

North Carolina Pest News

Departments of Entomology and Plant Pathology



Volume 29, Number 21,
August 29, 2014

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.

Dept. of Entomology,
North Carolina State
University, Box 7613,
Raleigh, NC 27695

ANNOUNCEMENTS AND GENERAL INFORMATION	2
• Field Days Scheduled	
FIELD AND FORAGE CROPS	2
• Bollworms in <i>Bt</i> Cotton	
• Treating Loopers in Soybeans	
• Tobacco Insect Scouting Report – August 29, 2014	
• Soybean Rust Update: August 26, 2014	
ORNAMENTALS AND TURF	7
• Caterpillars on Roses	
• Wax Scales	
RESIDENCES, STRUCTURES AND COMMUNITIES	8
• Yellow Jackets	
INSECT TRAP DATA	9
• Light Trap Data from Bertie County	
• Light Trap Data from Craven County	
• Light Trap Data from Edgecombe County	
• Light Trap Data from Halifax County	
• Light Trap Data from Lenoir County	
• Light Trap Data from Northampton County	
• Light Trap Data from Robeson County	
• Light Trap Data from Scotland County	
• Light Trap Data from Washington 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 Internet at: <http://ipm.ces.ncsu.edu/2014-north-carolina-pest-news-archive/>

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.

ANNOUNCEMENTS AND GENERAL INFORMATION

Field Days Scheduled

Peanut Field Day will be held on Thursday, September 4, 2014, at 9:00 a.m., Peanut Belt Research Station, 112 Research Lane, Lewiston, North Carolina. For more information, please contact David Jordan at 919-515-4068.

Southeastern Peanut Field Day will start 9:30 a.m. on Tuesday, September 9, 2014, at the Border Belt Research Station, 86 Border Belt Drive, Whiteville, North Carolina. Please contact David Jordan at 919-515-4068 for more information.

Cotton Field Day will be held on Wednesday, September 10, 2014, at 1:30 p.m., Upper Coastal Plain Research Station, 2811 Nobles Mill Pond Road, Rocky Mount, North Carolina. More information will be provided at <http://cotton.ces.ncsu.edu/>.

FIELD AND FORAGE CROPS

From: Dominic Reisig, Extension Entomologist

Bollworms in *Bt* Cotton

We are between flights right now (click [here](#) and select “corn earworm” on the right), having experienced our major bollworm (aka corn earworm) flight during the first week of August. Most of the bollworms that we are finding in cotton and soybeans resulted from this flight. We can expect another flight within a few weeks. The general trend for this generation of earworms is that they show up and lay some eggs, but really never amount into much of anything. It would still be a good idea to scout any late-planted soybeans. Moths preferentially lay in tender beans, especially those that are flowering.



Bollworm underneath bloom tag.

Most of our cotton in the state is WideStrike or Bollgard II, which produce two proteins that eliminate budworm and are very effective on bollworm. However, sometimes bollworm can develop on *Bt* cotton. Furthermore, **sometimes actions taken earlier in the season (such as pyrethroid, Bidrin or Orthene sprays) knock out natural enemies and can flare worm populations.** *Bt* protein expression varies with environmental conditions, variety, parts of the plant and time. In general, the least *Bt* is expressed in squares and flowers. Sometimes bollworms can develop on these plant parts and infest bolls. This is why we have a threshold for bollworms in post-bloom *Bt* cotton, which is **three live larvae per 100 terminals, squares, blooms of bolls.** We also recommend scouting for larvae underneath bloom tags, where they have developed on squares and blooms and can move into bolls.



Staging larvae.

If you're scouting cotton, you should focus on the size of the larvae, note where they are located, and take into account the growth of the cotton. Our last effective bloom date for cotton is August 15, so do not count on any more squares or blooms making it into harvestable bolls. However, recognize that larvae could develop on squares and blooms and move into larger bolls. At a certain point, bolls become too large for larvae to penetrate. If you have large-sized larvae (7+ days) either in bolls or present, your best time for control would have been when they were small (3 to 7 days). Your best bet will be to wait for these to cycle out since most the damage is done and you will not kill larvae inside bolls.

