

# 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.

### *In This Week's Issue . . .*

#### **FIELD AND FORAGE CROPS**

- Cotton Bollworms
- Stink Bug Damage on Cotton
- Spider Mites on Cotton
- Current Soybean Disease Situation
- Asiatic Soybean Rust Outlook
- Management of Soybean Diseases with Fungicides: To Spray or not to Spray
- Are All Fungicides Equal?
- Web Resources for Asiatic Soybean Rust
- Pasture and Forage Crops: Fall Armyworms Spotted (and Striped)
- Field and Forage Crops: Chinch Bug on Pearl Millet

#### **FRUIT AND VEGETABLES**

- Sweet Potato Pest Bulletin: Be on the Lookout for Corn Earworm Infestation at Harvest

## **ORNAMENTALS AND TURF**

- Azalea Caterpillars and Relatives
- Chinch Bugs in St. Augustinegrass

## **INSECT TRAP DATA**

- Light Trap Data from Anson, Stanly and Union Counties
- Light Trap Data from Bertie County
- Light Trap Data From Chowan County
- Light Trap Data from Craven County
- Light Trap Data From Cumberland County
- Light Trap Data from Duplin County
- Light Trap Data From Edgecombe County
- Light Trap Data From Halifax County
- Light Trap Data From Hoke County
- Light Trap Data From Jones County
- Light Trap Data from Lenoir County
- Light Trap Data from Martin County
- Light Trap Data From Northampton County
- Light Trap Data from Onslow County
- Light Trap Data From Perquimans County
- Light Trap Data from Robeson County
- Light Trap Data from Sampson County
- Light Trap Data From Scotland County
- Light Trap Data from Wayne County
- Light Trap Data from Wilson County

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 Bollworms**

The next bollworm moth flight began almost a week ago in our southern counties. However, only a few late maturing cotton fields will likely be impacted by this flight. Female bollworm moths have largely turned their egg laying elsewhere, for example soybeans and other hosts. However hard as it may seem to the rest of us in our largely “droughty” state, some areas have good moisture levels and cotton has not bloomed out the top. For scouts who are only monitoring upper very small and bloom tagged bolls, be sure to raise the bollworm threshold by three or four fold, say to the 8 to 12 percent live worm level.

### **Stink Bug Damage on Cotton**

In my widely scattered stink bug tests, damage to quarter sized bolls is dropping to well below threshold levels. Additionally, in many cotton fields, most bolls are now beyond the stink bug safe stage of 3½ weeks old. For cotton fields showing 3 or less nodes above first position white flower, damage thresholds can probably be raised to the 20 to 40+ percent level without a noticeable yield loss. A few widely scattered, rapidly growing cotton remains susceptible to bug damage, though they’re getting few and far between.

### **Spider Mites on Cotton**

Spider mites are showing up throughout much of the state as the dry weather continues. In most cases, cotton is too far “cut out” to justify treatment. However, there also appears to be a couple of close treatment calls, that is very high mite and egg levels in some less mature cotton fields with significant reddening and large scale defoliation. If this is the case throughout much of a cotton field, treatment may be justified. If treatment is needed, Kelthane (now sold as generic dicofol) at a quart of product per acre appears to be the best bet here, although another product Oberon has shown promise in some 2005 tests. It would appear that treatment would be justified in very few situations.

At this point, our insect year appears to be thankfully winding down. What we need now is some rain to fill out upper bolls.

In case we have an insect surprise or two, I will provide a final cotton insect report next week.

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

### **Current Soybean Disease Situation**

Sentinel plots continue to be monitored weekly, and several samples from kudzu in the southern part of the state were taken to the lab for examination. All were negative for Asiatic soybean rust. **Rust has not been found in North Carolina thus far.** Frogeye leaf spot is fairly common in susceptible varieties as is target spot and these diseases may warrant fungicide application on highly susceptible varieties. A strobilurin fungicide (Headline or Quadris) is recommended for these diseases. Soybean downey mildew is also prevalent in most areas of the State.

### **Asiatic Soybean Rust Outlook**

Soybean rust is starting to develop at a faster pace to the south of North Carolina. Asiatic Soybean Rust has been confirmed near St. Matthews, in Calhoun County, South Carolina. One lesion was found on one of 25 leaves on a maturity group V soybean at stage R5 (full sized pods with small beans); no lesions were found on the group IV variety at the same site.

This find is approximately 110 miles from Charlotte, 320 miles from Elizabeth City, 145 miles from Fayetteville, 210 miles from Murphy, 195 miles from Raleigh, 250 miles from Washington (North Carolina), 170 miles from Wilmington, and 175 miles from Winston-Salem. There have many new finds of rust in Louisiana and Mississippi along the River and new finds in Texas. The other confirmed finds of rust on soybeans since our August 7 update were all 500 miles or more from Raleigh.

Soybean producers in the Charlotte area should be alert for rust moving any closer. If rust gets within 100 miles, and the soybeans do not yet have fairly good-sized seeds in the pods, we suggest spraying with a strobilurin fungicide. Soybeans that have full sized soybeans in the pods (stage R6) before rust is identified in the field will probably mature before rust causes significant yield loss, and it is illegal to spray any of our fungicides that late in soybeans' development. As infrequently as rust affects soybeans that have not started blooming, we also would not spray soybeans that have not started blooming yet.

