



North Carolina Pest News

Departments of Entomology and Plant Pathology

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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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FIELD AND FORAGE CROPS

From: Dominic Reising, Extension Entomologist

This Corn Earworm Flight May Bring Even More Pyrethroid Issues

Light trap counts for adult corn earworm moths are up across the state. The question is if this will mirror 2010 to 2011, bringing a heavy sustained flight and developing into treatable situations, or if this flight will develop like "normal" (someone remind me what a normal insect year is), laying eggs in soybeans, but producing few surviving mid or large-sized larvae.

Unfortunately, if this flight does develop into something significant, we could see even more problems with pyrethroid resistance. Our vial tests last month showed anywhere from 12 to 41% survivorship (article at <http://www.nccrops.com/2012/08/03/corn-earworm-alert-pyrethroid-failures-possible-in-soybeans/>). We consider anything over 30% survivorship to be resistant. Our most recent test shows 21% survivorship, but Dr. Ames Herbert's vial tests from Suffolk, Virginia are showing 50 to 58% survivorship. Because resistance is extremely spatially variable, even on a small-scale, you could spray a pyrethroid in one field and have great success. You could then move down the road and have a complete failure.

With this in mind, I recommend to scout fields and treat only if the threshold is reached. Do not apply an insurance insecticide "protectively." If this flight develops into significant infestations, your insurance treatments will not hold out. If this flight doesn't develop into anything, you've wasted your money. I also recommend that you save your pyrethroids for stink bugs and/or kudzu bugs. This year we are seeing very high densities of brown stink bugs. Soon corn will be harvested, as will cotton. Come October and November, I expect that we'll see our share of stink bugs. Brown stink bugs become more tolerant to pyrethroids over the season. We don't want to select for problems later on. Use Belt, Steward or Tracer for the worms until then.

Insecticide Efficacy for Corn Earworm, Beet Armyworm and Looper in Soybean

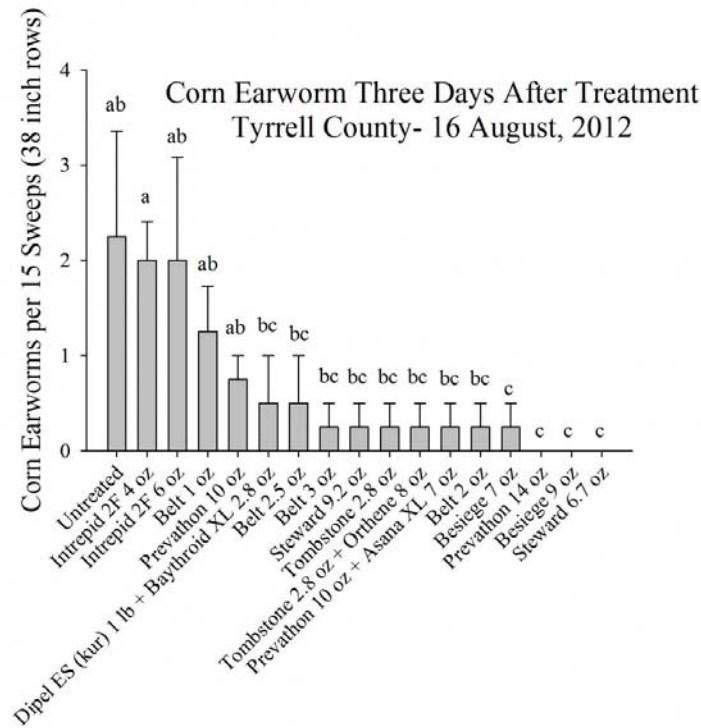
This experiment was applied on August 13 in Tyrrell County soybean. It was sprayed using a Hi-boy at 12.5 gallons to the acre. Lepidopteran pests present included corn earworm, beet armyworm and soybean looper. Contrast these results with those for corn earworm in 2010 and 2011 and for loopers in 2010:

<http://www.ces.ncsu.edu/plymouth/ent/RESULTS/SOYCEW2010.pdf>

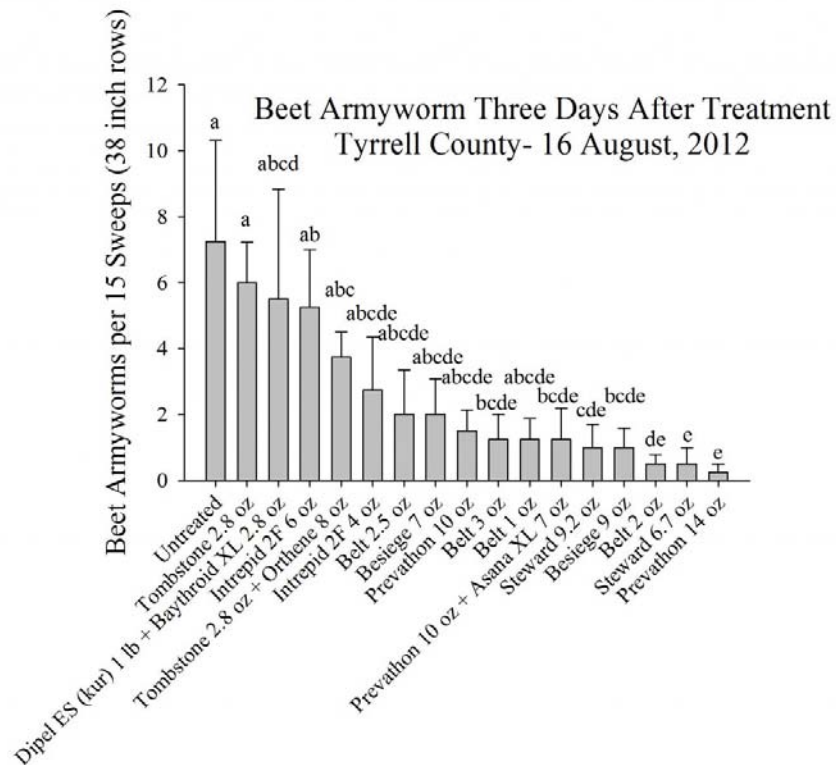
<http://www.ces.ncsu.edu/plymouth/ent/RESULTS/SOYCEW2011.pdf>

<http://www.ces.ncsu.edu/plymouth/ent/RESULTS/SOYLOOPER2010.pdf>

For corn earworm at this location, pyrethroids were working well (Baythroid and Tombstone). This will not be the case in every location (<http://www.nccrops.com/2012/08/03/corn-earworm-alert-pyrethroid-failures-possible-in-soybeans/>). The addition of chlorantraniliprole (Besiege - not registered in soybeans, but registered in corn and cotton) and *Bt* (Dipel) was not needed for pyrethroids to be effective. Dipel was also not needed for efficacy on corn earworm in 2011. Some chemistries other than pyrethroids worked well, such as chlorantraniliprole (Prevathon - not registered in soybeans, but registered in cotton; Release expected in 2013), flubendiamide (Belt) and indoxacard (Steward).



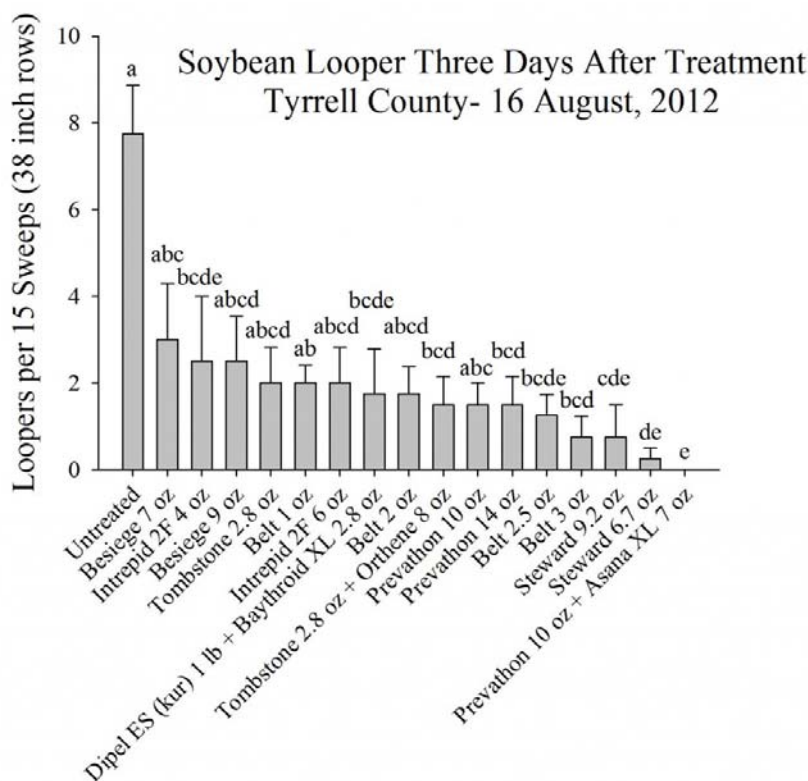
Corn earworms per 15 sweeps, three days after treatment. Image from D. Reisig.



