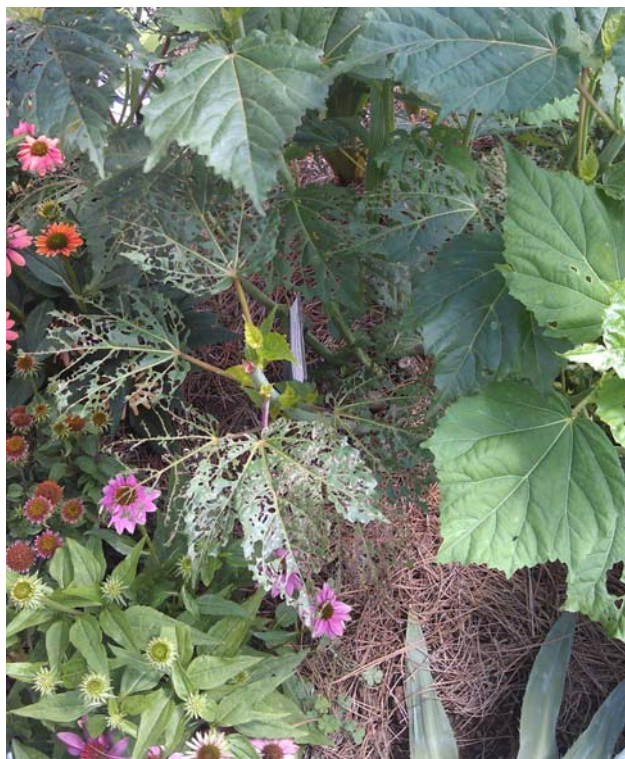
In Georgia last week I found severe damage by hibiscus sawfly. Larvae and adults were present on the plants I surveyed. The adults are active throughout the summer. The larvae feed on hibiscus and related plants. The larvae skeletonize leaves when they are young, but quickly defoliate plants as they grow. Contact insecticides such as bifenthrin and Orthene will kill larvae. Other insecticides such as spinosad, acetamiprid, azadirachtin and others listed can be used

(<http://www.ces.ncsu.edu/depts/ent/notes/O&T/shrubs/note07/note07.html>). The larvae are not caterpillars so be sure to look for sawflies specifically on the label of the product you select. More information on this critter may be found at

[http://www.ct.gov/caes/lib/caes/documents/publications/fact\\_sheets/entomology/hibiscussawfly.pdf](http://www.ct.gov/caes/lib/caes/documents/publications/fact_sheets/entomology/hibiscussawfly.pdf).



Adult hibiscus sawfly. Photo: S. D. Frank.



Damage caused by hibiscus sawfly larvae. Photo: S. D. Frank.

### New Pest: Daylily Leafminer Active Now

The daylily leafminer is a recent pest from Asia. It was first detected in 2006, but is now spread through much of the Southeast including North Carolina. I spotted some last week on a trip to Georgia. This fly lays its eggs in day lilies and the larvae produce relatively straight, vertical mines. Pruning infested leaves will help prevent the larvae from maturing and infesting new leaves. I do not know of any formal

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efficacy tests on this pest but other material targeting leafminers such as imidacloprid and pyriproxifen should help. A recent article about this pest is in American Nurseryman (<http://www.amerinursery.com/article-7705.aspx>).



Daylily leafminer damage. Photo: S. D. Frank.

### **Cicadas in Nurseries and Landscapes**

For folks in western parts of the state you may have periodical cicadas in your nursery or landscape. Of course this will depend on a number of things including the habitat surrounding your nursery. Areas with a lot of suburban development may have fewer than less disturbed areas.

Cicadas cause damage to trees when they lay eggs in branches. They use a knife-like ovipositor (egg inserter) to insert eggs into thin tree branches. This causes slits in the branch that could be 6 inches long or more. This long scar reduces plant aesthetic value, but also weakens branches. Scarred branches usually break and fall to the ground or break and remain hanging in the tree, but turn brown.

We have found that imidacloprid reduces oviposition in landscape trees (<http://ecoipm.files.wordpress.com/2012/02/ahernfrankraupp2005jeconent.pdf>). Females detect the insecticide with their ovipositor so treated trees have fewer scars and the scars are much shorter. Thus branches do not become as weak so there is less flagging. This is not to say you should treat every tree with imidacloprid. Most landscape trees over a few feet tall can withstand losing many branches with no negative effects on health. Even nursery stock could survive losing branches, but may need corrective pruning. Nursery stock can be pruned to remove scarred branches.

Trees that are very valuable could be protected with mesh netting to keep cicadas off (<http://ecoipm.files.wordpress.com/2013/06/cicada-tree-netting.pdf>). This may apply to specimen trees in landscapes or to particularly expensive nursery trees. Japanese maples may be one species where shape is very important and it would be worth protection of some sort.



Cicada oviposition scar. Photo: Tim Tigner, Virginia Department of Forestry (Bugwood.org).



Flagging branches due to cicada oviposition. Photo: Linda Haugen, USDA Forest Service (Bugwood.org).

### Cicada Management for Homeowners

With cicadas emerging, big box stores are overflowing with insecticides promising to kill periodical cicadas. This may be true. If you take a particular insecticide off the shelf and pour it on a cicada it will kill it. But these products will not ‘control’ cicadas. There are millions upon billions of them.

There is no such thing as an insecticide that only kills cicadas. They also kill butterflies, bees, and other non-target organisms. It is important that homeowners consider the risks of these insecticides (some) compared to the benefit (none). Cicadas do not last long and pose no risk to people. Insecticides do.

The other problem with trying to manage cicadas with insecticides is that they are generally ineffective. Especially products available to homeowners provide so little benefit that the monetary cost and risk is just not worth it. If you managed to spray a whole tree with Orthene or Sevin for instance cicadas would likely colonize it again within hours or days.

Cicadas cause damage to trees when they lay eggs in twigs. They use a knife-like ovipositor (egg inserter) to insert eggs into thin twigs. This causes slits in the branch that could be 6 inches long or more. This long scar reduces plant aesthetic value, but also weakens branches. Scarred branches usually break and fall to the ground or break and remain hanging in the tree but turn brown.

Trees that are very small or that you just planted this year are at risk if they get many cicada oviposition scars. Cicadas prefer skinny branches (< 0.5 inch) so if your tree trunk is this skinny it could get damaged and this could kill your tree. Other trees will shed a few twigs and go on about their lives. You can protect trees with mesh netting to prevent cicadas from damaging them.

If you are unhappy about having cicadas on your porch or sidewalk just sweep them off. If you apply insecticide to these trapped critters (they don't want to be on your porch) you will end up with a dead smelly pile of cicadas that you have to sweep up anyway. In addition, as you walk across the porch and sidewalk you will get insecticide on your shoes that will be carried into your house where kids and pets play on the floor. When you take your shoes off you get insecticide on your hands. Next thing you know you are eating a sandwich.

Insecticides have a place. That is to reduce economic or aesthetic damage to plants that we eat or enjoy. Insecticide applied for cicadas won't achieve this. So save your money and wait it out or try to enjoy it.



Ovipositing periodical cicada. Photo: Linda Haugen, USDA Forest Service (Bugwood.org).

### 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      ----- 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
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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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