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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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In This Week's Issue . . .

See current and archived issues of the *North Carolina Pest News* on the Internet at: http://ipm.ncsu.edu/current_ipm/pest_news.html

ANNOUNCEMENTS AND GENERAL INFORMATION

Final Issue of *North Carolina Pest News* for 2012

This will be the final issue of the *North Carolina Pest News* for 2012. The editor would like to thank all of the Extension specialists and county agents and directors that contributed articles and/or insect trap data for the newsletter this season.

If you have any comments, criticisms or suggestions regarding the content or format of the newsletter, please take time to complete our online survey of *North Carolina Pest News* readers (see article below for instructions).

Thank you for your interest in the *North Carolina Pest News*. The newsletter will resume in April of 2013. Meanwhile, individual articles on insect and disease pests in North Carolina will be provided as *Pest Alerts* via electronic mail and the Internet at http://ipm.ncsu.edu/current_ipm/palert99.html.

Reminder of Online Survey of *North Carolina Pest News* Readers

If you have already completed the online survey of *North Carolina Pest News* readers regarding the use and usefulness of the newsletter, then please accept our appreciation.

If you have not taken the opportunity to complete the survey, please take a few minutes to do so. The editor and authors of the *North Carolina Pest News* plan to use the information collected through the survey to document the usefulness of the newsletter to our readers and improve its quality in the future. The information in the survey is anonymous and confidential. You only need to complete the survey one time.

To complete the online survey, go to the following web page: http://www.ipmpipe.org/survey_ncpn/

Enter the following password: pestnews
Click on the login button.

Once you have accessed the online survey questionnaire, please enter your answers to each question. You can change your answers by clicking on another selection. Once you have entered and are satisfied with your answers to the survey questions, click on the "Submit" button at the end of the questionnaire. Once you have clicked on the "Submit" button, your answers will be entered into a database with the answers of others that have completed the survey.

You can complete the survey online until Friday, September 28, when the site will be taken offline.

Thank you in advance for spending your valuable time completing the online survey and your interest in the *North Carolina Pest News*.

FIELD AND FORAGE CROPS

From: Jack Bacheler, Extension Entomologist

Final Cotton Insect Report

Hopefully, current cotton insect-related problems are down to the last few late maturing fields. Although this will be the last *North Carolina Pest News* article of 2012, we (and many others) will continue to provide blog posts at Dominic Reisig's and Hannah Burrack's *NC Field Crops Blog* (http://www.nccrops.com/) throughout the year as issues warrant.

We'll report soon on the results of our damaged boll survey and find out how bollworms and stink bugs treated our cotton producers in 2012. With this survey, every year brings some surprises. Last year I had evaluated several counties and found very little (sometimes 0%) stink bug damage. Just when I was beginning to think stink bugs were giving everyone a break, I encountered two consecutive cotton fields with 43% and 18% boll damage. This was simply an example of two late maturing, wet-natured cotton fields that were apparently not scouted for stink bugs. Fortunately, stink bug damage to Bollgard II and WideStrike cotton averaged less than 3% across the state in 2011. At this point, yield prospects generally look excellent in many areas of the state, *pending the continuation of a hurricane-free fall*.

Cotton Field Day a Rousing Success

By almost any measure - the weather, the attendance, the enthusiasm, the research information provided and the evening meal - the *2012 Cotton Field Day* was a hit, with nearly 300 in attendance. Some sort of extra effort awards should go to Art Bradley (Edgecombe County Extension), the Upper Coastal Plain Research Station personnel, and BB Griffin and David Parrish of the NC Cotton Producers Association for insuring that this field day well-orchestrated and productive.