Although it has been hot and dry through much of the Mid-South and Delta, recent storms in northern Florida and southern Georgia may result in increasing detections of soybean rust. Since 2006 soybean production in Florida and Georgia is estimated at only about 155,000 acres, high numbers of spores are not anticipated coming from soybean at this time. Although rust is likely to spread over the next several weeks in South Carolina with the recent rains, dry weather is forecast for the next week or so, which may inhibit development of rust. South Carolina typically has around 400,000 acres of soybean so rapid spread from this source is unlikely since sources of spores are still weak.

## **Management of Soybean Diseases with Fungicides: To Spray or not to Spray**

Reasons why we don't recommend fungicides on a regular basis:

1. We can't predict the weather conditions for the next two to three weeks.
2. So far, we have not been able to validate "Plant Health" benefits of fungicides in North Carolina.
3. A number of fungicides are available for management of soybean foliar diseases (see <http://ipm.ncsu.edu/agchem/agchem.html>). Typically yield responses of 1 to 2 bushels per acre are found in North Carolina, unless frogeye leaf spot or target spot are found in the field. There are a number of reasons why other states, particularly in the Delta, routinely report larger yield increases: 1) shift to the early production system, many varieties in the Delta are very susceptible to frogeye leafspot, and soybean maturing in August are more vulnerable to fungi because of the hot humid environment at this time of year; 2) some diseases such as web blight and cercospora blight are more common in the Delta than in North Carolina; and 3) crop rotation is practiced less often in the Delta than in North Carolina.

### **Are All Fungicides Equal?**

A strobilurin fungicide (Headline or Quadris) is recommended for common soybean diseases found in North Carolina and as a preventative treatment for soybean rust. Triazole fungicides (Tilt, Propimax, Folicur, Laredo, Domark, and Topgaurd) have limited activity on the most common soybean diseases but are excellent on soybean rust. Stratego, Quilt, and Headline SBR, are combinations of strobilurin fungicides with triazoles. While they may provide better control of soybean rust should it appear than a strobilurin alone, the amount of strobilurin fungicide in these mixtures may be inadequate for control of frogeye or target spot. Another fungicide is Topsin M, which is a benzimidazole fungicide (similar to Benlate). It is excellent for common soybean diseases and is less expensive, but does not control soybean rust. None of these materials will have much, if any, effect on downey mildew.

### **Web Resources for Asiatic Soybean Rust**

A number of excellent resources are available on the web to assist you with decision making on Asiatic Soybean Rust. The North Carolina soybean rust forecast is available on web (<http://www.ces.ncsu.edu/depts/pp/soybeanrust/index.php>) and USDA soybean rust and soybean aphid web site (<http://www.usda.gov/soybeanrust/>). The USDA site also contains tools to help manage insurance claims and current information on labeled fungicides.

From: Stephen B. Bambara, Extension Entomologist

### **Pasture and Forage Crops: Fall Armyworms Spotted (and Striped)**

I have received several recent reports of fall armyworms rapidly eating Bermudagrass pasture. Check those fields. Hopefully, fall armyworms are not too widespread. Look for bird activity.

Walk out into the field. Sevin 80WSP, XLR, and SL are good formulations of insecticides, but check the product label to make sure they apply to the specific needs and harvest interval of the crop. Lannate gives a bit faster results, especially when the larvae are larger.

### **Field and Forage Crops: Chinch Bug on Pearl Millet**

Chinch bug [*Blissus leucopterus leucopterus* (Say) (Hemiptera: Lygaeidae)] is one of the most important insect pests for pearl millet (*Pennisetum glaucum* L. R. Br.) production in the southeastern and central U. S. The insect causes stunting and necrosis of the young seedlings, and loss of crop stand in severe infestations. There is research being conducted on resistant varieties. If an active infestation is underway, Sevin, or a pyrethroid insecticide such as Mustang Max should be helpful. Check the label for harvest and other information.

See the following web sites for general management recommendations:

<http://www.utextension.utk.edu/publications/spfiles/SP341-E.pdf>

<http://pubs.caes.uga.edu/caespubs/pubs/PDF/B1216.pdf>

## **FRUIT AND VEGETABLES**

From: George Kennedy and Mark Abney, Department of Entomology

### **Sweet Potato Pest Bulletin: Be on the Lookout for Corn Earworm Infestation at Harvest**

As harvest time rapidly approaches, sweet potato growers should be on the lookout for corn earworm infestations in sweet potato fields. Light trap catches of corn earworm moths have been unusually high in North Carolina this season, and larvae have been reported in sweet potato fields. Corn earworm larvae generally feed on sweet potato foliage and do not pose much of a threat for economic loss. However, if larvae are present at harvest, the insects will feed on exposed roots and may cause significant damage. Larvae in the field at harvest may also be inadvertently transferred to bins where they will continue to feed on harvested roots. Though formal thresholds for treating corn earworm infestations in sweet potato do not exist, the presence of 1 to 2 larvae per row foot at harvest would be cause for concern. Corn earworm larvae can be controlled effectively with carbaryl (Sevin), but applications must be made at least seven days before harvest to comply with pre-harvest interval requirements. Endosulfan (Thionex 3EC), which has a one-day preharvest interval, may also be used. Corn earworm larvae from the late summer generation are likely to be present in sweet potato fields through the month of September, and it is important that growers scout their fields prior to digging to determine if insecticide applications are warranted.

