

# North Carolina Pest News

Departments of Entomology and Plant Pathology



Stephen J. Toth, Jr., editor  
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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](http://ipm.ncsu.edu/current_ipm/pest_news.html)

## **FIELD AND FORAGE CROPS**

From: Jack S. Bachelier, Extension Entomologist

### **Cotton Insect Pests: General Conditions**

Both plant bugs and stink bugs are already making things interesting in some fields. Many producers could be dealing with high levels of both of these insect groups in the coming days and weeks. Making sound weekly assessments of primarily fruit damage and insects themselves provides producers with their best chance of protecting squares and bolls in a way that both avoids both economic damage and unnecessary insecticide applications, which sometime trigger subsequent insect problems. The beginnings of spider mite and cotton aphid buildups have also been reported in scattered cotton fields across much of the state.

### **Plant Bugs on Cotton**

More cotton fields have been treated for plant bugs this past week, but so far thresholds brought to my attention have just barely been met. We certainly seem to have conditions conducive for plant bug buildups, i.e., plenty of drying down vegetation, very hot dry weather over much of the state (until a couple of welcome recent cooler wetter days), and many fields with rapidly growing, leggy plants. With much of North Carolina's cotton a week or two behind schedule, utilizing somewhat protective thresholds where recent damage and/or insects are confirmed may be justified.

### **Stink Bug Alert on Cotton**

By all indications, both green and brown stink bugs levels appear to be very high this year. Several consultants have found up to 6 to 10 adult stink bugs per 25 sweeps in some cotton fields, and an North Carolina State University Entomology graduate student this past week was

catching more than 2 mostly brown stink bugs per sweep in one wheat field. That's over 50 per 25 sweeps! On July 5, a county Extension agent in Northampton County reported over 500 green stink bugs in 5 nights in a single black light trap. The purpose of this information is not to alarm producers unnecessarily. However, this would appear to be a very good year to take stink bugs seriously.

Published information suggests that adult stink bugs do little damage to cotton before blooming begins. That is, stink bug feeding on cotton prior to the bloom stage apparently does not significantly impact square retention, main stems, node development, node of first flower, or time of first flower. Additionally, based on 2004 and 2005 tests, moderate to high levels of stink bugs feeding on cotton did not adversely impact yield until late in the second week of blooming. However, in both 2004 and in 2005, we had excellent fall harvest conditions. If 2006 reveals a wetter, later harvest season, this "free first 2 weeks of blooming" from stink bug damage might not hold up. Also, plant bugs may figure more prominently in this year's overall bug damage to bolls than was the case in 2004 and 2005, which were average plant bug years.

Once blooming begins in earnest, producers are urged to have their cotton scouted weekly for internal damage to quarter sized bolls. Older cotton is typically more attractive to stink bugs than less mature cotton. Information about scouting for stink bugs can be found on the web at: [http://ipm.ncsu.edu/cotton/insectcorner/scouting\\_guide.htm](http://ipm.ncsu.edu/cotton/insectcorner/scouting_guide.htm). I will cover scouting and thresholds in the coming weeks as the magnitude of this year's stink bug story unfolds.

### **Spider Mites and Cotton Aphids**

Reports of spider mite and cotton aphid buildups are increasing. As of this time, however, no treatments have been reported to me. So far, a few scattered, moderate cotton aphid buildups have been controlled by a combination of the aphid mummy-forming wasp parasites (Fig.1) and by lady bird beetles.



**Fig. 1. Aphid mummies. Image by Jack Bacheler.**

## Upcoming Cotton Scouting Schools

Wayne, Sampson and Duplin counties: Friday, July 7 from 9:30 to 11:30 a.m. at the Mount Olive College Agri-Business Center, Mount Olive, North Carolina. Contact Kevin Johnson (telephone: 919-731-1520; e-mail: [kevin\\_johnson@ncsu.edu](mailto:kevin_johnson@ncsu.edu)) for details and directions.

Edgecombe County: Thursday, July 13 from 10:00 to 12:00 noon at the Eastern Carolina Agriculture and Education Center, Kingsboro, Exit 478, Highway 64, approximately 6 miles east of Rocky Mount, North Carolina. Contact Art Bradley (telephone: 252-641-7815; e-mail: [art\\_bradley@ncsu.edu](mailto:art_bradley@ncsu.edu)) for details.

Nash and Wilson counties: Tuesday, July 18, 4:00 to 6:00 p.m. at the Wilson County Agricultural Center, 1806 S. Goldsboro Street, Wilson, North Carolina. Contact Norman Harrell (telephone: 252-237-0111; e-mail: [norman\\_harrell@ncsu.edu](mailto:norman_harrell@ncsu.edu)) for details.

Northampton County: Thursday, July 20 from 9:30 to 11:30 a.m. at the County Administration Building, Jackson, North Carolina. Contact Craig Ellison (telephone: 252-534-2711; e-mail: [craig\\_ellison@ncsu.edu](mailto:craig_ellison@ncsu.edu)) for details.