Treating Loopers in Soybeans

Looper numbers have really picked up this week in soybeans. Loopers are migratory pests that sometimes show up late season and eat leaves, but not pods or seeds. Remember that the threshold for soybean loopers (and all defoliating pests) is 15% defoliation throughout the canopy (thresholds and defoliation guide [here](#)). Loopers generally defoliate from the bottom of the canopy up so peel back those plants when you scout.

So, should you treat your soybeans for loopers now?

If you have beans below 15% defoliation throughout the canopy, relatively low populations of loopers (5 in 15 sweeps and lower), beans with a low-yield potential **and** beans that are at or past R6, I would not recommend treatment. Remember that the "safe point" for defoliation is R7 and that they begin feeding in the middle of the canopy, working their way up. Also keep in mind that our 15% defoliation threshold is a yield prevention threshold that has not taken into account the money you will spend on insecticide, fuel, and drive-down loss over the beans.

The hardest call will be beans with a high-yielding potential that have not reached R6 and have lots of loopers and/or defoliation. So you really need to assess what your canopy looks like. Although pyrethroids will knock loopers back initially, they will often resurge because they are tolerant to these chemicals and because natural enemies are removed. My top choices for soybean looper are Belt, Prevathon and Steward. There are premix products that will also work, such as Besiege, but these should only be used if you need the non-worm portion of the premix (such as stink bugs or kudzu bugs at threshold). Remember that you want to preserve natural enemies if possible. Tracer/Blackhawk and Intrepid are also good effective chemicals for loopers.

From: Hannah Burrack, Extension Entomologist, and Cameron McLamb, Student Working

Tobacco Insect Scouting Report – August 29, 2014

We are at week eighteen of scouting. Two of our eastern sites are almost done with harvesting, while harvesting continues at our other locations. None of our grower plots have hornworms or flea beetles above threshold, and hornworm pressure has definitely declined in our untreated on-station plots. Our Eastern 3 and 4 locations have low levels of aphid infested plants. At Eastern 4, 70% rates of parasitism were observed with only one plant having more than 50 healthy aphids per leaf.



Tobacco from our Piedmont site has grown noticeably over the past few weeks.

Scouting Report, Eastern 1 – Grower Standard Field

Insect observation	No. aphid infested plants	Flea beetles per plant	Percent tobacco budworm infested plants	Hornworms per plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No treatment	1.98 flea beetles/plant – No treatment	0% budworm infested plants – No treatment	0 – No treatment	0 – No treatment	0.22 stilt bugs/plant 0.04 lady beetles/plant

Scouting Report, Eastern 2 – IPM Field

Insect observation	No. aphid infested plants	Flea beetles per plant	Percent tobacco budworm infested plants	Hornworms per plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	4.82 flea beetles/plant – No treatment	0% tobacco budworm infested plants – No treatment	0 – No treatment	0 – No Treatment	0.18 stilt bugs/plant 0.02 stink bugs/plant

Scouting Report, Eastern 3 – Grower Standard Field

Insect observation	No. aphid infested plants	Flea beetles per plant	Percent tobacco budworm infested plants	Hornworms per plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0.025 – No treatment	4.05 flea beetles/plant – No treatment	0% tobacco budworm infested plants – No treatment	0 – No treatment	0 – No treatment	0.025 lady beetles/plant 0.025 parasitized budworms/plant

Scouting Report, Eastern 4 – IPM Field

Insect observation	No. aphid infested plants	Flea beetles per plant	Percent tobacco budworm infested plants	Hornworms per plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0.025 – No Treatment	2.75 flea beetles/ plant – No treatment	0% tobacco budworm infested plants – No treatment	0 – No treatment	0 – No Treatment	0.15 stilt bugs/plant 0.025 lady beetle/plant