## ORNAMENTALS AND TURF

From: Stephen B. Bambara, Extension Entomologist

### Azalea Caterpillars and Relatives

Azalea caterpillars and other notodontid caterpillars are currently developing. Young azalea caterpillars start as small, green worms (Fig. 1) that grow into medium, purple worms and then into large, black and yellow-striped worms (Fig. 2) with red-colored heads and prolegs. They are sometimes called “Labor Day” worms, because so many people discover them around Labor Day. Azalea caterpillars are gregarious in the larval stage, which makes their control relatively easy. However, because the worms feed in groups, they often completely defoliate a portion of a plant before they are detected. There is only one generation per year. The adult moths (Fig. 3) emerge in early summer and deposit eggs in masses of 80 to 100 on a leaf. As the larvae mature, they consume more and more of the leaf. Most of the damage occurs in August and September. Azalea caterpillars can be shaken from the shrub and trampled underfoot. These caterpillars and their relatives found on similar trees and shrubs are known for striking a U-shaped pose by throwing their head and tail up when disturbed. Pesticides are rarely needed in the home landscape if you have a stick and a shoe, but there are insecticides available for the non-ecologically minded.



**Fig. 1. Young azalea caterpillars. Image from James R. Baker.**



**Fig. 2. Azalea caterpillar in typical posture when disturbed. Image from James R. Baker.**



**Fig. 3. Adult moth of azalea caterpillar. Image from James R. Baker.**

## Chinch Bugs in St. Augustinegrass

Chinch bugs (Fig. 4) have been heavy this week on St. Augustinegrass. Chinch bugs are small (about one sixth of an inch), slender insects with black and white markings. This bug is a severe pest of St. Augustinegrass in North Carolina. It also attacks centipede. Chinch bugs cause yellow spots in lawns that rapidly turn into brown, dead areas. Most of the damage is caused by the young, bright-red nymphs. Chinch bugs seem to be worse in lawns that have a layer of thatch. Good thatch management helps not only by making the lawn less attractive to the bugs, but it also makes it easier for the pesticide to reach the chinch bugs when they are treated.



**Fig. 4. Adult chinch bug. Image by James L. Castner, University of Florida.**

Astro, Sevin, and Tempo 2 insecticides are labeled for professional chinch bug management. It helps to water the lawn before treating, but not afterward for two days. However, the label directions should be followed for any pesticide. Homeowner formulations of imidacloprid, cyfluthrin or Sevin insecticides are good choices for the homeowner. There is additional information on chinch bugs in *Ornamental and Turf Insect Information Note No. 112* at: <http://www.ces.ncsu.edu/depts/ent/notes/O&T/lawn/note112/chinch1.html>.

## INSECT TRAP DATA

From: Thomas G. Pegram, Agricultural Extension Agent, Union County

### Light Trap Data From Anson, Stanly and Union Counties

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*****
                        Number of Adult Insects
*****
      Anson S      Anson N      Union S      Union N      Stanly
*****  *****  *****  *****  *****
Date   CBW  GR  BR  CBW  GR  BR  CBW  GR  BR  CBW  GR  BR  CBW  GR  BR
*****
July 17  12  78  20   10   0   0   18  17   0   38   4   0    8   0   0
July 19   -   -   -   15   0   0   19  12   0   30   2   0   14   0   0
July 21  18  11   2   28   0   0   81  17   0   40   4   1   15   1   0
July 24  55  48   7  101   1   2  211  13   0   59  26   3   24   0   0
July 26   0   0   0  157   3   0  250   9   0   46  18   1   23   1   0
    
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July 28	0	0	0	133	1	0	185	12	0	44	8	0	27	2	0
July 31	-	-	-	132	5	0	215	14	0	36	9	2	42	3	0
August 2	-	-	-	118	4	1	230	15	0	43	8	0	33	2	0
August 4	-	-	-	102	1	0	245	12	0	57	11	0	10	0	0
August 7	71	158	9	80	1	0	375	9	0	52	4	0	5	1	0
August 9	39	14	0	28	0	0	150	6	0	67	3	0	16	0	0
August 11	42	21	1	38	5	0	145	4	0	61	7	0	17	0	0
August 14	36	6	0	52	0	0	180	5	0	84	1	0	26	0	0
August 16	22	46	1	28	3	0	168	14	0	42	4	0	15	1	0
August 18	11	17	0	27	1	0	152	19	0	28	0	0	24	1	0
August 21	46	46	1	42	0	0	134	33	0	42	8	0	26	1	0
August 23	105	147	0	36	0	0	76	17	0	25	5	0	12	0	0
August 25	68	28	0	55	2	0	75	22	0	19	3	0	9	0	0

\*\*\*\*\*  
 CBW = cotton bollworm moths; GR = green stink bugs; BR = brown stink bugs

Trap Locations and Cooperators:  
 Anson N: Ansonville area (Fincher Martin)  
 Anson S: Deep Creek area (Richard Melton)  
 Union N: New Salem area (Tom Pegram)  
 Union S: White Store area (Greg Hargett)  
 Stanly: Richfield area (Shannon Braswell)