Beet armyworms per 15 sweeps, three days after treatment. Image from D. Reisig.

Chemicals including chlorantraniliprole (Besiege and Prevathon), flubendiamide (Belt) and indoxacard (Steward) worked well. Although results from tests across the Southeast and Midsouth show that methoxyfenozide (Intrepid) works well, it did not control beet armyworm well in this experiment. It can be applied up to 16 ounces per acre and 8 ounces per acre is the highest recommended rate on the label for beet armyworm. Therefore, Intrepid may work better at these higher rates. Pyrethroids are not effective for managing beet armyworm.

Indoxacard (Steward) was the best insecticide for soybean looper. This is consistent with results from 2010. Results from chemicals including chlorantraniliprole (Besiege and Prevathon) were mixed. Pyrethroids have some efficacy on soybean looper, but will not control them alone. Often times a pyrethroid will flare looper populations by killing natural enemies that may have eaten them. Regardless, the addition of a pyrethroid to Prevathon seemed to help. Flubendiamide (Belt) worked well, albeit at higher rates, consistent with results from 2010. The recommended labeled rates for methoxyfenozide (Intrepid) and loopers are higher (10 to 16 ounces per acre) than those that were tested in this experiment (4 to 6 ounces per acre). It is likely that this chemical would have worked better at higher rates. The addition of Dipel to a pyrethroid did not improve soybean looper control.



Soybean loopers per 15 sweeps, three days after treatment. Image from D. Reisig.

From: Steve Koenning, Extension Plant Pathologist, and Keith Edmisten, Cotton Extension Specialist

Target Spot Found on Cotton in Eastern North Carolina

Target spot (*Corynespora cassicola*) has been verified on cotton in eastern North Carolina, and possibly in South Carolina. The geographic extent of the disease and any varietal resistance to *Corynespora* are

not known at this time. Warm humid conditions favor the development of this disease. Quadris and Headline are strobilurin type fungicides that can be applied to cotton and should provide control for ten days to two weeks. The efficacy of other fungicides on cotton for control of this disease is not known, but many triazole fungicides have not proved to be very effective against this disease.

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

Soybean Rust Update

Asiatic soybean rust has been confirmed a little closer to soybeans in the eastern part of our state with the announcement that rust has been confirmed in Tift County, Georgia. That puts rust approximately 300 miles from Charlotte, 535 miles from Elizabeth City, 360 miles from Fayetteville, 185 miles from Murphy, 405 miles from Raleigh, 470 miles from Washington, 375 miles from Wilmington and 370 miles from Winston-Salem, North Carolina.

We do not recommend spraying soybeans with a fungicide to control Asiatic soybean rust if they are not yet blooming, if they are blooming but rust has not been confirmed within 100 miles, or if full sized seeds are present in the top of the plant (stage R6). Such pre-bloom applications have seldom improved yields, and repeated applications will likely be needed to provide season-long protection against rust. The higher labeled rates tend to provide more days of prevention, and may thus require fewer applications. The triazole fungicides, alone or in combination with a strobilurin fungicide, will probably provide better prevention of rust than a strobilurin alone. Be sure to check the fungicide label to see how many times it may be used in a season.

An exception to the above recommendation is if Asiatic soybean rust is found **on the farm** before bloom, spraying a fungicide to the rest of the fields on the farm is recommended.

The current status of soybean rust in the U.S. can always be found at <http://sbr.ipmpipe.org/cgi-bin/sbr/public.cgi>.

FRUIT AND VEGETABLES

From: Mark Abney, Extension Entomologist

Scout Sweetpotato for Caterpillars Before Harvest

Armyworms and corn earworms can be serious pests of sweetpotato in the late summer and fall, and growers need to be alert for developing infestations as harvest time approaches. While the feeding these insects do on the leaves rarely results in economic damage, they can be severe pests if they are allowed to get into bins of harvested potatoes. Caterpillars that are present on the foliage at harvest will begin to feed on exposed roots if the roots are not removed from the field soon after they are dug. The insects will feed on the surface of the roots, but are also capable of boring into the sweetpotatoes where they can easily be transferred to bins. Once in the bin, larvae will continue to feed and damage potatoes. Control options for caterpillars in storage bins are basically non-existent.