Scouting Report Piedmont 1 – Grower Standard Field

Insect observation	No. aphid infested plants	Flea beetles per plant	Percent tobacco budworm infested plants	Hornworms per plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 aphid infested plants – No treatment	0.775 flea beetles/plant – No treatment	0% tobacco budworm infested plants – No treatment	0 – No treatment	0 – No treatment	0

Scouting Report, Piedmont 2 – IPM Field

Insect observation	No. aphid infested plants	Flea beetles per plant	Percent tobacco budworm infested plants	Hornworms per plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	2.34 flea beetles/plant – No treatment	0% tobacco budworm infested plants – No treatment	0 – No treatment	0 – No Treatment	0.16 stilt bugs/plant 0.02 stink bugs/plant 0.04 lady beetles/plant

Here are the scouting reports from the control plots for our experiments at the [Upper Coastal Plain Research Station](#) near Rocky Mount, North Carolina, and the [Lower Coastal Plain Research Station](#) near Kinston, North Carolina. For some of these experiments, the control plots receive no insecticide treatments for the entire season. For some of the experiments, we are interested in only caterpillar pests so all plants in the experiment, including the control plots, are treated in the greenhouse with imidacloprid to prevent other early season pests.

On Station, Kinston – Control plants with no insecticide treatment

Insect observation	No. aphid infested plants	Flea beetles per plant	Percent tobacco budworm infestation	Hornworms per plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0% aphid infested plants – No Treatment	0 beetles/plant – No treatment	0% budworm infested plants – No treatment	0 hornworms/plant – No treatment	0 – No Treatment	0.015 parasitized hornworms/plant

On Station, Kinston – Control plants treated with imidacloprid

Insect observation	No. aphid infested plants	Flea beetles per plant	Percent tobacco budworm infestation	Hornworms per plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	0 beetles/plant – No treatment	0% budworm infested plants – No treatment	0 hornworms/plant – No treatment	0 – No Treatment	0 parasitized hornworms/plant

On Station, Rocky Mount – Control plants with no insecticide treatment

Insect observation	No. aphid infested plants	Flea beetles per plant	Percent tobacco budworm infestation	Hornworms per plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0.015 aphid infested plants – No Treatment	0 beetles/plant – No treatment	0.005% budworm infested plants – No treatment	0.045 hornworms/plant – No treatment	0 – No Treatment	0.2 parasitized hornworms/plant

On Station, Rocky Mount – Control plants treated with imidacloprid

Insect observation	No. aphid infested plants	Flea beetles per plant	Percent tobacco budworm infestation	Hornworms per plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	0 – No treatment	0.005% budworm infested plants – No treatment	0.02 hornworms/plant – No treatment	0 – No Treatment	0.055 parasitized hornworms/plant

More Information

To see last week's scouting report, click [here](#).

(Originally posted at: <http://tobacco.ces.ncsu.edu/2014/08/tobacco-insect-scouting-report-august-29-2014/>)

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

Soybean Rust Update: August 26, 2014

Asiatic soybean rust was confirmed on soybeans in Escambia County, Alabama, August 25, and in Jackson, Jefferson, and Leon counties, Florida, August 26. To date, the closest rust to Murphy is approximately 230 miles (Autauga County, Alabama), and the closest to Charlotte is approximately 320 miles (Leon County, Florida). None of the confirmed finds are within 300 miles of Elizabeth City, Fayetteville, Raleigh, Washington, Wilmington, or Winston-Salem, North Carolina.

We do not consider these finds to pose any imminent threat to North Carolina soybeans. Soybeans with developing seeds in the top of the plants are probably safe from rust anyway.

The current status of rust in the U.S. can be found at <http://sbr.ipmpipe.org>.

ORNAMENTALS AND TURF

From: Steve Frank, Extension Entomologist

Caterpillars on Roses

Caterpillars can damage roses throughout the summer. It is not a particular species of caterpillar, but several generalists that will feed on rose plants and particularly the buds. Tobacco budworm and corn earworm are the most common culprits. They are active throughout the year and I found some on my knockout roses this week. This does not usually cause extreme damage, but can reduce flowering if you have a lot of caterpillars present. The tiny caterpillar I found August 27 was creating damage called window panning. Since it cannot chew all the way through leaves it just chews off the bottom surface. Larger caterpillars can burrow into the buds or eat the flowers.