From: Richard W. Rhodes, County Extension Director, Bertie County

**Light Trap Data From Bertie County**

Date	Windsor			Woodard			Hexlena			Roxobel			Colerain		
	BW	GSB	BSB	BW	GSB	BSB	BW	GSB	BSB	BW	GSB	BSB	BW	GSB	BSB
July 10	0	0	0	-	-	-	-	-	-	1	0	0	-	-	-
July 11	0	2	0	-	-	-	0	0	0	-	-	-	-	-	-
July 12	0	3	0	2	0	0	-	-	-	-	-	-	-	-	-
July 13	0	3	0	-	-	-	0	17	0	3	3	0	5	1	0
July 14	0	5	0	2	10	0	0	9	0	-	-	-	-	-	-
July 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
July 16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
July 17	-	-	-	7	12	0	0	11	0	2	14	0	-	-	-
July 18	1	9	0	-	-	-	0	3	0	1	2	0	-	-	-
July 19	1	6	0	11	7	0	0	2	0	0	3	0	2	7	0
July 20	0	7	0	8	5	0	0	8	0	0	22	0	2	1	0
July 21	7	1	0	5	2	0	1	6	0	-	-	-	-	-	-
July 22	1	6	0	-	-	-	-	-	-	-	-	-	-	-	-
July 23	15	2	0	-	-	-	-	-	-	-	-	-	-	-	-
July 24	18	0	0	14	1	0	5	11	0	-	-	-	15	0	0
July 25	19	6	0	27	0	0	4	2	0	-	-	-	18	0	0
July 26	10	1	0	24	3	0	4	7	0	-	-	-	35	1	0
July 27	35	9	0	24	5	0	2	7	0	9	1	0	15	2	0
July 28	22	2	0	-	-	-	3	7	0	11	0	0	46	0	0
July 29	30	3	0	-	-	-	-	-	-	-	-	-	-	-	-
July 30	55	1	0	-	-	-	-	-	-	-	-	-	-	-	-
July 31	102	0	0	7	1	0	54	31	0	50	6	0	60	4	0
August 1	93	4	0	178	1	0	39	7	0	16	4	0	170	0	0
August 2	215	10	0	87	8	0	53	6	0	19	3	0	236	6	0
August 3	265	12	0	77	1	0	66	12	0	-	-	-	305	3	0

August 4	202	8	0	83	4	0	65	5	0	19	5	0	351	4	0
August 5	115	3	0	80	2	0	-	-	-	31	5	0	-	-	-
August 6	34	3	0	56	0	0	-	-	-	-	-	-	-	-	-
August 7	14	0	0	42	3	0	92	0	0	21	2	0	470	0	0

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BW = Bollworm moths; GSB = Green stink bugs; BSB = Brown stink bugs

From: Mike Williams, County Extension Director, Chowan County

### Light Trap Data From Chowan County

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Adult Insects

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Date	CEW	GSB	BSB	ECB
July 18	0	6	0	0
July 19	0	4	0	3
July 20	0	2	0	5
July 21	1	6	-	-
July 22	7	2	-	-
July 23	-	-	-	-
July 24	43	2	-	-
July 25	40	2	-	-
July 26	35	1	-	-
July 27	41	13	-	-
July 28	51	27	-	-
July 29	46	4	-	-
July 30	81	68	-	-
July 31	160	8	-	-
August 1	140	7	-	-
August 2	137	19	-	-
August 3	265	20	-	-
August 4	161	21	-	-
August 5	103	5	-	-
August 6	-	-	-	-
August 7	65	0	-	-
August 8	51	0	-	-
August 9	78	2	-	-
August 10	11	0	-	-
August 11	21	0	-	-
August 12	17	0	-	-
August 13	8	0	-	-
August 14	10	0	-	-
August 15	35	0	-	-
August 16	85	0	-	-
August 17	36	0	-	-
August 18	41	1	-	-
August 19	39	0	-	-
August 20	34	0	-	-
August 21	74	1	-	-
August 22	195	0	-	-
August 23	182	0	-	-
August 24	147	0	-	-
August 25	191	1	-	-

\*\*\*\*\*

CEW = Corn earworms (bollworms); GSB = Green stink bugs;  
 BSB = Brown stink bugs; ECB = European corn borers