Fortunately, caterpillars can be controlled effectively with insecticides in the field. It is important to note that infestations may not be uniform from field to field or even within a single field; fields should be scouted thoroughly before harvest to determine if caterpillars are present. Fall armyworm development may take from 14 to 30 days depending on temperature (development is more rapid at higher temperatures). The size and number of larvae present, and the time until harvest should be considered when making a control decision. Small larvae that are present now will likely still be in the field for another 10 to 20 days. If harvest is imminent, growers should select an insecticide with rapid knockdown and a short pre-harvest interval. Information regarding insect control in sweetpotato can be found in the *North Carolina Agricultural Chemicals Manual* and the following internet Extension publication:

<http://www4.ncsu.edu/~mrabney2/images/Sweetpotato%20insect%20management%20guide.10.11.2011%5B1%5D.pdf>

From: Emma Lookabaugh, Plant Disease and Insect Clinic, and Barbara Shew, Extension Plant Pathologist

Plant Carbuncles: Anthracnose on Banana Peppers

We recently received banana peppers that were covered with sunken dead spots. The lesions on the fruit are symptoms of a serious fungal disease caused by *Colletotrichum acutatum*, *C. coccodes* and other *Colletotrichum* species. Lesions can also be found on stems and leaves. *Colletotrichum acutatum* produces pink spores in a sticky matrix, which often appears to coat the lesions in pink or salmon-colored ooze. If you look at the lesions with a hand lens, you can see small black dots arranged in concentric rings. These are fruiting bodies that produce the spores. The name of this disease is anthracnose.



Anthracnose on banana pepper (Photo: L. Kaderabek).



Anthracnose lesions: Note salmon colored spores (Photo: L. Kaderabek).



Anthracnose lesions: Note concentric rings and black fruiting bodies (Photo: L. Kaderabek).

Several common plant diseases are called “anthracnose.” Unlike other tongue-twisting plant disease names, the “anthracnose” does not come from the name of the pathogen that causes it. Rather, it describes a disease with characteristic sunken lesions like those we saw on the pepper. This description is not very evident until we look at the Greek roots of the word “anthracnose.” It is derived from anthrax (carbuncle) + nosos (disease). Carbuncles are large boils - think of the Summoner in Canterbury Tales, who Chaucer describes as having a face covered with carbuncles, or of Prince Charles referring to a building proposed for a historic part of London as a “. . . monstrous carbuncle on the face of a much-loved and elegant friend.”

Anthracnose on pepper usually begins in “hotspots” in a field. The disease is favored by warm, wet weather. Because the masses of spores produced on the oozing lesions are perfectly adapted for dispersal in splashing rain or irrigation water, periods of rainy weather can lead to rapid spread and devastating losses.



Strawberry Anthracnose: Note salmon colored spores (Photo: E. Lookabaugh).



Strawberry Anthracnose: Note red marbling of the crown (Photo: E. Lookabaugh).

The pathogen survives on plant debris left behind from previous plantings or on other susceptible plant hosts. Although the pathogen can survive on infested plant debris, typically it does not overwinter more than one year in the absence of a host, and rotation is an effective control. Peppers should be rotated out of infested fields or gardens for at least two years. Other hosts to avoid include tomatoes, eggplants, other solanaceous plants, and strawberries. The fungus can be introduced from contaminated seed, so always start with disease-free plants and seed. Removing infected fruit early in the season reduces inoculum levels. After harvest, disk or cultivate to bury debris. All infected fruit should be removed and buried. Left over plant debris from hotspots should also be removed to reduce inoculum levels.