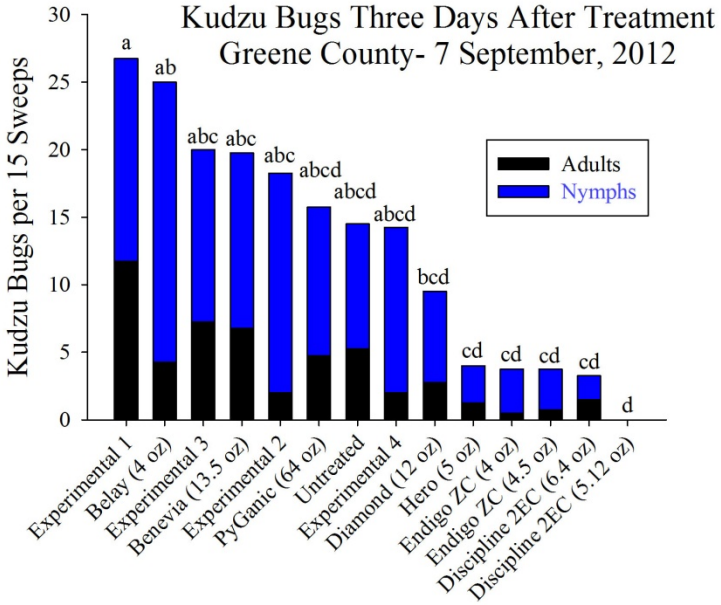
Where does this sign go? Image from Jack Bacheler.

Insect, disease and variety tour stop. Image from Dan Mott.

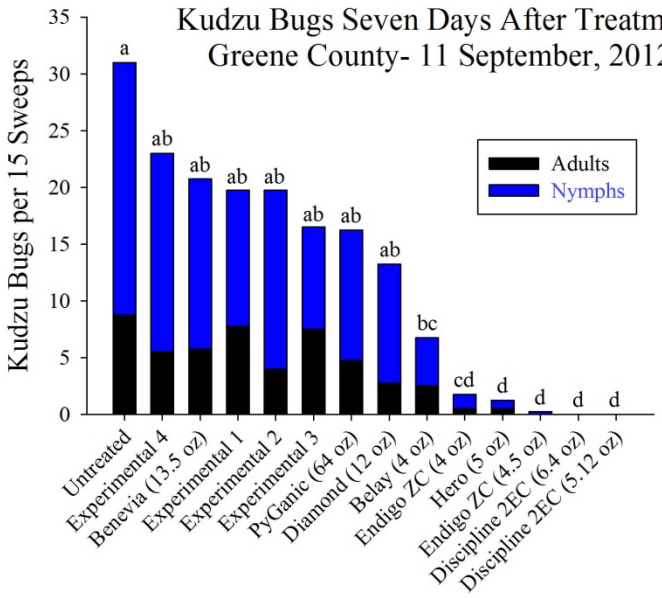
From: Dominic Reisig, Extension Entomologist

Kudzu Bug Insecticide Update

We now have several screening trials in-process or completed for kudzu bug in North Carolina soybeans. One test, performed by Jack Bacheler, was in the Piedmont (Randolph County), while two tests, one performed by Dominic Reisig and one by Jack Bacheler, were in the Coastal Plain (Greene County). In general our results align with those from Georgia and South Carolina. Pyrethroids and pre-mix products containing pyrethroids are very effective. Remember to stay away from anything with cyfluthrin. Some of these products look good at reduced rates. The results from one Greene County test are presented for three and seven days after treatment.



Knockdown was good with the synthetic pyrethroids and pre-mixes with pyrethroids. Slightly reduced rates of Endigo and bifenthrin were also effective at these population levels. Remember that the threshold is one nymph per sweep. Image from D. Reisig.



Products that were effective three days after treatment held to seven days after treatment. Although initial knockdown was poor with Belay, it was moderately effective at a week after treatment (78% control compared to the check). Image from D. Reisig.