From: Mike Carroll, Agricultural Extension Agent, Craven County

**Light Trap Data From Craven County**

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*****
                        Number of Adult Insects
*****
Date      THW    TBW    CEW    GSB    BSB    ECB    FAW    BAW    Looper
*****
July 10      3     1     9     3     1     0     0     0     0
July 12      1     0     5     3     0     0     0     0     0
July 17      4     0    31    16     0     0     0     0     0
July 19      2     0    16     2     0     2     0     0     0
July 21      7     1    23     2     3     0     0     0     0
July 24      4     0    42     3     0     4     2     0     0
July 25      2     0    21     4     1     0     0     0     0
July 26      1     1    36     2     0     0     0     0     0
July 27      2     0    31     1     1     0     0     0     0
July 28      4     0    43     2     0     0     0     0     0
July 31      9     0   318    16     1     0     2     0     0
August 1     0     2    96     3     0     1     3     0     0
August 2     4     0   187     7     3     1     2     0     0
August 3     1     0   153     3     1     0     0     0     0
August 4     4     0   149     6     1     0     0     0     0
August 7     3     2   179     2     0     0     4     0     0
August 9     0     0    42     0     0     0     2     0     0
August 11    0     0    23     0     1     0     0     0     0
August 14    4     0    24     0     0     0     0     0     0
August 16    0     0     7     0     0     0     7     0     0
August 21    4     0    37     0     4     4     3     0     0
*****
  
```

THW = tobacco hornworms; TBW = tobacco budworms; CEW = corn earworms;  
 GSB = green stink bugs; BSB = brown stink bugs; ECB = European corn  
 borers; FAW = fall armyworms; BAW = beet armyworms

Location of trap: Cove City

From: Colby S. Lambert, Agricultural Extension Agent, Cumberland County

**Light Trap Data From Cumberland County**

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*****
                        Number of Adult Insects
*****
Date      THW    CEW    GSB    BSB
*****
June 30                trap set up
July 3        2     9     22     6
July 5        0     2     15     4
July 7        0     6     3      1
July 10       0     2     7      1
  
```

July 12	-	-	-	-
July 14	1	0	31	2
July 17	4	16	29	1
July 19	19	40	23	1
July 21	28	129	10	2
July 24	13	439	10	0
July 26	4	401	0	0
July 28	6	321	15	1
July 31	-	-	-	-
August 2	9	180	46	8
August 4	-	-	-	-
August 7	9	466	67	5
August 9	1	103	20	0
August 11	0	114	24	0
August 14	4	152	14	0
August 16	1	91	24	1
August 18	4	141	50	0
August 21	5	122	41	0
August 23	6	82	15	0
August 25	11	145	15	0

\*\*\*\*\*

THW = tobacco hornworms; CEW = corn earworms;  
 GSB = green stinks bugs; BSB = brown stink bugs

From: Curtis D. Fountain, Agricultural Extension Agent, Duplin County

### Light Trap Data From Duplin County

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Number of Adult Insects  
\*\*\*\*\*

Date	BW	GSB	BSB
July 7	3	2	1
July 10	1	2	2
July 12	1	5	1
July 14	0	8	2
July 17	0	21	2
July 19	0	17	3
July 21	0	6	0
July 24	321	15	0
July 26	286	9	0
July 28	161	7	0
July 31	715	32	0
August 2	557	60	1
August 4	525	32	2
August 7	152	12	1
August 9	57	13	2
August 11	48	2	1
August 14	13	0	0
August 16	14	0	0
August 18	31	3	0
August 21	12	2	0
August 23	10	8	0

\*\*\*\*\*

BW = cotton bollworms; GSB = green  
 stink bugs; BSB = brown stink bugs

Trap location: Albertson  
 Cooperator: Justin Murphy

From: Arthur R. Bradley, Jr., Agricultural Extension Agent, Edgecombe County

**Light Trap Data From Edgecombe County**

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*****
                          Number of Adult Insects
*****
      W Edgecombe /a      Coakley /b      Lawrence /c
*****      *****      *****
Date      CEW   BS   GS   CEW   BS   GS   CEW   BS   GS
*****
July 7      0    0    3     7    0   48     -    -    -
July 10     0    0    0    14   7    1     -    -    -
July 12     0    0   12     3    0   34     -    -    -
July 14     0    0   13     4    0   61     -    -    -
July 17     0    0    3     9    0   27     0    0    1
July 19     0    0    2     7    0   24     0    0    0
July 21     0    0    4     6    0   12     0    0    2
July 24     -    -    -    29   1   61     5    0    0
July 26    30    0    2    46   0   11    55    0   11
July 28    45    1    8    46   0   14    11    0    2
July 31   117    1   13    72   0   39     1    0    0
August 2    50    0    8   107   0   14    11    0    5
August 4    58    0   13   190   0   39    70    0    1
August 7    30    0    1    79   0    1    22    0    1
August 9    29    1    3    39   0    3    11    0    4
August 11   25    0    4     -    -    -     3    0    1
August 14     -    -    -    35   0    1     1    0    0
August 16   23    0    4   169   0   16     7    0    2
August 18   13    1    2   122   0    2     4    0    0
August 21   14    0    6    76   0    9    15    0    0
August 23   10    0    2     -    -    -    22    0    2
August 24     -    -    -   290   0    6     -    -    -
August 25   15    0    0    84   0    0     2    0    0
*****
  
```

Abbreviations: CEW = corn earworms;  
 BS = brown stink bugs; GS = green stinks bugs

a = trap located 12 miles west of Tarboro; maintained by Tom Porter.  
 b = trap located 5 miles east of Tarboro; maintained by Bryan Mayo.  
 c = trap located at Lawrence; maintained by Terri Thomas.

From: Arthur Whitehead, Jr., Agricultural Extension Agent, Halifax County

**Light Trap Data From Halifax County**