Resistance is available in some varieties of chili peppers, but not in bell peppers. Choose varieties with shorter ripening periods since the longer the fruit remains on the plant, the more likely it is to become infected. Once disease develops, anthracnose is very difficult to control. Fungicide applications should be used preventatively (at time of flowering) in fields with a history of anthracnose. For chemical control recommendations:

<http://www.ces.ncsu.edu/fletcher/programs/plantpath/pepper-spray-guide/index.html>

ORNAMENTALS AND TURF

From: Steve Frank, Extension Entomologist

Azalea Caterpillars

Azalea caterpillars, *Datana major*, are among our most attractive caterpillar species. They feed primarily on *Rhododendron* spp. and are most evident late in the summer. There is one generation of this pest each year. Adults lay eggs on the underside of azalea leaves where the small caterpillars feed gregariously. As they grow the caterpillars take on the coloration seen in the picture below. Unfortunately, by the time they are noticed azalea caterpillars can consume a lot of foliage and defoliate a shrub. Scout for these caterpillars by scanning shrubs for bare twigs then look closer to investigate. If you find a group of them just prune the branch out. In larger infestations or nurseries there are several insecticides active on caterpillars but any product works best on small stages.



Azalea caterpillars. Photo: Adam Dale, North Carolina State University.

Information can be found at <http://www.ces.ncsu.edu/depts/ent/notes/O&T/shrubs/note07/note07.html>.

INSECT TRAP DATA

From: Andrew Baucom, Agricultural Extension Agent, Union and Stanly Counties

Light Trap Data from Anson, Stanly and Union Counties

```

*****
                          Number of Adult Insects
*****
          Union S      Union N      Stanly N      Anson W
          *****      *****      *****      *****
Date      CEW  GR    CEW  GR    CEW  GR    CEW  GR
*****
July 16      4  21     -   -     -   -     -   -
July 18      3  20     -   -     -   -     14  3
July 20      6  15     -   -     0   3     11  8
July 23     11  28     -   -     0   3     38 11
July 25     23  35     -   -     1   2     42  6
July 27     25  23     -   -     2   2     54  4
July 30     14  11     -   -     1   0     31  8
August 1     17   5     -   -     0   0     27  0
August 3      9   7     -   -     0   0      5  0
August 6     12   4     -   -     6   1      8  2
August 8     18   3     -   -     1   1     31  0
August 10    20   5     -   -     0   2     27  2
August 13    75  17    279  0      4   2     34  2
August 15    55  10    289  0      1   0     30  1
August 17    70   7    195  0      2   0     34  0
August 20    58   6    260  0      3   1     42  0
August 22    33   3    263  0      2   0     39  0
August 23    32   4    120  0      2   0     30  0
*****
    
```

CEW = corn earworm moths; GR = green stink bugs

Union County-South; Stanly County-North; Anson County-West

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

Light Trap Data from Bertie County

```

*****
                          Indian
                          Windsor  Hexlena  Woods
                          *****  *****  *****
Date      BW  GSB  BW  GSB  BW  GBS
*****
July 22      10   9   -   -   -   -
July 23       3  14   -   -   -   -
July 25       1   3   -   -   -   -
    
```

July 29	25	3	-	-	-	-
July 30	18	0	-	-	2	0
July 31	15	2	-	-	-	-
August 1	10	0	11	0	3	0
August 2	8	0	10	0	0	0
August 3	7	2	9	0	-	-
August 4	-	-	-	-	12	0
August 5	29	2	-	-	5	0
August 6	23	4	-	-	-	-
August 7	20	2	13	0	-	-
August 8	17	0	4	0	-	-
August 9	-	-	5	0	-	-
August 10	62	8	-	-	5	-
August 11	17	3	-	-	-	-
August 12	14	6	7	0	-	-
August 13	23	2	-	-	9	0
August 14	32	1	-	-	-	-
August 15	62	8	5	0	37	0

BW = bollworms; GSB = green stink bugs

Indian Woods: Liberty Hall Farms

From: Mike Carroll, Agricultural Extension Agent, Craven County

Light Trap Data from Craven County

Number of Adult Insects

Date	BW	GSB	BSB	FAW	THW
July 9	2	2	0	2	0
July 12	2	2	1	0	0
July 16	0	0	0	0	0
July 20	41	3	2	0	1
July 23	25	3	0	0	2
July 25	34	2	0	0	1
July 26	40	2	0	0	0
July 27	106	2	1	2	0
July 30	48	2	1	2	0
August 1	55	0	0	2	1
August 3	37	0	1	0	0
August 6	42	0	1	0	1
August 8	31	1	0	0	0
August 10	37	2	0	0	0
August 13	22	1	0	0	1
August 15	44	2	0	0	0
August 16	31	0	0	0	1
August 17	32	0	0	2	0
August 20	141	0	0	4	0
August 22	35	0	0	2	0

