

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

FIELD AND FORAGE CROPS

From: Jack S. Bachelier, Extension Entomologist

Bollworm Moth Flight

The bollworm moth flight is now just getting underway in the southern part of the state. Under hot dry conditions, these flights tend to be heavier. Additionally, increased corn acreage across all of the state should push moth numbers and their resulting bollworms higher. Unfortunately,

dry, “sorry looking” corn can produce plenty of bollworm moths. The best way to monitor the major bollworm moth flight in North Carolina is to consult our *Cotton Insect Corner* web site (<http://ipm.ncsu.edu/cotton/insectcorner/blacklight/index.htm>) where we provide the Monday, Wednesday, and Friday trap counts for bollworm moths and green stink bugs from approximately 18 traps. We hope to have approximately 30 traps posted by next week. Remember that the egg threshold of 10 eggs per 100 terminals, 3 eggs per 100 fruit or 3 eggs on lower stalks is appropriate for conventional cotton once the flight is underway in your area. We have let bollworm damage on conventional cotton get a bit on the high side in recent years (see the damaged boll survey summary for 2006 on page 15).

Plant Bugs on Cotton

After the big plant bug influx that resulted in a handful of far eastern North Carolina cotton fields sprayed for plant bugs last week, plant bugs in those treated fields dropped off dramatically. Additionally, plant bugs in general do not appear to have increased in most areas of the state, with very little spraying for these bugs occurring this week. Checking fields for upper square retention and dirty blooms should help define whether plant bugs are either not a problem or if further assessments for live plant bugs is indicated. In most cases, we should have upper square retention in the 90+ percent range through the fourth or fifth week of blooming. If this is the case, treatment is not needed. In the case of upper square retention less than about 75 to 80 percent and dirty bloom levels are more than about 10 percent, further sweepings or drop cloth sampling for plant bugs is indicated to determine if a spray is needed. Fortunately, most cotton fields in North Carolina fit into the former category of high square retention and low dirty bloom levels.

Spider Mites on Cotton

So far, spider mites are still “behaving themselves,” with very few additional cotton fields needing treatment this past week. That could change any time, however, as spider mites are still very easy to find in many cotton fields, and for many, hot dry weather continues. A few cotton fields have also been treated for cotton aphids this past week, but so far nothing out of the ordinary. If past history holds, we may start seeing the aphid fungus any time now.

Assessments for internal damage from stink bugs are just now getting underway in most North Carolina cotton fields, with a few fields already meeting or exceeding the 10 percent threshold recommended for weeks 3 through 6 of blooming. So far, we have had situations where both brown stink bugs or green stink bugs predominate. More brown stink bugs are possible this year due to our high corn acreage in which brown stink bugs tend to build up. In cases where sweeping and/or observations reveal brown stink bugs and threshold levels of internal boll damage are met, Bidrin will be the insecticide product of choice. Where Bidrin is used, be aware that this product is highly toxic to humans and observe the 24-hour reentry interval. If the bollworm moth flight is within 7 days or so, or is underway, a Bidrin plus pyrethroid insecticide tank mix may be in order. If you are fairly sure that green stink bugs predominate, pyrethroid alone provides good control of both green stink bugs and bollworms. Cutting open or crushing of quarter-sized bolls and examining them for internal warts and stained lint is the only valid means of assessing if a threshold has been met. For further details, see pages 145 to 148 of the *Cotton Information* booklet (http://ipm.ncsu.edu/Production_Guides/Cotton/07Cotton-ch-11.pdf).

Cotton Insect Updates

Remember also that you can get weekly cotton insect updates either by calling 1-800-662-7301 and pressing "4" for cotton, or by going to our *Cotton Insect Corner* web page at <http://ipm.ncsu.edu/cotton/insectcorner/radio/index.html> and clicking on the most recent tape and/or script. These tapes are usually posted each Wednesday.

Upcoming Cotton Scouting School

Nash and Wilson counties: Tuesday, July 24 from 4:00 to 6:00 p.m. at the Agricultural Center, Nashville, NC. For details, contact Charlie Tyson (telephone: 252-459-9810; e-mail: charlie_tyson@ncsu.edu).