```

*****
                Scotland
                Neck
                West
                Enfield
                Weldon
                *****
Date            CEW  GSB  BSB  CEW  GSB  BSB  CEW  GSB  BSB  CEW  GSB  BSB
*****
July 17         -    1    -    -    -    -    -    -    -    -    -    -
July 19         -    -    -    -    -    -    -    -    -    -    -    -
July 21         -    -    -    -    -    -    10   0    0    5    0    0
July 24         5    2    -    7    4    -    8    -    4    10   3    -
July 26        55    -    -    8    7    -    10   3    -    16   3    -
July 28         -    -    -    11   -    -    23   -    -    -    -    -
July 31         1    -    -    16   -    -    27   -    -    16   -    -
August 2        11    -    -    22   -    -    26   -    -    -    -    -
August 4        70    -    -    25   -    -    29   -    -    4    -    -
August 7        22    -    -    32   -    -    28   -    -    10   -    -
*****

```

Abbreviations: CEW = corn earworms;  
 GSB = green stinks bugs; BSB = brown stink bugs

From: Keith B. Walters, Agricultural Extension Agent, Hoke County

**Light Trap Data From Hoke County**

```

*****
                Boyles Farm
                *****
Date            Moths    GSB    BSB
*****
June 28         28         4         0
June 30         72         26        0
July 3           -         -         -
July 5          13         7         0
July 7          41         9         13
July 10         32         7         0
July 12         16         5         1
July 14         17         33        4
July 17         12         22        3
July 19         27         27        2
July 21         39         14        3
July 24         23         14        11
July 26        223         9         17
July 28        198         7         7
July 31        327         23        18
August 2        276         32        18
August 4        147         11         2
August 7        353         36         8
August 9         78         6         0
August 11       167         7         0
August 14       319         13         0
August 16        64         12         0

```

August 18	51	13	0
August 21	96	17	0
August 23	86	7	0

\*\*\*\*\*

GSB = green stink bugs; BSB = brown stink bugs

Location of trap is Shannon Road, Shannon.  
 Trap monitored by Johnny Boyles.

From: Curtis D. Fountain, County Extension Director, Jones County

**Light Trap Data From Jones County**

\*\*\*\*\*

Number of Adult Insects

\*\*\*\*\*

Date	BW	GSG	BSB	HW
July 21	3	3	1	2
July 24	4	1	0	2
July 26	6	1	7	3
July 28	63	0	0	10
July 31	140	1	6	7
August 2	244	4	1	10
August 4	265	2	4	6
August 7	25	1	2	9
August 9	28	1	0	3
August 11	16	0	0	5
August 14	2	0	0	3
August 16	1	0	0	2
August 18	1	0	0	2
August 21	5	0	0	5
August 23	6	3	0	6
August 25	12	0	0	5

\*\*\*\*\*

Trap Location: Comfort  
 Monitored by: Morris and Brett Pike

BW = bollworms; GSB = green stink bugs;  
 BSB = brown stink bugs; HW = hornworms

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
*****
```

July

```
*****
                        Number of Adult Insects
*****
Date      HW      CEW      ECB      AW      AWC      GSB      BSB      TBW
*****
July 1      1     12      1      0      0      2      0      0
July 2      1      6      0      0      1      0      0      0
July 3      0      4      0      0      0      2      2      0
July 4      0      3      0      0      0      7      0      0
July 5      0      4      0      1      0      4      1      0
July 6      0      5      0      0      0      4      0      0
July 7      0      8      3      1      2      1      0      1
July 8      0      3      0      0      1      3      0      1
July 9      0      3      0      0      0      0      0      0
July 10     0      2      0      0      0      1      0      0
July 11     0      5      0      0      1      3      0      0
July 12     0     12      0      0      1      6      0      0
July 13     0      5      0      0      1      3      0      0
July 14     0     12      0      0      4      7      0      0
July 15     0      9      0      1      0      2      0      0
*****
```

July 16	0	6	1	0	0	2	0	0
July 17	1	8	4	1	1	4	0	0
July 18	2	14	3	1	2	13	1	0
July 19	0	12	12	1	7	20	1	3
July 20	1	7	9	1	7	2	0	2
July 21	2	12	8	1	5	3	0	1
July 22			light	inadvertently	unplugged			
July 23	1	4	5	1	1	2	0	1
July 24	4	23	2	1	5	0	0	4
July 25	9	59	2	1	1	29	0	5
July 26	6	44	4	1	3	3	0	3
July 27	1	105	9	4	0	17	1	4
July 28	5	99	5	3	4	8	0	7
July 29	2	41	2	1	1	5	0	0
July 30	3	177	7	2	4	8	0	3
July 31	1	158	8	1	3	10	2	6

\*\*\*\*\*

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: J. B. Coltrain, County Extension Director, Martin County

### Light Trap Data From Martin County

\*\*\*\*\*

Date	Farm Life			Robersonville			Palmyra		
	BW	GSB	BSB	BW	GSB	BSB	BW	GSB	BSB
July 17	8	1	0	3	8	0	1	8	0
July 19	5	0	0	6	10	0	0	0	0
July 21	6	2	0	3	5	0	-	-	-
July 24	23	0	0	40	7	0	1	7	0
July 26	21	3	0	8	6	0	2	3	0
July 28	19	7	0	8	5	0	-	-	-
July 31	46	17	2	20	10	0	2	3	0
August 2	78	8	0	22	8	1	15	15	0
August 4	60	2	0	65	8	1	131	31	0
August 7	27	14	2	21	0	0	62	1	0
August 9	53	23	0	34	4	0	51	10	0
August 11	28	6	0	27	3	1	16	33	0
August 14	14	1	0	16	0	0	21	1	0
August 16	7	4	0	21	4	0	23	9	0
August 18	17	5	0	18	1	0	26	1	0
August 21	10	6	0	33	2	0	29	13	0
August 23	17	5	0	58	1	0	64	8	0