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

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   4        11       1        1
July 13   0         5       1        0
July 20   0        30       6        0
July 23   0        47       9        1
July 26   0        41       3        0
July 27   0        57       7        2
July 30   1        63       1        0
August 2  0        42       4        0
August 6  0        15       3        3
August 9  1        27       3        0
August 13 6        80       3        0
August 15 1        39       2        1
August 20 7        96       3        0
*****

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

Light Trap Data from Edgecombe County

```

*****
                        Number of Adult Insects
*****
West Edgecombe      Coakley      Lawrence
*****
Date      CEW  BS  GS  CEW  BS  GS  CEW  BS  GS
*****
July 9    -   -  -   3   1  1   -   -  -
July 11   -   -  -   8   1  3   -   -  -
July 13   -   -  -   9   0  0   -   -  -
July 16   -   -  -  17  0  5   -   -  -
July 18   -   -  -   -   -  -   -   -  -
July 20   -   -  -  10  0  1   -   -  -

```

July 23	9	0	1	9	0	2	-	-	-
July 25	18	0	2	-	-	-	0	0	2
July 27	10	0	2	16	0	6	1	0	3
July 30	19	0	0	10	0	4	0	0	2
August 1	15	0	0	4	0	0	0	0	2
August 3	9	0	0	1	0	0	0	0	0
August 6	17	0	1	4	0	2	0	0	0
August 8	7	0	1	5	0	2	0	0	4
August 10	8	0	1	4	0	2	1	0	0
August 13	12	0	0	23	0	0	0	0	1
August 15	19	0	0	14	0	3	0	0	0
August 17	15	0	0	-	-	-	0	0	0
August 20	65	0	0	68	0	0	-	-	-

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

From: Upper Coastal Plains Research Station, Edgecombe County

**Light Trap Data from Edgecombe County -
 Upper Coastal Plains Research Station**

Date	CEW
July 24	3
July 25	2
July 31	19
August 1	3
August 2	1
August 7	16
August 8	3

Abbreviations: CEW = corn earworms

Locations: South East of Rocky Mount

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

Light Trap Data from Halifax County

Date	Hobgood		Weldon		Dawson Crossroad	
	CEW	STB	CEW	STB	CEW	STB
July 23	0	2	-	-	-	-
July 30	0	2	15	1	-	-
August 3	0	0	2	0	4	0

August 6	0	0	5	0	33	0
August 8	-	-	-	-	-	-
August 10	-	-	-	-	-	-
August 13	0	1	0	0	101	-
August 15	-	-	48	0	75	0

Abbreviations: CEW = corn earworms; STB = stink bugs

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 22	0	2	0	0	0	0	0	0
June 23	0	0	0	1	0	0	0	0
June 24	0	3	1	0	1	0	0	0
June 25	0	4	0	0	2	0	0	0
June 26	0	2	0	0	2	0	0	0
June 27	0	1	0	0	0	0	0	1
June 28	0	0	0	0	0	0	0	0
June 29	0	2	0	0	0	0	0	0
June 30	0	1	0	0	1	0	0	0

July

Number of Adult Insects

Date	HW	CEW	ECB	AW	AWC	GSB	BSB	TBW
July 1	0	2	0	1	1	0	0	0
July 2	0	2	0	1	1	0	0	0
July 3	0	1	0	0	0	0	0	0
July 4	1	0	1	2	1	0	0	0
July 5	----- Light unplugged -----							
July 6	----- Light unplugged -----							
July 7	0	0	0	3	6	1	0	1
July 8	0	0	0	2	4	0	0	0
July 9	0	1	0	5	3	0	1	0
July 10	0	0	0	2	1	0	0	0
July 11	0	2	0	1	1	0	0	0
July 12	0	1	0	4	7	0	0	0
July 13	2	4	0	13	4	0	0	0
July 14	----- Light unplugged -----							
July 15	0	7	0	11	6	1	0	0
July 16	0	6	0	6	2	1	1	1
July 17	0	4	1	2	4	0	2	0

July 18	0	8	0	1	3	2	1	0
July 19	0	5	0	4	3	0	0	1
July 20	0	5	0	0	0	0	0	0
July 21	0	11	0	1	3	1	0	0
July 22	0	36	0	0	0	0	0	1
July 23	0	25	0	1	3	2	0	3
July 24	0	41	0	1	4	4	0	0
July 25	0	29	0	1	7	0	0	0
July 26	1	55	1	1	2	3	0	4
July 27	0	16	0	6	1	1	2	0
July 28	0	35	0	5	2	2	4	0
July 29	0	32	0	2	6	0	0	0
July 30	0	20	0	0	2	0	0	0
July 31	0	17	0	0	1	0	0	0