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

Soybean Rust Update

Asiatic soybean rust has been confirmed on soybeans in Marion and Gadsden counties in Florida, and in Calhoun and Wharton counties in Texas. The Marion County site was in a sentinel plot which was at stage R5 (small beans in the top of the plants), and represents the closest rust found on soybeans to date for Elizabeth City (595 miles), Fayetteville (440 miles), Raleigh (490 miles), Washington (525 miles) and Wilmington (420 miles). The Gadsden County find was in soybean rust research plots at stage R4 (large pods in the top of the plants) at the research station near Quincy, and represents the closest rust found on soybeans to date for Charlotte (390 miles), Murphy (315 miles), and Winston-Salem (455 miles). The two Texas finds are both more than 800 miles from any North Carolina soybeans.

FRUIT AND VEGETABLES

From: Kelly L. Ivors, Extension Plant Pathologist

Late Blight on Tomatoes Identified in Western North Carolina

Late blight on field-grown tomatoes was identified on July 15 in Mills River, North Carolina (western North Carolina, Henderson County). Recent rain and cool temperatures have been conducive for the pathogen's growth and spread. The first symptoms of late blight on tomato leaves are irregularly shaped, water-soaked lesions on lower leaves. During high humidity, white cottony growth may be visible on underside of the leaf. As the disease progresses, lesions enlarge causing leaves to brown, shrivel and die. Fruit lesions appear as dark, greasy spots that eventually turn a chocolate brown color, and can enlarge to the point of encompassing the entire fruit.

Commercial growers in western North Carolina should apply protectant products as soon as possible, as controlling late blight preventatively is better than after infection. Before late blight infection occurs, mancozeb products such as Maneb, Dithane DF rainshield, Manzate 75DF, and Penncozeb 75DF work well early in the season before harvest (5-day PHI); chlorothalonil products (Bravo Ultrex, Equus) work best during fruit growth (0-day PHI). A product with a post harvest interval (PHI) of more than one day cannot be used when harvests are done two or more times per week.

Currently, the recommended chemical protocol for late blight on tomatoes is:

First application: tank mix of chlorothalonil (0-day PHI) and propamocarb HCl (trade name Previcur flex; 5-day PHI), followed 5 to 7 days later by cyazofamid (trade name Ranman; 1-day PHI). Additional applications should be considered based on weather and disease pressure.

For help on rates, check the North Carolina State University tomato spray program web site at <http://www.ces.ncsu.edu/fletcher/programs/plantpath/>.

ORNAMENTALS AND TURF

From: Stephen B. Bambara, Extension Entomologist

Slug-like Sawfly Larvae

Caliroa is a genus of sawfly slug caterpillars (Fig. 1) that usually feed as a skeletonizer on the lower surface of the leaf. The pear slug belongs to this group. There was a regional outbreak of these slug caterpillars on oak last year. The females have a saw-like ovipositor with which they pierce leaves to lay their eggs inside. Sawfly slug caterpillars are slimy and usually smallish caterpillars (about 0.5 inch in length). When there are large numbers, sawfly slug caterpillars may cause large portions of their host trees to “brown out.” Sawfly slug caterpillars overwinter in the soil in a small cavity that is lined with the secretions of the larva. The larvae pupate the following year and the new adults emerge to mate and lay eggs. The adult of this caterpillar is an insect that more closely resembles a fly than a wasp. If there are enough of these insects present to cause alarm, Sevin insecticide should give more than adequate control. If it is a small shrub, you could wipe them off.



Fig. 1. Sawfly slug caterpillars. Image from the USDA Forest Service.

Dragonfly Attacks Car!

They're back . . . the car eating dragonflies, that is. Okay, they don't eat cars, not even VW bugs. These are the wandering glider dragonflies that seem to mistake the shiny finish of some cars for pools of water. This dragonfly will dip its abdomen on the automobile surface in an attempt to

lay an egg. The wandering glider, *Pantala flavescens* (Fig. 2), is one of the most widespread dragonflies. This attractive golden dragonfly is found from late June to September and often fairly far from water.