Photo: S. D. Frank.



Photo: S. D. Frank.

Wax Scales

I have seen a lot of wax scale on conifers and broad leaf evergreen plants. I probably see them a lot because they stand out so much. Right now most are juveniles about half the size of the adults. Since tree growth will be slowing down soon I am not sure how much uptake of systemic insecticides would occur via drenches. However you could try foliar applications or even oil to kill these young scales. Or, you could just make a note and come back in spring when crawlers are active.

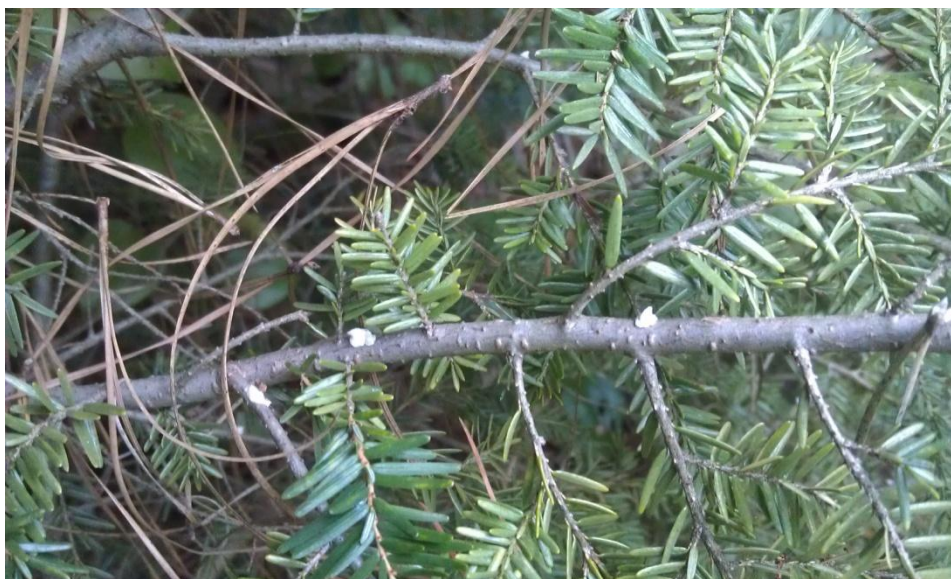


Photo: S. D. Frank.

RESIDENCES, STRUCTURES AND COMMUNITIES

From: Mike Waldvogel, Extension Entomologist

Yellow Jackets

Labor Day often signals the end of the summer is near and so many insects are also beginning to wind down their activity. Yellow jacket colonies likely peaked in late July or early August, but they are still quite active and even aggressive in foraging for food. So, while people are outdoors celebrating this weekend at parks, the beach or just in their own backyard, more than just their invited guests will be waiting for hot dogs, burgers and other items coming off the grill. The inclination is to swat the unwanted visitors as they try to taste what sitting on our plates. That can trigger an aggressive response by the yellow jackets. Another piece of advice to give people – drink from cups rather than cans. While we are busy sitting at picnic tables talking, we may not notice a yellow jacket sipping soda from the top of the can or crawling inside to investigate this sugar (or beer) gold mine. Pour the beverage into a cup.

