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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 . . .

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FIELD AND FORAGE CROPS

From: Jack Bacheler, Extension Entomologist

Cotton Susceptibility to Insect Damage Down

Last weekend's rainfall helped many cotton producers, but it still left others high and dry. Light trap counts of bollworm moths continue to increase, perhaps somewhat aided by recent rainfall. However, our projected 7-day

forecast for much of the state generally looks like a continuation of our hot, dry conditions. This will certainly be an early-maturing crop overall.

Cotton is less susceptible to insect damage. I realize exceptions are probably common, but many areas now have cotton that has been "cut out" for several weeks, with a very few fields even beginning to open. Many of the other fields have either greatly diminished blooming or have stopped blooming altogether. In these above situations, remember that cotton is quickly becoming unattractive to both bollworms and stink bugs. Even in rapidly growing cotton with plenty of blooms and good moisture levels, the seventh or eighth week of bloom signals the raising of the internal damaged boll threshold for stink bugs to the 20 to 30% range, making the need to treat less likely. In many of our cotton fields, bolls are now too mature to be damaged by stink bugs.

Light trap counts across the state continue to rise, but levels so far are below historical averages for this time of year, with only a few light traps exceeding 100 moths per two-night catch. Based on our present moth levels, I would expect light trap counts to climb for approximately a week or two in our central and upper cotton production areas, probably having more of an impact on soybean than cotton.

Perhaps our most significant task during the next few days and weeks, will be to cull out cotton fields that are no longer susceptible to insect damage, and place a higher scouting priority on those fields that still contain susceptible bolls. As a general rule of thumb, fields that are no longer blooming will not likely be attractive to or damaged by insects.

We had had some recent calls about **fall armyworms** feeding on pastures, but none on cotton. The fall armyworm race that feeds on pastures (the grass race) is different than the one that can damage cotton. Additionally, both *Bollgard II* and *WideStrike* cotton lines are quite resistant to fall and beet armyworm damage, so we're probably safe from these species. The cases that I have seen fall and beet armyworms and European corn borers on *WideStrike* or *Bollgard II* cotton at economically-damaging levels in parts of cotton fields was almost always when a particular host weed was burned down late in the spring and the half-grown larvae were able to transfer to the *Bt* cotton. Even these cases are rare.

Additional rainfall in the coming days or weeks would be welcome to help fill out bolls that are generally on the small side this year due to our hot and dry conditions.

From: Dominic Reisig, Extension Entomologist

Kudzu Bugs on Soybeans in the North Carolina Coastal Plain: Insecticide Recommendations

Kudzu bugs have been reported on soybeans in Duplin County, North Carolina by Curtis Fountain, the Duplin County Cooperative Extension agent. This is the first report of kudzu bugs on soybeans in North Carolina's Coastal Plain and the first instance where kudzu bugs have initially been found on soybeans in a county before an alternate host. The general pattern of finding has centered around an initial find on kudzu, or wisteria, followed by a host shift to soybeans.

This insect seems to find flowering soybeans attractive, but will still migrate to and persist on the plants through the reproductive stages. Although it is a stem and leaf feeder, it can still cause significant yield loss. The treatment threshold is 3 to 5 kudzu bugs per plant or 1 kudzu bug per sweep (e.g., 15 kudzu

bugs in a 15 sweep sample or 25 kudzu bugs in a 25 sweep sample). More information on treatment thresholds and kudzu bug photographs can be found at http://www.nccrops.com/?p=80.

The best insecticide treatment options are a pyrethroid or acephate. Consider the pest complex when making a treatment decision. Tolerance to pyrethroid insecticides has been documented in the state for pests such as the corn earworm/tobacco budworm complex, bean leaf beetles, soybean loopers and brown stink bugs. With the specter of these pests on the horizon, you will want to scout intensively before making a treatment decision. Here are some options to consider if you have to spray for kudzu bugs in the mid-season:

- Kudzu bugs and corn earworms/tobacco budworms only. If corn earworms are present in significant amounts, **DO NOT** use a pyrethroid without mixing 0.5 pounds of acephate or an alternative chemistry targeted for lepidopteran pests (such as Belt, Larvin, Steward, or Tracer). Do not use a straight neonicotinoid (e.g., Belay) or any insecticide mixed with a neonicotinoid when kudzu bugs are present (e.g., Endigo, Leverage 360, etc.).

- Kudzu bugs and bean leaf beetles only. If bean leaf beetles are present and you have not used a pyrethroid for bean leaf beetles in the past, use a pyrethroid. If you have been using a pyrethroid for bean leaf beetles, use acephate.

- Kudzu bugs and green stink bugs only. Use a pyrethroid at the highest labeled rate.

- Kudzu bugs and brown stink bugs only. Use acephate at the highest labeled rate.