Dragonflies are extremely helpful in the landscape and especially beneficial for eating mosquitos, midges, flying ants, swarming termites and aphids. Many great species can be found at this time. One common species you may be seeing around the garden is the white-tailed dragonfly, *Plathemis lydia* (Fig. 3). This is not be confused with the white-tailed deer, which is a true pest in the garden.



Fig. 2. Wandering glider. Image by Forrest Mitchell, Digital Dragonfly Museum.



Fig. 3. White-tailed dragonfly. Image by Stephen B. Bambara.

Trap Door Spider

The trap door spider (Fig. 4) is not from "Harry Potter." Trap door spiders live in a small tunnel in the ground covered by a silken trap door. There, they wait until prey passes by, usually at night. At that time they spring from their hiding place and drag the prey down into the tunnel. They are closely related to tarantulas and may live for several years. Though similar, this is **NOT** the Australian mouse spider (http://www.amonline.net.au/factsheets/mouse_spider.htm), and you don't live in Australia either. To our present knowledge, there are no mouse spiders in North America.



Fig. 4. Trap door spider. Image by a Cooperative Extension Service agent.

INSECT TRAP DATA

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

Light Trap Data from Anson, Stanly and Union Counties

```

*****
                        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 9      -  -  -    0  0  0    6 36  0    7  4  2   10  0  0
July 11     -  -  -    0  0  0    6 40  0    4  4  0    3  0  0
July 13     -  -  -   10  0  0    7 41  0   10  3  2    4  0  0
July 16     9 53  0   15  -  -    7 19  -    4  7  0   10  0  0
July 18     9 55  0    -  -  -    9 27  -    8  5  1    6  1  0
July 20    12 64  2   19  -  -   26 39  -    7  9  0    6  0  0
*****
    
```

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

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

Light Trap Data from Bertie County

```

*****
      Windsor      Woodard      Hexlena      Roxobel      Colerain
*****          *****          *****          *****          *****
Date      BW  GSB  BSB  BW  GSB  BSB  BW  GSB  BSB  BW  GSB  BSB  BW  GSB  BSB
*****
July 19     -  -  -    7  3  0    0  0  0    -  -  -    -  -  -
July 20     5 16  0   24  3  0    0  4  0    -  -  -    -  -  -
*****
    
```

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

From: Mike Carroll, Agricultural Extension Agent, Craven County

Light Trap Data from Craven County

```

*****
                        Number of Adult Insects
*****
      Date      THW  TBW  CEW  GSB  BSB  ECB  FAW  BAW  Looper
*****
July 6          3   1  11   1   1   -   2   -   -
July 9          5   1  26   2   1   -   1   -   -
July 11         2   -  22   1   1   -   -   -   -
July 13         4   -  28   2   -   -   1   -   -
July 16         4   2  34   2   1   -   3   -   -
July 18         3   -  10   1   -   -   -   -   -
*****
    
```

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
 Cooperators: R&W McCoy Farms and Cove City Fertilizer

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

Light Trap Data from Cumberland County

```
*****
                        Number of Adult Insects
*****
Date      THW      CEW      GSB      BSB
*****
July 11   0         3         5         0
July 13   0         2         5         0
July 16   4        33        12         0
July 18   2        66         6         0
July 20   7       160        20         0
*****
```

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

Trap located in Godwin at Cumberland/Harnett County Line
 at Lewis Farms off of Highway 301

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

Light Trap Data from Duplin County

```
*****
                        Number of Adult Insects
*****
Date      BW       GSB      BSB
*****
July 2     0         1         0
July 4     0         0         0
July 6     0         4         4
July 9     4         8         0
July 11    1        11         0
July 13    4         7         2
July 16    3         6         0
July 18    9        13         0
*****
```

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

Trap location: approximately two miles east of Albertson
 Cooperator: Justin Murphy

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

Light Trap Data from Edgecombe County

```
*****
                        Number of Adult Insects
                        *****
                        W Edgecombe /a      Coakley /b      Lawrence /c
                        *****          *****          *****
Date                   CEW   BS   GS   CEW   BS   GS   CEW   BS   GS
*****
July 10                 -   -   3   14   0   46   -   -   -
July 11                 -   -   6    4   0   28   -   -   -
July 13                 0   0   7    8   0   44   -   -   -
July 15                 0   0   5   10   0   49   -   -   -
July 18                 0   0   8    2   0   39   -   -   -
July 20                 8   0   1    1   0   56   4   0   4
*****
```

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 Glenn O'Neal.
c = trap located at Lawrence; maintained by Terri Thomas.