Halifax County: Thursday, July 20 from 1:30 to 3:30 p.m. at the Agricultural Building, Halifax, North Carolina. Contact Arthur Whitehead (telephone: 252-583-5161; e-mail: [arthur\\_whitehead@ncsu.edu](mailto:arthur_whitehead@ncsu.edu)) for details.

Union, Anson, Stanley and Montgomery counties: Tuesday, July 11 from 8:00 a.m. until around 10:00 a.m., beginning with breakfast at the Wayside Restaurant in Oakboro following by field visit. Contact Tom Pegram (telephone: 704-283-3801; e-mail: [thomas\\_pegram@ncsu.edu](mailto:thomas_pegram@ncsu.edu)) for details.

Gates and Perquimans counties: Wednesday, July 19, beginning at 2 p.m. in Perquimans County. Interested persons can call either Paul Smith at 252-357-1400 or Lewis Smith at 252-426-5428. Dr. John Van Duyn, Extension Entomologist, North Carolina State University, will serve as the instructor. There will be 1 hour of re-certification credit for commercial and private applicators.

From: Stephen B. Bambara, Extension Entomologist

### **Forage Crops and Pastures: Get a Jump on Grasshoppers**

Grasshopper outbreaks occur every few years. I don't have a crystal ball. Grasshoppers were reported early this season damaging cotton seedlings. Early populations may mean late populations. As the green and succulent crops and vegetation mature or dry out during the summer, if there are substantial grasshopper populations they will move to "greener pastures". This may also be true of ornamental or vegetable gardens around residences that are near fields. Just keep an eye open for our big-legged friends.

## **Wheat Variety Recommendations Available on the Web**

Randy Weisz, Department of Crop Science, North Carolina State University, has posted the latest results of the wheat variety recommendations for 2006. These recommendations, which include the latest performance, yield, and pest tolerance characteristics of the varieties, can be found at: <http://www.smallgrains.ncsu.edu/Varieties/Varieties2006.pdf>.

## **FRUIT AND VEGETABLES**

From: Gerald J. Holmes, Extension Plant Pathologist

### **Cucumber Downy Mildew Now Widespread in Eastern North Carolina**

Since June 30, 2006, downy mildew has been confirmed on cucumber from the following locations: Swan Quarter (Hyde County), 4 fields in the Nash/Edgcombe County area, Clinton (Sampson County) and Harrellsville (Hertford County). I have had telephone calls reporting suspected downy mildew from other areas, but have not yet been able to confirm the reports.

In most cases the disease is just getting started, but in at least one location (Clinton) it looks like symptoms developed approximately 7 to 10 days ago, putting symptom appearance around June 21. With so many fields having the disease within a short time frame, it looks as though there was a widespread inoculation event coinciding with heavy rains.

Fortunately, according to Phil Denlinger of Mt. Olive Pickle Company, our spring crop will be finished in the next 7 days or so. It is the summer crop that is most in danger. Most plantings for the summer crop will begin in a couple of weeks. Growers should be aware that downy mildew is present and that chemical control is necessary to control the disease. A disease control program that has worked well over the last couple of years is outlined below:

Tanos + mancozeb alternated on a 5- to 7-day interval with Previcur Flex + Bravo. Remember that mancozeb has a 5-day preharvest interval (PHI) and Tanos and Previcur Flex have 3-day and 2-day PHIs, respectively.

Other products that have shown good activity against downy mildew of cucumber in North Carolina include Ranman and Gavel. Recent fungicide trial results can be accessed online at [http://www.ces.ncsu.edu/depts/pp/cucurbit/control\\_temp.php](http://www.ces.ncsu.edu/depts/pp/cucurbit/control_temp.php). Downy mildew can infect plants at all stages of growth including just after emergence. Once infection occurs, the disease is much more difficult to control.

Remember that the Cucurbit Downy Mildew forecasting website (see <http://www.ces.ncsu.edu/depts/pp/cucurbit/>) contains information on field disease identification and a photo gallery. Disease outbreaks should first be verified by a reputable pathologist, then reported via the website.

## ORNAMENTALS AND TURF

From: Stephen B. Bambara, Extension Entomologist

### Spider mites: When You're Hot, They're Hot

Hot weather spider mites, such as twospotted spider mites, are up and going in some locations. A little scouting and early treatment can prevent more severe symptoms later in the season. Daylilies, roses, butterfly bush, hollyhock, some cultivars of euonymus, marigolds and bedding plants are often infested by twospotted spider mites during the summer. Because spider mites flair up in dry weather, their control is more challenging because plants that are wilted are much more susceptible to pesticide injury than turgid plants. Also, plants are much more likely to be burned if pesticides are applied during mid-day. Watering plants thoroughly before spraying and spraying in early morning or late afternoon so that the pesticide residue is dry before the bright, noontime sun hits will help to lessen the chances of plant injury. Because spider mites are tiny and relatively fragile, they can be dislodged from stout bodied ornamental plants by hosing the plants down with water from an ordinary garden hose. Don't use a strong spray on a tender plant. Insecticidal soaps and horticultural oils are fairly effective for spider mite control. Treat the undersides of the leaves also. Commercial growers have a good selection of miticides. There is information on twospotted spider mite control in *Ornamental and Turf Insect Information Note Number 25* (<http://www.ces.ncsu.edu/depts/ent/notes/O&T/flowers/note25/note25.html>).