Trash and recycle receptacles will also be wasp magnets and can also pose a problem in parks, athletic fields and other recreation areas. These receptacles need to be emptied before the overflow with trash or beverage bottles/cans. A lot of people try those yellow jacket traps that are sold at hardware stores. We still haven't seen data that shows that they are effective. If yellow jacket nests can be found, treating them with a Wasp & Hornet spray is the best choice. Use a product that propels the chemical 10+ feet so

you have a running head-start when the wasps start streaming out of the nest. Some of these products are foams which help envelope the opening to the nest. I would suggest treating late in the evening because it is unlikely that you will kill all of the wasps and the survivors may return in search of their now-unusable home. Also, discourage people from using home remedies such as gasoline. While it may be viewed as entertaining, it's obviously hazardous and environmentally unsound. Some people place bowls or rocks over the opening figuring that this is a "low impact" alternative to chemicals. However, I have reservations about this approach particularly if there are "inquiring little minds" that might investigate this situation and move the object with the obvious unintended consequences. Another technique some people try is to pour boiling water down into the hole. That may seem "safer" than a pesticide but consider that you have to carry the water over to the nest and pour it down the opening and hope some of the occupants don't emerge to "encourage" you to go elsewhere. Yellow jackets are actually quite valuable as predators and so if the nest doesn't pose a health hazard to you or family members or friends, "Let it be" . . .

INSECT TRAP DATA

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

Light Trap Data from Bertie County

```

*****
                                Hexlena
                                TNT
                                Woodard
                                *****
Date      CEW GSB   CEW GSB   CEW GSB
*****
July 28      5  6     4 27     -  -
July 30      2  0     2  3     2  1
August 29    -  -     1  1     0  1
*****
    
```

Abbreviations: CEW = corn earworms; GSB = green stink bugs

From: Mike Carroll, Agricultural Extension Agent, Craven County

Light Trap Data from Craven County

```

*****
                                Number of Adult Insects
                                *****
Date      BW*  GSB   BSB   AW   HW
*****
Date Initiated
July 16    -----
July 18    13    0     0     0     1
July 21    28    0     0     0     2
July 23    30    1     0     0     1
July 25    18    1     0     0     1
July 28   105    1     0     0     2
July 30    76    1     0     0     1
    
```

August 1	136	1	0	2	1
August 4	259	1	0	2	2
August 6	80	2	0	0	0
August 8	49	0	0	0	1
August 11	65	0	0	1	1
August 14	18	2	0	1	1
August 17	40	0	0	0	1
August 19	76	3	0	2	3
August 20	32	2	0	2	1
August 25	85	1	0	0	3
August 27	36	2	0	2	2

Abbreviations: BW* = bollworms; GSB = green stink bugs;
 BSB = brown stink bugs; AW = true armyworms;
 HW = tobacco hornworms

*Bollworms reflect corn earworm and tobacco budworm counts

Cooperator: Cove City Fertilizer

From: Arthur R. Bradley, Jr., County Extension Director, Edgecombe County

Light Trap Data from Edgecombe County

Number of Adult Insects

Date	West Edgecombe			Coakley			Lawrence		
	CEW	BSB	GSB	CEW	BSB	GSB	CEW	BSB	GSB
July 11	-	-	-	0	3	6	-	-	-
July 14	0	1	0	1	0	1	-	-	-
July 16	0	0	0	0	0	3	-	-	-
July 18	0	0	0	-	-	-	-	-	-
July 21	0	1	0	-	-	-	-	-	-
July 23	1	0	0	5	0	1	-	-	-
July 25	1	0	1	8	2	6	-	-	-
July 28	14	1	1	15	0	1	-	-	-
July 30	5	0	0	-	-	-	-	-	-
August 1	12	0	0	43	0	1	-	-	-
August 4	20	0	0	84	0	1	-	-	-
August 6	9	0	0	35	0	0	-	-	-
August 8	15	0	1	14	0	3	-	-	-
August 11	14	0	0	12	0	2	-	-	-
August 13	8	1	1	-	-	-	-	-	-
August 15	13	0	0	9	0	1	-	-	-
August 18	37	0	1	-	-	-	-	-	-
August 19	-	-	-	25	0	7	-	-	-
August 20	16	0	0	-	-	-	-	-	-
August 22	10	0	1	8	0	3	-	-	-
August 25	8	0	0	-	-	-	-	-	-
August 27	1	0	0	-	-	-	-	-	-