From: Franky J. Howard, Agricultural Extension Agent, Jones County

Light Trap Data from Jones County

```
*****
                        Number of Adult Insects
                        *****
Date                   BW     BSB     GSB     HW
*****
July 2                  0       0       0       0
July 4                  0       0       0       0
July 6                  1       0       0       1
July 9                  7       0       0       0
July 11                 0       0       0       1
July 13                 0       0       0       0
July 16                 0       1       1      15
July 18                 0       4       0      18
*****
```

Trap Location: Comfort
Monitored by: Morris and Brett Pike

BW = bollworms; BSB = brown stink bugs;
GSB = green 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 15   0        5        0        5        2        0        0        0
June 16   0        7        0        1        3        0        0        0
June 17   0        0        0        2        2        2        0        1
June 18   0        1        1        1        4        0        0        0
June 19   0        3        0        0        2        2        4        0
June 20   0        5        1        0        3        0        2        0
June 21   -----no electric power-----
June 22   0        2        0        0        1        0        0        0
June 23   1       10        1        3       14        1        0        1
June 24   0        3        0        1        4        0        0        0
June 25   0        1        1        1        2        1        0        0
June 26   0        0        5        0        6        3        0        0
June 27   0        3        4        1        2        2        0        0
June 28   0        4        1        0        3        1        0        0
June 29   0        4        0        1        2        0        0        0
June 30   0        4        2        1        5        0        0        0
*****
```

July

```
*****
                        Number of Adult Insects
*****
Date      HW      CEW      ECB      AW      AWC      GSB      BSB      TBW
*****
July 1    -----no electric power-----
July 2    0        3        0        0        3        2        0        0
July 3    0        6        2        0        6        1        0        0
July 4    0        1        0        0        3        0        0        0
July 5    0        2        1        0        5        4        0        0
July 6    0        3        1        0        2        1        0        0
July 7    0        3        1        1        3        4        0        0
July 8    -----no electric power-----
July 9    0        2        2        0        5        3        0        0
July 10   0        2        0        0        0        7        0        0
July 11   0        1        0        0        3        3        0        0
July 12   0        0        0        0        1        1        0        0
July 13   0        2        2        0        5        9        0        0
July 14   0        4        2        0        3        1        0        0
July 15   0        0        3        4        1        4        0        0
July 16   1        2        1        1        4        9        0        0
July 17   0        3        2        1        2        3        0        0
July 18   0        2        0        0        1        1        0        0
July 19   1       12        1        0        3       15        0        0
July 20   0       11        2        0        7        7        2        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

From: Charlie Tyson, Agricultural Extension Agent, Nash County

Light Trap Data from Nash County

```
*****
                Number of Adult Insects
                *****
Date           CEW           GSB           BSB
*****
July 13        3             -             -
July 16       10             -             -
July 18        5             3             -
July 20        8             10            1
*****
```

CEW = corn earworms; GSB = green stink bugs; BSB = brown stink bugs

Trap location: near Hickory Crossroads

From: Tray Bridgers, Agricultural Extension Agent, Onslow County

Light Trap Data from Onslow County

```
*****
                Number of Adult Insects
                *****
Date           Bollworms    GSB           BSB    Hornworms
*****
July 4         6             3             0             0
July 6        20             7             0             0
July 9        25             19            3             0
July 11       21             10            0             0
July 13       33             10            3             1
July 16       31             10            0             0
July 18       34             3             5             3
July 20       39             18            2             6
*****
```

GSB = green stinks bugs; BSB = brown stink bugs

Trap location: Richlands; Cooperator: Richland Farms
 Insect counts are from a single black light trap
 located approximately 1 mile east of Richlands.