August

Number of Adult Insects

Date	HW	CEW	ECB	AW	AWC	GSB	BSB	TBW
August 1	0	15	0	1	1	0	0	0
August 2	0	5	0	1	0	0	0	0
August 3	0	12	0	0	2	0	0	1
August 4	0	7	0	0	2	2	0	0
August 5	0	14	0	0	0	2	0	0
August 6	0	9	0	3	1	2	0	1
August 7	0	2	0	0	0	4	0	0
August 8	0	1	0	1	1	1	0	0
August 9	0	4	0	1	1	2	1	1
August 10	0	2	0	1	1	11	1	0
August 11	0	2	0	0	1	0	0	0
August 12	0	3	0	0	1	0	1	0
August 13	1	8	0	4	0	5	8	0
August 14	0	5	0	4	1	8	1	0
August 15	0	5	1	2	2	6	1	0
August 16	1	17	0	3	2	2	0	0
August 17	0	17	0	1	3	2	0	0
August 18	0	36	0	2	0	1	0	1
August 19	0	34	0	1	1	0	0	0
August 20	0	15	0	2	0	0	0	0
August 21	0	42	0	2	0	0	0	0
August 22	2	57	0	6	1	1	0	1
August 23	0	68	1	4	0	0	0	1
August 24	2	44	0	5	1	0	0	2

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

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*****
                                Number of Adult Insects
*****
Woodland      Conway      Galatia      Seaboard      Gaston      W. Gaston      Jackson
*****      *****      *****      *****      *****      *****      *****
Date      CEW GR BR      CEW GR BR      CEW GR BR      CEW GR BR      CEW GR BR      CEW GR BR      CEW GR BR
*****
July 18      - - -      - - -      - - -      - - -      - - -      - - -      9 16 -
July 20      - - -      - - -      - - -      - - -      - - -      - - -      30 14 -
July 23      - - -      - - -      26 24 0      75 0 0      - - -      - - -      14 11 4
July 25      - - -      - - -      26 3 0      44 6 0      - - -      - - -      37 8 3
July 27      - - -      - - -      30 4 0      10 5 0      12 0 0      - - -      24 16 0
July 30      - - -      - - -      29 1 0      25 3 0      11 0 0      - - -      17 10 1
August 1      - - -      - - -      24 1 0      22 4 0      2 0 1      - - -      5 1 0
August 3      - - -      - - -      6 - -      12 0 0      - - -      - - -      6 1 0
August 5      - - -      - - -      7 0 0      12 0 0      - - -      - - -      58 3 0
August 7      1 4 0      - - -      7 0 0      14 7 0      - - -      - - -      58 2 0
August 10     2 0 0      - - -      4 0 0      12 8 0      - - -      - - -      64 8 0
August 13     2 0 0      5 2 0      19 0 0      60 5 0      - - -      - - -      84 2 0
August 15     1 0 0      16 4 0      9 0 0      45 6 0      - - -      - - -      70 3 0
August 17     - - -      15 4 0      8 0 0      20 0 0      - - -      - - -      37 3 0
August 20     - - -      10 3 0      27 5 0      35 2 0      - - -      - - -      102 4 0
August 22     0 0 0      18 2 0      8 0 0      44 0 0      - - -      - - -      84 3 0
August 24     1 0 0      14 2 0      49 3 0      - - -      - - -      - - -      69 4 0
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CEW = corn earworms; GR = green stink bugs; BR = brown stink bugs

Locations: Woodland, Conway, Galatia, Seaboard, Gaston, West Gaston and Jackson
 Monitored by: L. Culpepper, K. Edwards, Ben Harris, T. Flythe, D. Grant
 and B. Bryant

From: Mac Malloy, Agricultural Extension Agent, Robeson County

Light Trap Data from Robeson County

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*****
                                Number of Adult Insects
*****
Date      THW      TBW      GSB      BSB      FAW      BW
*****
July 25      2      -      1      1      -      -
July 27      -      2      5      1      -      5
July 30      -      -      -      -      -      2
August 1      -      -      -      -      -      5
August 3      -      -      -      -      -      -
August 6      -      1      1      2      1      2
August 8      -      -      -      -      -      1
August 10     1      -      2      6      -      -
August 13     -      -      -      2      1      1
    