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

Asiatic Soybean Rust Update: September 14, 2012

Asiatic soybean rust has been confirmed in **Robeson** and **Johnston counties, North Carolina**. Between this find, and the confirmation of rust in Robeson County, North Carolina, and in Union County, Georgia, this puts rust approximately 105 miles from Charlotte, 140 miles from Elizabeth City, 15 miles from Fayetteville, 15 miles from Murphy, 35 miles from Raleigh, 80 miles from Washington, 75 miles from Wilmington, and 80 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.

Soybeans that have just reached full bloom (stage R2) typically have 65 days until they're safe from rust or frost (stage R7) if they are full-season soybeans, or closer to 55 days if they are double-crop soybeans. If they have small pods in the top of the plants (stage R3), they have 55 and 47 days, respectively, to R7. With full sized pods in the top of the plants (stage R4), they have 45 and 38 days, respectively, until R7. From stage R5 (small seeds in the top of the plant) they typically have 35 and 30 days, respectively. From stage R6 (full sized seeds in the top of the plants), they typically have 20 and 17 days, respectively.

Rust will typically take 10 to 20 days from initial infection to develop to detectable levels. It will take another 7 to 14 days to spread to other leaves on the same plant, and another 10 days to cause significant defoliation." This assumes optimal conditions for rust, "65 to 85 degrees, and either overcast or rainfall" through much of this period. This is not common in North Carolina in September and October but has and can occur.

The rust prediction models say there was a fair to good chance rust spores were deposited in North Carolina this weekend. If so, we expect to detect rust in about three weeks in sentinel plots, which would be about October 1. It will likely take another two weeks with optimal conditions for rust to increase to damaging levels.

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

ORNAMENTALS AND TURF

From: Steve Frank, Extension Entomologist

Fall Pest Cleanup

Fall is a good time for nurseries and landscapers to consider dormant oil applications for spider mite and scale management. It is also a great time to scout for these critters. After leaves drop you can get good coverage of trunks and branches where scales and mites are overwintering. Scouting is also easy in the fall because scales are often overwintering in their adult, or near adult stages, which are (a little) larger and easier to see. Without leaves it is also much easier to see the scales. Trees that have scales should be examined in spring to determine if live scales are still present and if further treatment is necessary. The squish test will give you a good idea if scales are alive. If you squish some scales with your finger nail and juice comes out they are alive. If it is dry and crumbly they are dead. Most horticultural oils have a low and high rate listed that may even indicate that they should be used on growing or dormant trees respectively. On dormant deciduous trees you can safely use the high rate.

As a side note, 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.

Juvenile wax scales on hemlock in a landscape. Photo: S. D. Frank.

Rose Bud Caterpillars

This is not a species of caterpillar but several generalists that will feed on rose plants and particularly the buds. Tobacco bud worm 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.

Noctuid caterpillar feeding on a rose bud. Note damage to bud on the right. Photo: S. D. Frank.

There are many incidental and beautiful caterpillars out now such as the American dagger moth. I have catalogued some pictures and information on my blog: http://ecoipm.com/

General caterpillar information:
http://www.ces.ncsu.edu/depts/ent/notes/Ornamentals_and_Turf/shrubs/note07/note07.html

From: David Orr, Extension Entomologist

Soldier Beetles on Flowers

The margined leatherback (*Chauliognathus marginatus*) is one of two soldier beetles commonly seen feeding on nectar and pollen on garden flowers in the late summer and early fall. Sometimes they can be quite numerous and cause concern for gardeners. However, they do not damage plants and can be considered beneficial. The adult of this beetle can be predatory on small insects such as aphids, while the larvae feed on ground-dwelling invertebrates such as slugs and insects. Occasionally, the larvae can be found inside of damaged produce such as tomatoes that have split from rainfall, or been opened up by caterpillars.

Adult. Photo: John Meyer, North Carolina State University.

Larva. Photo: Patrick Coin (2004).