From: Kent Wooten, Agricultural Extension Agent, Robeson County

Light Trap Data from Robeson County

```
*****
                        Number of Adult Insects
                        *****
Date          BW      GSB      BSB      FAW
*****
July 6        12       -       -       -
July 7-8      23       -       -       -
July 9        18       -       -       -
July 10       15       -       -       -
July 11       11       -       -       -
July 12       14       -       -       -
July 13-15    47       18      3       -
July 16       18       7       1       2
July 17-18    132      17      4       -
July 19       98       11      1       11
*****
```

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

Location is Rowland; monitored by Kay McGirt

From: Josh Gaddy, Agricultural Extension Agent, Sampson County

Light Trap Data from Sampson County

```
*****
                        Number of Adult Insects
                        *****
Date          BW      GSB      BSB      THW
*****
July 2        ----- trap set up -----
July 5         3       0       1       1
July 6         3       0       0       0
July 9         3       7       0       4
July 11        3       1       1       2
July 13        4       4       0       8
July 16        -       -       -       -
July 18        12      0       0       12
July 20        57      5       0       8
*****
```

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
*****
          Gibson                John's                Laurinburg
*****                *****                *****
Date      BW  GSB  BSB  FAW      BW  GSB  BSB  FAW      BW  GSB  BSB  FAW
*****
July 11   13  14   0   0      22  33   1   0      12  10   1   0
July 13    8  10   0   0      17  25   6   0       3   7   0   0
July 16   16  14   0   0      61  14   0   0      26   5   0   0
July 18   16   5   0   0      74  24   2   0      57   6   0   0
July 20   41   7   0   0     223  41   0   0     156  11   0   0
*****

```

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

From: Kevin Johnson, Agricultural Extension Agent, Wayne County

Light Trap Data from Wayne County