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August 15	-	1	3	4	-	11
August 17	1	1	2	-	3	15
August 20	1	-	5	-	2	24
August 22	1	-	3	1	1	31
August 24	2	-	1	1	-	28

THW = tobacco hornworms; TBW = tobacco budworms; GSB = green stick bugs;
 BSB = brown stink bugs; FAW = fall armyworms; BW = bollworms

Location: Lumber Bridge; Collected by: Forbis Farms

From: Scotland County Extension Center

Light Trap Data from Scotland County

Number of Adult Insects

Date	Gibson				Johns				Laurinburg			
	BW	GSB	BSB	FAW	BW	GSB	BSB	FAW	BW	GSB	BSB	FAW
July 18	27	9	0	0	-	-	-	-	-	-	-	-
July 20	52	10	2	0	-	-	-	-	54	3	0	0
July 23	54	13	1	0	436	7	0	0	89	3	0	0
July 25	16	3	0	0	189	4	1	0	21	2	1	0
July 27	34	15	0	0	173	4	1	0	37	2	1	0
July 30	21	3	0	0	85	3	0	0	26	0	1	0
Aug. 1	18	1	0	0	35	0	0	0	18	0	0	0
Aug. 3	21	2	1	0	10	0	0	0	7	0	0	0
Aug. 6	30	4	0	0	-	-	-	-	17	0	1	0
Aug. 8	48	2	0	0	63	0	0	0	28	0	0	0
Aug. 10	86	8	3	0	-	-	-	-	33	1	0	0
Aug. 13	367	4	0	0	493	3	1	0	117	1	1	0
Aug. 15	138	5	0	0	297	2	1	0	304	0	0	0
Aug. 17	52	0	0	0	220	0	2	0	38	0	0	0
Aug. 20	132	1	0	0	312	1	0	0	308	1	0	0
Aug. 22	101	1	0	0	472	2	0	0	252	0	0	0

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

From: John Sanderson, Agricultural Extension Agent, Wayne County

Light Trap Data from Wayne County

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*****
                Number of Adult Insects
                *****
                    Goldsboro
                *****
Date            GSB    BSB    CEW    HW
*****
July 4          0      4      0      0
July 6          1      3      0      1
July 9          3      6      0      4
July 11         1      0      3      5
July 13         0      0      2      8
July 16         8      1     27      1
July 18         1      1     15      1
July 20         4      2      7      1
July 25         3      2     26      0
July 27         9      6     37      0
July 30         2      2     59      0
August 1        4     11     13      0
August 3        3      2      8      0
August 6        4      3      7      0
August 8        2      1     14      0
August 10       16      7      4      1
August 13       13      4     66      6
August 15       8      7     74      3
August 17       3      1     61      3
August 20       2      1     98      6
August 22       3      0     54      2
August 24       1      1     57      2
*****
    
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GSB = green stink bugs; BSB = brown stink bugs; CEW = corn earworms; HW = hornworms

Cooperator: Gerald and Willie Howell Farm (Goldsboro)

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

Light Trap Data from Wilson County

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*****
                Number of Adult Insects
                *****
                Kenly          Fountain          Pender's
                *****          *****          *****
Date            CEW  GSB    CEW  GSB    CEW  GSB
*****
July 16         5   0      -   -      -   -
July 18         3   2      -   -      -   -
July 20         2   3      5   1      -   -
    
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July 23	7	4	18	11	-	-
July 25	5	9	8*	3	0	0
July 27	6	11	14	11	2	0
July 30	14	2	19	8	2	0
August 1	3	0	8	3	1	0
August 3	1	0	8	2	0	0
August 6	2	2	17	8	0	0
August 8	3	1	13	1	3	0
August 10	1	2	7	2	2	0
August 13	4	2	7	3	4	0
August 15	7	0	17	5	5	0
August 17	11	0	31	0	0	0
August 20	19	0	41	5	2	0
August 22	21	0	97	2	10	0
August 24	10	3	83	9	5	0

CEW = corn earworms; GSB = green stink bugs

*= problems with blacklight bulb

Locations: Kenly, Fountain and Pender's Cross Roads
Monitored by: Norman Harrell, Barbara Smith and Adam Gardner

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.