INSECT TRAP DATA

From: Richard Melton, County Extension Director, Union County

Light Trap Data from Anson, Stanly and Union Counties

	Number of Adult Insects											
	Anson			Union S			Union N			Stanly		
Date	CEW	GR	BR	CEW	GR	BR	CEW	GR	BR	CEW	GR	BR
July 16	-	-	-	15	-	-	-	-	-	-	-	-
July 20	-	-	-	43	-	-	-	-	-	-	-	-
July 22	-	-	-	126	-	-	-	-	-	1	2	2
July 25	-	-	-	75	9	-	-	-	-	2	1	2
July 27	43	14	-	68	12	-	-	-	-	1	-	-

CEW = corn earworm moths; GR = green stink bugs; BR = brown stink bugs
Union County South – Marshville; Union County North - Unionville

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

Light Trap Data from Bertie County

	Windsor		Woodard		Hexlena		Colerain	
Date	Moths	GSB	Moths	GSB	Moths	GSB	Moths	GSB
July 20	4	4	15	3	0	1	-	-
July 21	4	0	25	1	-	-	-	-
July 22	10	1	12	2	9	5	-	-
July 23	37	0	-	-	-	-	-	-
July 24	-	-	-	-	-	-	-	-
July 25	70	1	19	2	19	4	-	-
July 26	15	0	7	0	12	0	25	0
July 27	20	2	19	1	17	0	-	-
July 28	39	0	34	4	15	1	-	-
July 29	36	6	27	4	10	2	-	-
July 30	41	0	-	-	-	-	-	-
July 31	-	-	-	-	-	-	-	-
August 1	65	0	42	2	-	-	33	-
August 2	18	2	32	7	6	2	18	-
August 3	19	4	32	5	3	10	13	0
August 4	12	0	23	7	1	5	25	0
August 5	10	3	24	1	5	0	-	-

Moths = Bollworm moths; GSB = Green 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	LOOP
July 5	1	1	-	2	-	-	-	-	-
July 11	-	-	3	3	1	-	-	-	-
July 18	-	-	23	-	-	4	-	-	-
July 22	-	-	38	1	1	-	-	-	-
July 25	-	-	75	-	-	-	-	-	-
July 29	2	-	91	1	1	-	-	-	-
August 2	-	-	85	-	1	-	-	-	-
August 5	1	-	62	-	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; LOOP = Looper

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 7	-------- trap set up ---------			
July 9	0	1	3	0
July 11	0	6	8	1
July 13	0	4	26	3
July 15	0	4	1	0
July 18	0	5	6	0
July 20	0	16	16	0
July 22	0	24	12	1
July 25	0	37	7	0
July 29	0	127	22	0
August 1	0	91	11	0
August 3	0	35	3	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 8	-	-	-	0	0	0	-	-	-
July 11	0	0	0	0	1	3	-	-	-
July 13	0	0	0	0	1	1	4	0	6
July 15	0	0	0	0	0	0	0	0	4
July 18	0	0	0	3	0	0	0	0	0
July 20	0	0	0	3	0	2	2	0	4
July 22	0	0	2	4	0	0	1	0	2
July 25	1	0	7	14	0	0	0	0	4
July 27	5	0	5	22	0	0	0	0	1
July 29	4	0	1	26	0	1	0	0	1

August 1	10	0	3	41	0	2	1	0	1
August 3	6	0	3	19	0	2	0	0	0

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

From: Alan A. Harper, Lenoir County

Light Trap Data from Lenoir County

	Number of Adult Insects						
Date	HW	CEW	ECB	AW	AWC	GSB	BSB	TBW
July 18	0	9	0	0	1	0	0	0
July 19	0	1	2	0	0	1	0	0
July 20	0	5	0	0	0	2	0	0
July 21	0	20	1	0	2	2	0	1
July 22	0	15	0	0	0	4	0	0
July 23	0	8	0	0	3	1	0	0
July 24	0	4	0	0	0	0	0	0
July 25	0	8	0	0	1	0	0	0
July 26	0	11	0	0	2	0	0	0
July 27	0	16	0	0	0	0	0	1
July 28	0	24	0	0	1	2	0	2
July 29	0	13	0	0	3	1	0	0
July 30	0	34	0	1	2	2	0	0
July 31	0	29	0	1	2	2	0	0
August 1	1	36	1	0	3	1	0	0
August 2	0	17	0	1	2	4	0	0
August 3	0	23	1	0	2	0	0	0
August 4	0	20	0	1	3	0	0	0
August 5	0	25	0	3	3	3	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: Al Cochran, County Extension Director, Martin County

Light Trap Data from Martin County

	Robersonville		Farm Life	
Date	BW	GSB	BW	GSB
July 8	8	3	2	6,1*
July 13	3	1	3	0
July 15	3	0	0	3

July 18	5	0	2	0
July 20	5	1	3	1
July 22	9	1	12	0
July 25	12	1	7	1
July 27	17	0	8	4
July 29	17	0	24	0,6*
August 1	21	2	29	7
August 3	18	1	25	5,5*