Adult margined soldier beetles have somewhat flattened bodies and soft, leathery wing covers rather than the hard covers found in many beetles. They can appear clumsy as they 'stumble' around flower heads on their long legs looking for both food and mates. Margined soldier beetle larvae look velvety and soft, and their legs are small and hard to see. This can make them appear similar to caterpillars. However, if you watch them carefully they have no legs near their rear end so they move by dragging their bodies along using the 3 pairs of legs under their thorax. Caterpillars, on the other hand, use either an "inchworm" or slinky type movement to lift up and bring their back legs closer to the front ones.

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
August 27	21	3	270	0	2	0	31	0
August 29	22	2	80	0	1	0	32	0
August 31	18	1	70	0	9	1	18	2
Sept. 3	19	5	-	-	0	0	19	3
Sept. 5	18	4	-	-	1	0	22	1
Sept. 7	13	6	-	-	0	0	20	1

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

	Windsor		Hexlena		Indian 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
August 27	70	1	0	2	0
August 31	12	0	0	0	0
September 4	10	1	0	0	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
August 22	5	56	2	0
August 24	3	85	1	0
August 27	1	62	3	1
August 29	1	51	2	0
August 31	0	26	2	1
September 4	0	25	4	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: 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	1	0	2
August 22	36	0	0	37	0	0	13	0	1
August 24	28	0	0	28	0	1	-	-	-
August 27	25	0	0	7	0	1	-	-	-
August 29	22	0	0	2	0	1	-	-	-
August 31	9	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

	Hobgood		Weldon		Dawson Crossroad	
Date	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
August 25	0	41	1	4	0	0	0	0
August 26	0	21	0	4	0	0	0	1
August 27	0	33	0	0	0	0	2	0
August 28	0	25	0	0	0	0	0	0
August 29	0	38	0	0	1	0	0	0
August 30	0	2	0	1	0	1	0	0
August 31	0	16	0	0	1	0	0	0

September

	Number of Adult Insects						
Date	HW	CEW	ECB	AW	AWC	GSB	BSB	TBW
September 1	0	15	0	0	0	0	0	0
September 2	1	26	0	0	0	2	0	0
September 3	0	2	0	1	0	1	0	0
September 4	0	9	0	1	1	1	0	0
September 5	0	11	1	1	0	0	0	0

September 6	0	6	0	1	1	0	0	0
September 7	1	4	0	3	2	0	0	2
September 8	0	6	0	0	0	0	0	0
September 9	0	2	0	1	2	0	0	0
September 10	0	0	0	0	3	0	0	0
September 11	0	2	0	1	1	0	0	0
September 12	0	1	0	0	8	0	0	0
September 13	0	0	1	0	3	0	0	0
September 14	1	0	0	0	0	0	0	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																				
	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	65	2	0	-	-	-	-	-	-	69	4	0
August 27	5	0	0	15	4	0	24	2	0	25	0	0	-	-	-	-	-	-	84	1	0
August 29	1	1	0	18	1	0	69	11	0	17	2	0	-	-	-	-	-	-	294	7	3
August 31	-	-	-	12	0	0	35	0	0	31	0	0	-	-	-	-	-	-	142	2	2

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

	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
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											
	Gibson				Johns				Laurinburg			
Date	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
Aug. 24	72	0	0	0	-	-	-	-	268	0	1	0
Aug. 27	24	0	0	0	172	0	0	0	21	0	0	0
Aug. 29	49	2	0	0	-	-	-	-	66	1	0	0
Aug. 31	54	0	0	0	127	0	0	0	39	0	1	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

	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
August 27	1	-	18	2
August 29	3	1	23	2
August 31	2	1	11	0
September 3	7	2	10	1

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

	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	-	-
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
August 27	8	3	61	0	4	0
August 29	7	2	61	4	3	0
August 31	2	0	39	4	2	0
September 3	7	2	32	2	1	0
September 5	9	1	28	4	7	0
September 7	3	1	23	0	2	0
September 10	5	2	9	2	8	0
September 12	2	0	1	0	9	0
September 14	3	0	0	0	2	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.