### *Prionus* Long Horned Beetles

Now is when large, brown beetles with conspicuous antennae (Fig. 2) “buzz” around porch lights at night. They may even be mistaken for large cockroaches (Fig. 3). These are the adult stage of grubs called *Prionus* root borers. These are round-headed borers that grow up to three inches in length and feed in the living roots of oaks, pecans, chestnuts, pears, apples, and various other plants. Females lay their eggs in the soil in groups around the bases of trees. Tiny grubs hatch and feed on the bark of roots before they bore in. Over the next three to five years, the grubs bore inside the roots and sometimes completely hollow them out. They also move through the soil from root to root, causing many injuries to the roots. A single female beetle may lay hundreds of eggs.



Fig. 2. Longhorned beetle in Genus *Prionus*. Image by James R. Baker.



Fig. 3. *Prionus* longhorned beetle. Image from Steve Bambara.

There are systemic insecticides that can be helpful, but it is rare that the problem is recognized before there is damage and it is not always clear how much real damage they can inflict on a healthy tree. The general recommendation for any prized tree is to reduce factors that stress a tree. Adding fertilizer to a stressed tree is not beneficial and don't pile twelve inches of mulch against the bark or your trees despite what you see on many commercially landscaped areas and along the roadsides.

## INSECT TRAP DATA

From: Alan A. Harper, Lenoir County

### Light Trap Data from Lenoir County

June

```

*****
                                Number of Adult Insects
*****
Date          HW      CEW      ECB      AW      AWC      GSB      BSB      TBW
*****
June 7
June 8          0        0        0        0        0        0        0        0
June 9          0        0        1        0        0        0        0        0
June 10         0        0        1        0        0        0        0        0
June 11         0        0        0        0        1        6        1        0
June 12         0        0        1        1        0        0        2        0
June 13         0        1        2        0        0        0        0        0
June 14         0        0        3        0        0        0        0        0
June 15         0        0        1        0        0        0        0        0
June 16         0        0        2        2        0        3        2        0
June 17         0        0        0        0        0        1        0        0
June 18         0        0        0        0        0        2        0        0
June 19         0        0        0        0        1        3        0        0
June 20         1        1        0        0        0        2        0        0
June 21         1        0        0        0        0        1        2        1
June 22         0        0        0        1        2        0        0        0
June 23         1        0        1        0        0        5        7        1
June 24         0        3        2        0        0        1        1        0
June 25         0        4        1        0        0        2        2        0
June 26         0        5        0        0        1        1        1        1
June 27         1        2        0        0        0        10       0        0
June 28         0        2        0        0        0        2        0        1
June 29         1        1        0        1        0        5        0        3
June 30         0        6        2        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

From: Bryant M. Spivey, Agricultural Extension Agent, Onslow County

**Light Trap Data from Onslow County**

```
*****
                        Number of Adult Insects
                        *****
Date      Bollworms      GSB      BSB
*****
July 3    15              7        0
July 5    43              17       0
July 7    21              2        0
*****
```

GSB = green stinks bugs; BSB = brown stink bugs

Insect counts are from a single black light trap located approximately 1 mile east of Richlands.

From: Josh Gaddy, Agricultural Extension Agent, Sampson County

**Light Trap Data from Sampson County**

```
*****
                        Number of Adult Insects
                        *****
Date      BW      GSB      BSB      THW
*****
June 30           trap set up
July 3           0        4        0        2
July 5           3        9        0        0
July 7           2        6        0        0
*****
```

BW = cotton bollworms; GSB = green stink bugs; BSB = brown stink bugs; THW = tobacco hornworms

Black trap located 6 miles south of Clinton on US-701S on the farm of Mike and James Hope.

From: Kevin Johnson, Agricultural Extension Agent, Wayne County

### Light Trap Data from Wayne County

```

*****
                        Number of Adult Insects
*****
                Seven Springs                Goldsboro
*****                *****
Date          GSB   BSB   BW   THW          GSB   BSB   BW   THW
*****                *****
June 26      -     -     -     -           43    3    10    6
June 28      -     -     -     -           81    4     -     -
June 29      -     -     -     -          131   11    4     1
July 3       -     -     -     -           91    9     5     2
July 5       -     -     -     -           63   10     -     -
*****

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GSB = green stink bugs; BSB = brown stink bugs;  
 BW = budworms; THW hornworms

Cooperators: D. M. Price (Seven Springs)  
 and Willie Howell (Goldsboro)

*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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