\*\*\*\*\*

BW = Bollworm moths; GSB = Green stink bugs; BSB = Brown stink bugs

From: Craig Ellison, Agricultural Extension Agent, Northampton County

**Light Trap Data From Northampton County**

```

*****
                        Number of Adult Insects
*****
      Woodland      Conway      'Neck      Seaboard      Gaston      Jackson
      *****      *****      *****      *****      *****      *****
Date      CEW GR BR      CEW GR BR      CEW GR BR      CEW GR BR      CEW GR BR      CEW GR BR
*****
July 17      - - -      - - -      - - -      - - -      - - -      0 84 6
July 19      - - -      - - -      - - -      4 10 0      - - -      0 124 4
July 21      - - -      - - -      - - -      - - -      - - -      - - -
July 24      - - -      2 0 0      26 17 0      30 0 0      - - -      61 140 3
July 26      1 0 0      10 12 1      29 13 0      40 6 0      - - -      83 11 1
July 28      3 4 2      9 8 0      24 19 0      31 1 0      32 0 0      59 72 3
July 31      3 22 2      10 19 4      50 35 0      72 12 0      53 0 0      208 191 2
August 2      1 11 1      9 18 1      53 41 0      57 12 2      22 2 0      103 94 2
August 4      4 13 1      17 9 4      49 58 0      46 8 2      24 0 0      157 135 5
August 7      0 0 0      3 4 0      53 8 0      - - -      11 0 0      199 20 0
August 9      22 1 0      6 0 0      58 9 0      29 0 0      - - -      271 20 0
August 11     13 0 0      4 2 0      49 9 0      7 0 0      - - -      227 8 0
August 14     8 0 0      6 0 0      19 2 0      9 0 0      - - -      204 1 0
August 16     11 1 0      4 2 0      34 6 0      - - -      - - -      227 28 0
August 18     7 0 0      12 2 0      19 1 0      - - -      - - -      145 9 0
August 21     8 2 0      11 3 0      33 7 0      - - -      - - -      212 129 0
August 23     6 0 0      23 19 0      34 3 0      - - -      - - -      154 34 0
August 25     6 2 1      13 4 0      43 17 0      - - -      - - -      105 17 0
*****

```

CEW = corn earworms; gr = green stink bugs; br = brown stink bugs  
 Locations: Woodland, Conway, 'Neck, Seaboard, Gaston and Jackson  
 Monitored by: L. Culpepper, K. Edwards, B. Johnson, T. Flythe,  
 D. Grant and B. Bryant