August 29 1 0 0 - - - - - -

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

From: Arthur Whitehead, Jr., County Extension Director, Halifax County

Light Trap Data from Halifax County

Date	Hobgood					Dawson				
	CEW	BSB	ECB	GSB	HW	CEW	BSB	ECB	GSB	HW
July 24	7	-	0	-	0	-	-	-	-	-
July 26	19	-	0	-	0	-	-	-	-	-
August 6	4	0	-	0	-	43	1	-	9	-

Abbreviations: CEW = corn earworms;
 ECB = European corn borers; HW = hornworms

From: Alan A. Harper, Lenoir County

Light Trap Data from Lenoir County

June

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

June 22	0	1	0	0	0	1	0	0
June 23	0	0	0	1	1	0	0	0
June 24	0	1	0	0	0	0	0	1
June 25	0	3	0	2	1	1	0	0
June 26	0	1	0	1	0	1	0	0
June 27	0	1	0	0	0	0	0	0
June 28	0	2	0	1	1	0	0	0
June 29	0	0	0	0	2	0	0	0
June 30	0	0	0	0	1	0	0	1

July

Number of Adult Insects

Date	HW	CEW	ECB	AW	AWC	GSB	BSB	TBW
July 1	0	2	0	0	1	0	0	0
July 2	0	1	0	0	0	0	0	0
July 3	0	1	0	0	1	0	0	1
July 4	0	2	0	0	0	0	0	0
July 5	0	1	0	1	0	0	0	0
July 6	0	1	0	0	0	0	0	1
July 7	0	0	0	0	0	0	0	0
July 8	0	0	0	0	0	0	0	0
July 9	0	0	0	0	0	1	0	0
July 10	0	0	0	0	0	1	0	0
July 11	0	2	0	0	0	2	0	0
July 12	0	1	0	1	0	1	0	0
July 13	0	0	0	0	0	0	0	0
July 14	0	0	0	0	0	0	0	0
July 15	0	1	0	0	0	0	1	1
July 16	0	1	1	0	0	0	0	0
July 17	0	4	0	0	0	1	0	0
July 18	0	1	0	0	2	1	0	0
July 19	1	1	0	0	0	1	0	0
July 20	0	2	0	0	1	2	0	0
July 21	0	7	1	0	1	6	0	0
July 22	1	8	0	0	2	3	0	0
July 23	0	9	1	0	0	3	1	1
July 24	0	11	0	0	0	3	3	0
July 25	0	8	0	0	4	2	1	0
July 26	0	26	0	0	0	5	0	0
July 27	0	18	0	0	2	7	2	0
July 28	0	20	0	1	3	8	7	0
July 29	0	26	0	1	1	2	0	0
July 30	0	36	0	0	1	0	0	0
July 31	0	52	0	1	1	6	0	0

August

```

*****
                        Number of Adult Insects
*****
Date      HW      CEW      ECB      AW      AWC      GSB      BSB      TBW
*****
August 1   0      36      0       2       0       7       0       1
August 2   0      30      0       1       0       3       1       2
August 3   0      43      0       1       1       3       0       1
August 4   0      46      0       0       0       4       0       1
August 5   0      63      0       1       0       6       0       1
August 6   0      26      0       0       0       5       0       0
August 7   0      33      0       1       0       6       0       2
August 8   0      21      0       0       0       2       1       0
August 9   0      32      0       0       2       5       0       0
August 10  0      15      0       0       1       0       0       0
August 11  0      14      0       0       0       0       0       0
August 12  0       5      0       0       0       3       0       0
August 13  0      15      0       0       0       8       0       0
August 14  0       8      0       0       0       1       0       0
August 15  0       4      2       0       0       0       1       0
August 16  -       -      -       -       -       -       -       -
August 17  0      11      0       0       0       9       0       0
August 18  -       -      -       -       -       -       -       -
August 19  0       8      0       0       0       8       1       0
August 20  -       -      -       -       -       -       -       -
August 21  0       5      0       1       0       3       2       0
August 22  0       3      4       0       0       4       0       0
August 23  0       7      0       0       0       0       0       0
August 24  0       5      3       0       0       3       0       0
August 25  -       -      -       -       -       -       -       -
August 26  0       6      6       1       0       6       2       0
August 27  0       7      1       0       0       1       1       0
August 28  0      11      9       1       0       9       1       0
August 29  0       8      8       1       0       8       1       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: Craig Ellison, Agricultural Extension Agent, Northampton County

Light Trap Data from Northampton County