```

*****
                          Number of Adult Insects
*****
          Seven Springs                Goldsboro
*****                *****
Date      GSB  BSB  CEW  HW      GSB  BSB  CEW  HW
*****
July 6         -   -   -   -         2   0   1   0
July 9         -   -   -   -        23   6   1   0
July 11        -   -   -   -         1   0   1   0
July 13         1   0   1   2         5   0   3   1
July 16         2   0   6   4         -   -   -   -
July 18         0   0   5   0        10   -  11   2
*****

```

GSB = green stink bugs; BSB = brown stink bugs;
 CEW = corn earworms; HW = hornworms
 Cooperators: D. M. Price (Seven Springs); 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.

Employment and program opportunities are offered to all people regardless of race, color, national origin, sex, age or disability. North Carolina State University, North Carolina A&T State University, U.S. Department of Agriculture, and local governments cooperating.



Damaged Boll Survey Summery, 2006

Bollgard Cotton: Damaged Boll Survey, 2006 (n = 92 fields)

County	Number of Damaged Bolls and Larvae / 100 Bolls								Aphid Rating	Plant Height (inches)
	Bollworm		Euro. Corn Borer:		Fall Armyworm		Stinkbug	Total		
	Damage	Live	Damage	Live	Damage	Live	Damage	Damage		
Scotland	0.13	0.00	0.00	0.00	0.00	0.00	1.63	1.75	0.25	33.25
Onslow/Jones	0.00	0.00	0.00	0.00	0.13	0.13	4.75	4.88	0.00	37.75
Craven	0.22	0.00	0.00	0.00	0.11	0.00	4.44	4.78	0.00	36.67
Northampton	1.18	0.00	0.00	0.00	0.00	0.00	2.27	3.45	0.00	36.55
Halifax	0.63	0.00	0.00	0.00	0.00	0.00	1.88	2.50	0.00	27.38
Wilson	0.58	0.00	0.00	0.00	0.08	0.00	7.25	7.92	0.00	35.67
Edgecombe	1.89	0.00	0.00	0.00	0.00	0.00	3.00	4.89	0.00	33.56
Wayne	2.40	0.00	0.00	0.00	0.00	0.00	8.50	10.90	0.00	39.70
Union	3.83	0.00	0.00	0.00	0.00	0.00	2.83	6.67	0.00	29.67
Sampson	1.14	0.00	0.00	0.00	0.00	0.00	6.00	7.14	0.00	35.29
Duplin	0.50	0.00	0.00	0.00	0.00	0.00	6.75	7.25	0.00	35.50
AVG.	1.14	0.00	0.00	0.00	0.03	0.01	4.48	5.65	0.02	34.63

Bollgard II Cotton: Damaged Boll Survey, 2006 (n= 59 fields)

County	Number of Damaged Bolls and Larvae / 100 Bolls								Aphid Rating	Plant Height (inches)
	Bollworm		Euro. Corn Borer:		Fall Armyworm		Stinkbug	Total		
	Damage	Live	Damage	Live	Damage	Live	Damage	Damage		
Scotland	0.13	0.00	0.00	0.00	0.00	0.00	3.63	3.75	0.00	38.50
Onslow/Jones	0.00	0.00	0.00	0.00	0.00	0.00	6.60	6.60	0.00	37.80
Craven	0.00	0.00	0.00	0.00	0.00	0.00	4.00	4.00	0.00	37.50
Northampton	0.00	0.00	0.00	0.00	0.00	0.00	8.00	8.00	0.00	34.00
Halifax	0.00	0.00	0.00	0.00	0.00	0.00	4.40	4.40	0.00	31.20
Wilson	0.50	0.00	0.00	0.00	0.00	0.00	4.75	5.25	0.00	43.25
Edgecombe	0.00	0.00	0.00	0.00	0.00	0.00	3.71	3.71	0.00	37.86
Wayne	1.00	0.00	0.00	0.00	0.00	0.00	9.40	10.40	0.00	37.40
Union	0.25	0.00	0.00	0.00	0.00	0.00	9.13	9.38	0.00	25.25
Sampson	0.00	0.00	0.00	0.00	0.00	0.00	12.00	12.00	0.00	36.00
AVG.	0.19	0.00	0.00	0.00	0.00	0.00	6.56	6.75	0.00	35.88

Conventional Cotton: Damaged Boll Survey, 2006 (n = 54 fields)

County	Number of Damaged Bolls and Larvae / 100 Bolls								Aphid Rating	Plant Height (inches)
	Bollworm		Euro. Corn Borer:		Fall Armyworm		Stinkbug	Total		
	Damage	Live	Damage	Live	Damage	Live	Damage	Damage		
Scotland	1.50	0.00	0.00	0.00	0.25	0.00	1.63	3.38	0.00	37.88
Craven	3.00	0.00	0.00	0.00	1.40	0.00	1.20	5.60	0.00	38.40
Northampton	4.64	0.00	0.00	0.00	0.00	0.00	1.27	5.91	0.00	36.73
Halifax	0.17	0.00	0.00	0.00	0.00	0.00	3.50	3.67	0.00	28.00
Wilson	7.00	0.00	0.00	0.00	0.00	0.00	4.33	11.33	0.00	37.33
Edgecombe	2.50	0.00	0.00	0.00	0.00	0.00	1.75	4.25	0.00	35.75
Wayne	21.43	0.00	0.00	0.00	1.29	0.00	2.14	24.86	0.00	39.14
Union	22.00	0.00	0.00	0.00	0.00	0.00	1.75	23.75	0.00	27.25
Sampson	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	34.00
Duplin	3.00	0.00	0.00	0.00	1.00	0.00	2.00	6.00	0.00	36.00
AVG.	6.52	0.00	0.00	0.00	0.39	0.00	2.16	9.07	0.00	35.05

Widestrike Cotton: Damaged Boll Survey; 2006 (n = 12 fields)

County	Number of Damaged Bolls and Larvae / 100 Bolls								Aphid Rating	Plant Height (inches)
	Bollworm		Euro. Corn Borer:		Fall Armyworm		Stinkbug	Total		
	Damage	Live	Damage	Live	Damage	Live	Damage	Damage		
Halifax	0.33	0.00	0.00	0.00	0.00	0.00	5.17	5.50	0.00	32.83
Edgecombe	0.75	0.00	0.00	0.00	0.00	0.00	3.00	3.75	0.00	32.00
Sampson	0.00	0.00	0.00	0.00	0.00	0.00	8.00	8.00	0.00	40.00
AVG.	0.36	0.00	0.00	0.00	0.00	0.00	5.39	5.75	0.00	34.94