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
July 10     18      0      1
July 12     16      4      3
July 14     22      20      0
July 17     93      7      0
July 19     32      7      2
July 21     50      6      0
July 24     156     14      0
July 26     203     12      1
July 28     246     13      2

```

July 31	345	8	0
August 2	125	6	0
August 4	101	6	2
August 7	59	3	0
August 9	68	6	0
August 11	20	0	0
August 15	28	8	0
August 18	20	1	0
August 21	55	7	0
August 23	30	5	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: Lewis Smith, County Extension Director, Perquimans County

**Light Trap Data From Perquimans County**

\*\*\*\*\*

No. of Adult Insects

\*\*\*\*\*

Date	Bollworms
July 28	1
July 29	9
July 30	29
August 1	80
August 2	96
August 3	77
August 4	87
August 5	48
August 6	21
August 7	11
August 8	22
August 9	14
August 10	6
August 11	6

\*\*\*\*\*

From: Everett Davis, County Extension Director, Robeson County

**Light Trap Data From Robeson County**

\*\*\*\*\*

Number of Adult Insects

\*\*\*\*\*

Date	BW	GSB	BSB	FAW
July 8-9	7	8	1	4
July 10	4	9	0	0
July 11-12	7	12	1	0
July 13	5	5	0	1

July 14	27	12	1	3
July 15-16	62	21	2	2
July 17	63	19	2	1
July 18	102	25	1	6
July 19	162	21	1	4
July 20	211	27	2	6
July 21	258	22	3	6
July 23-23	349	32	2	7
July 24	312	15	2	9
July 25	315	21	0	16
July 26	481	20	0	23
July 27	387	15	1	19
July 28	457	18	0	21
July 29-30	761	32	3	23
July 31	536	32	2	11
August 1 #	89	6	0	0
August 2	137	18	1	1
August 3	194	23	0	1
August 4	162	11	0	2
August 5-6	209	12	1	3
August 7	93	8	0	2
August 8	-	-	-	-
August 9-10	219	42	2	3
August 11-13	165	28	1	10
August 14	27	4	0	6

\*\*\*\*\*

BW = bollworms; GSB = green stick bugs;  
 BSB = brown stink bugs; FAW = fall armyworms

Location is Rowland; monitored by Kay McGirt

# = field was sprayed

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	2
July 10	4	8	0	0
July 12	1	11	1	2
July 14	1	5	0	0
July 17	0	23	2	4
July 19	1	15	5	9
July 21	11	12	0	18
July 24	20	5	0	15
July 26	105	10	3	6
July 28	127	75	13	16
July 31	150	21	4	6
August 2	101	31	18	6

August 4	158	28	10	8
August 7	33	60	8	9
August 9	67	11	1	2
August 11	60	30	2	5
August 14	71	5	1	5
August 16	23	5	1	5
August 18	21	12	0	10
August 21	37	31	1	6
August 23	28	3	0	8
August 25	56	21	2	11

\*\*\*\*\*  
 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: David E. Morrison, Agricultural Extension Agent, Scotland County

**Light Trap Data From Scotland County**

\*\*\*\*\*  
 Number of Adult Insects  
 \*\*\*\*\*

Date	Gibson				John's				Laurinburg			
	BW	GSB	BSB	FAW	BW	GSB	BSB	FAW	BW	GSB	BSB	FAW
July 7	-	-	-	-	1	1	2	-	2	4	-	-
July 10	11	3	-	-	9	-	-	-	6	7	1	-
July 12	12	17	-	-	9*	2*	-	-	3	3	1	-
July 14	16	38	-	-	21	5	-	-	3	10	-	-
July 17	16	26	1	-	54	23	1	-	24	14	3	-
July 19	24	17	-	-	70	7	-	-	18	10	2	-
July 21	94	5	-	-	138	7	-	-	75	5	-	-
July 24	263	20	-	-	198	1	-	-	190	15	-	-
July 26	352	2	-	-	292	3	-	-	230	5	-	-
July 28	232	17	2	-	145	4	1	-	418	19	-	-
July 31	411	28	-	-	593	5	1	-	408	16	-	-
August 2	124	36	-	-	375	30	2	-	336	7	1	-
August 4	212	15	-	-	275	30	1	-	224	10	-	-
August 7	181	14	-	-	94	3	-	-	111	7	-	-
August 9	102	1	-	-	109	2	-	-	129	1	-	-
August 11	194	4	-	-	145	1	-	-	113	5	-	-
August 14	69	2	-	-	78	-	-	-	57	2	-	-
August 16	58	23	-	-	43	3	1	-	37	-	3	-
August 18	19	2	-	-	71	1	-	-	27	-	-	-
August 21	118	20	-	-	127	6	1	-	47	3	2	-
August 23	180	12	-	-	117	1	-	-	146	1	3	-

\*\*\*\*\*

BW = bollworms; GSB = green stink bugs;  
 BSB = brown stink bugs; FAW = fall armyworms

Trap Location: Gibson, Johns and Laurinburg  
 Monitored by: Jim Ellis, David Morrison,  
 Percy Rachels, Rusty Muse and T. G. Gibson

\* light unplugged

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    -    -
July 7         -    -    -    -           47    4    2    2
July 10        -    -    -    -           15    0    5    3
July 12        2    1    -    -           17    3    3    1
July 14        2    -    8    -           29    4    -    -
July 17        15   2   20   -          111   11    2    5
July 19        -    -    -    -           37    4   13    3
July 21        3    -   37    7           17    -   18    2
July 24        1    2   62    3           47    2   78   11
July 26        11   1  100    4           32    -  157    8
July 28        9    -  105   -           66    5  209    3
July 31        10   1  125   10          174   10  264    8
August 2       25   8  235    3          134   12  238    5
August 4       5    6  130    6          174   18  224    3
August 7       7    3  250    5          101    9  174    6
August 9       52   3   96    3           14    2   35    1
August 11      -    -    -    -           20    4   30    2
August 14      -    -    -    -           10    1   19    0
August 16      -    -    -    -           32    2   72    3
August 18      -    -    -    -           25    2   53    0
*****

```

GSB = green stink bugs; BSB = brown stink bugs;

BW = budworms; THW = hornworms

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

From: Norman E. Harrell, Agricultural Extension Agent, Wilson County

### Light Trap Data From Wilson County

```

*****
                        Number of Adult Insects
*****
                Lucama      Pender's Xrds      Sims      Fountain
*****
Date           CEW  BS  GS   CEW  BS  GS   CEW  BS  GS   CEW  BS  GS
*****
July 14        5   1  16    -   -   -    -   -   -    -   -   -
July 17       13   2   2    -   -   -    -   -   -    9   0  23

```

July 19	6	0	2	5	0	0	2	0	1	8	0	18
July 21	6	0	0	7	0	1	3	0	2	2	0	3
July 24	30	0	1	11	2	5	14	0	2	17	0	4
July 26	33	0	3	21	0	0	81	0	1	51	0	3
July 28	36	0	0	15	0	2	255	0	0	66	0	0
July 31	60	0	1	66	0	9	84	0	7	61	0	20
August 2	46	0	0	71	0	2	44	0	1	34	0	9
August 4	49	0	0	51	0	3	31	0	0	66	1	24
August 7	73	0	0	26	0	0	3	0	2	40	0	9
August 9	18	1	1	8	0	0	2	0	0	18	0	8
August 11	26	1	2	17	0	0	0	0	0	27	1	1
August 14	7	0	0	12	0	0	1	0	0	6	0	0
August 16	20	0	0	6	0	2	0	0	2	10	0	14
August 18	21	0	1	26	0	0	3	0	0	15	0	2

\*\*\*\*\*

Locations: Lucama, Pender's Crossroads, Sims and Fountain  
 Monitored by: Chris Bass, Adam Gardner, Thad Sharpe, IV and Barbara Smith

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