```

*****
                        Number of Adult Insects
*****
                        Galatia      Seaboard      Woodland      Jackson
*****
Date      CEW GSB BSB HW CEW GSB BSB CEW GSB BSB CEW GSB BSB
*****
July 26   -  45  2  2   -  -  -   -  -  -   -  -  -
July 29   7  15  1  -   4  6  0   -  -  -   -  -  -
    
```

July 30	0	0	0	-	-	-	-	-	-	-	-	-	-
July 31	0	0	0	-	2	1	0	-	-	-	-	-	-
August 1	0	-	-	-	-	-	-	1	0	0	-	-	-
August 4	49	89	0	-	12	4	0	1	18	0	-	-	-
August 5	23	3	0	-	-	-	-	-	-	-	-	-	-
August 6	10	1	0	-	7	1	0	2	1	0	-	-	-
August 8	-	-	-	-	12	3	0	-	-	-	-	-	-
August 11	-	-	-	-	12	2	0	2	2	0	-	-	-
August 12	-	-	-	-	-	-	-	-	-	-	21	1	0
August 13	2	4	0	-	14	7	0	2	3	0	-	-	-
August 14	3	1	0	-	-	-	-	-	-	-	30	138	0
August 15	-	-	-	-	5	0	0	-	-	-	9	3	0
August 19	5	18	0	-	16	6	0	-	-	-	86	31	1
August 20	4	5	0	-	35	8	0	2	1	0	32	22	0
August 22	-	-	-	-	16	44	0	2	0	0	39	22	0
August 25	7	10	0	-	5	3	0	1	2	0	38	41	1
August 27	-	-	-	-	3	0	0	0	0	0	-	-	-
August 28	-	-	-	-	-	-	-	-	-	-	4	5	0
August 29	-	-	-	-	2	1	0	1	3	0	3	16	1

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

From: Robeson County

Light Trap Data from Robeson County

Number of Adult Insects

Date	CEW	ECB	AWC	AW	GSB	BSB
July 29	43	-	1	-	3	0
July 30	24	2	0	1	0	0
August 1	41	0	0	-	1	0
August 7	21	1	0	2	1	2
August 11	16	2	0	7	0	0
August 21	18	-	4	6	1	0

Abbreviations: CEW = corn earworms; ECB = European corn borers;
 AWC = armyworm complex; AW = true armyworms;
 GSB = green stink bugs; BSB = brown stink bugs

From: Scotland County Extension Center

Light Trap Data from Scotland County

```

*****
                                Number of Adult Insects
*****
                Gibson                John's                Laurinburg
*****                *****                *****
Date            CEW  ECB  GSB  TBW  BSB    CEW  ECB  GSB  TBW  BSB    CEW  ECB  GSB  TBW  BSB
*****
July 23         -   -   -   -   -      -   -   -   -   -      -   -   -   -   -
July 25         5   2   -   -   -      -   -   -   -   -      -   -   -   -   -
July 28         4   4   -  288  -      5   0   -  559  -      2   1   -   55  -
July 30         60  -   0   -   0    273  -   1   -   0      -   -   -   -   -
August 1        74  -   1   -   0     98  -   0   -   0     24  -   0   -   0
August 4       108  -   2   -   0    268  -   1   -   0      -   -   -   -   -
August 5         -   -   -   -   -      -   -   -   -   -     56  -   0   -   0
August 6        34  -   5   -   0     84  -   2   -   1      -   -   -   -   -
August 8         -   -   -   -   -      -   -   -   -   -     22  -   0   -   2
August 11       32  -   1   -   0     58  -   1   -   1     39  -   1   -   1
August 12       80  -   5   -   0      -   -   -   -   -     80  -   2   -   0
August 13        -   -   -   -   -    144  -   1   -   1      -   -   -   -   -
August 14       34  -   3   -   0      -   -   -   -   -     19  -   0   -   0
August 18       27  -   5   -   0    162  -   2   -   1     15  -   1   -   0
August 21       17  -   3   -   3     71  -   1   -   2     5   -   0   -   0
August 25        -   -   -   -   -    143  -   5   -   2    13  -   0   -   1
August 27       34  -   5   -   0      -   -   -   -   -     27  -   2   -   0
*****
    
```

Abbreviations: CEW = corn earworms; ECB = European corn borers;
 GSB = green stink bugs; TBW = tobacco budworms; BSB = brown stink bugs

From: Washington County

Light Trap Data from Washington County

```

*****
                                Number of Adult Insects
*****
Date            CEW    GSB
*****
July 15         1      1
July 18         4      2
July 25         3      -
*****
    
```

Abbreviations: CEW = corn earworms;
 GSB = green stink bugs

From: Tyler Whaley, Agricultural Extension Agent, Wayne County

Light Trap Data from Wayne County

```

*****
                        Number of Adult Insects
                        *****
                                Goldsboro
                                *****
Date                CEW    GSB    BSB    HW
*****
July 7                -     2     -     -
July 9                -     1     -     -
July 11               -     1     -     -
July 14               -     2     -     -
July 16                4     6     2     -
July 18                1     2     1     -
July 21                5     5     1     2
*****
    
```

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

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

Light Trap Data from Wilson County

```

*****
                        Number of Adult Insects
                        *****
                                Kenly                Fountain                Pender's
                                *****                *****                *****
Date                CEW  ECB  GSB  BSB  HW  CEW  ECB  GSB  BSB  HW  CEW  ECB  GSB  BSB  HW
*****
July 23                1   -   1   0   -   12  0   -   -   1   -   -   -   -   -
July 25                -   -   -   -   -   20  5   -   -   7   -   -   -   -   -
July 26                3   0   -   -   1   -   -   -   -   -   -   -   -   -   -
July 28                3   0   -   -   3   5   -  29  5   3   -   -   -   -   -
July 30                2   -   0   0   -   -   -   -   -   -   1   -   0   0   -
August 1                3   -   0   0   -   6   -  10  0   -   9   -   0   0   -
August 4               22  -   0   0   -  25  -  16  3   -  31  -   6   2   5
August 6                -   -   -   -   -  18  -  23  6   -  45  -   4   0   1
August 7               11  -   0   0   -   -   -   -   -   -   -   -   -   -
August 8                3   -   0   0   -  17  -  19  0   -  18  -   6   0   -
August 11               4   -   1   0   -  35  -  19  0   -  64  -   4   2   -
August 13               4   -   1   0   -  10  -  29  3   -  16  -   2   0   -
August 15               5   -   0   0   -   -   -   -   -   -  24  -   0   0   -
August 16               -   -   -   -   -   6   -   2   0   -   -   -   -   -   -
August 18               6   -   1   0   -  21  -  75  6   -  26  -   5   4   3
August 20               9   -   0   0   -  13  -  35  1   -  76  -   2   0   -
August 22               3   -   2   0   -  13  -  46  3   -  32  -   0   0   6
August 25               8   -   0   0   -   2   -  13  1   -   3   -   0   0   4
August 27               -   -   -   -   -   0   -   0   0   -   3   -   0   0   2
August 28               3   -   0   0   -   -   -   -   -   -   -   -   -   -
    
```

August 29 1 - 0 0 - 2 - 8 2 - 6 - 0 0 -

Abbreviations: CEW = corn earworms; ECB = European corn borers;
GSB = green stink bugs; BSB = brown stink bugs; HW = hornworms

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.