BW = Bollworm moths; GSB = Green stink bugs
* brown stink bugs

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 11	-	-	-	21	0	0	-	-	-	-	-	-	-	-	-	-	-	-	6	15	0
July 13	-	-	-	13	2	0	-	-	-	0	0	0	-	-	-	-	-	-	21	11	0
July 15	-	-	-	0	0	0	-	-	-	0	0	0	-	-	-	-	-	-	7	0	0
July 18	-	-	-	1	0	0	2	0	0	2	0	0	2	0	0	-	-	-	0	0	0
July 20	0	1	1	2	12	0	2	0	0	4	0	0	8	0	0	-	-	-	19	6	0
July 22	0	1	0	0	0	2	7	0	0	1	3	0	13	0	0	-	-	-	17	5	0
July 25	0	1	0	0	16	0	7	7	0	8	25	0	6	0	0	-	-	-	35	29	0
July 27	3	0	0	7	26	0	23	11	0	1	7	0	8	1	0	-	-	-	17	17	1
July 29	0	4	2	14	5	1	22	2	1	0	0	0	12	4	0	-	-	-	28	15	1
August 1	0	1	0	15	5	0	49	5	0	4	3	0	-	-	-	-	-	-	63	25	5
August 3	0	2	0	8	5	0	25	2	0	6	18	0	-	-	-	-	-	-	26	12	2
August 5	4	0	1	-	-	-	25	0	1	4	8	0	-	-	-	-	-	-	35	5	1

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, Tim Phelps and B. Bryant

From: Melissa E. Huffman, Agricultural Extension Agent, Onslow County

Light Trap Data from Onslow County

	Number of Adult Insects			
Date	Bollworms	GSB	BSB	Hornworms
July 22	30	1	-	-
July 25	30	1	-	-
July 27	80	2	-	-
July 29	115	7	-	-
August 1	155	3	-	-
August 3	105	5	-	-

GSB = green stinks bugs; BSB = brown stink bugs

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

From: Keith Kettner, Agricultural Extension Agent, Sampson County

Light Trap Data from Sampson County

	Number of Adult Insects		
Date	GSB	BSB	BW
July 26	8	-	85
July 29	6	2	92
August 1	10	4	105

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

Black trap located 6 miles south of Clinton on
US-701S on the farm of Mike and James Hope.

From: Dominic Reisig, Extension Entomologist

Light Trap Data from Tidewater Research Station (Washington County)

	Number of Adult Insects							
Date	CEW	TBW	ECB	AW	SBL	BSB	GSB	BaSB	DSB
June 22	9	0	0	0	0	0	1	0	0
June 24	5	0	0	0	0	2	2	0	0
June 27	4	0	0	0	0	17	0	0	0
June 29	3	0	0	0	0	13	0	0	0
July 1	3	0	0	0	0	6	0	0	0
July 4	3	0	0	0	0	2	0	0	0
July 6	0	0	0	0	0	2	1	0	0
July 8	2	0	0	0	0	1	3	5	0
July 11	1	0	0	0	0	0	0	0	0
July 13	1	0	0	0	0	5	2	0	1
July 15	0	0	0	0	0	2	1	0	0
July 18	0	0	0	0	0	0	0	0	0
July 20	0	0	0	0	0	0	0	0	0
July 22	0	0	0	0	0	0	0	0	0
July 25	6	0	0	0	0	0	0	1	0
July 27	14	0	0	0	0	1	1	2	0
July 29	11	0	0	0	0	2	4	0	0
August 1	6	0	0	0	0	2	6	3	0
August 3	2	0	0	0	0	0	0	0	0
August 5	5	0	0	0	0	3	2	0	0

Abbreviations: CEW = corn earworms; TBW = tobacco budworms; ECB = European corn borers; AW = armyworms; SBL = soybean loopers; BSB = brown stink bugs; GSB = green stink bugs; Banasa stink bugs; dusky stink bugs

Pheromone Trap Data from Tidewater Research Station, Tyrrell County and Upper Coastal Plains Research Station

	Tidewater		Tyrrell Co.		UCPRS	
Date	CEW	TBW	CEW	TBW	CEW	TBW
June 9	-	-	11	2	6	7
June 15	0	4	1	5	0	0
June 22	-	9	7	6	7	2
June 30	-	-	9	16	11	15
July 8	-	5	16	4	3	16
July 11	-	-	36	0	-	-
July 12	2	4	-	-	-	-
July 13	-	-	-	-	17	0
July 18	-	-	6	0	-	-
July 19	13	0	-	-	-	-

July 20	-	-	-	-	15	0
July 25	-	-	47	1	-	-
July 26	18	-	-	-	-	-
July 27	-	-	-	-	24	0
August 1	40	4	324	4	62	-

Abbreviations: CEW = corn earworms; TBW = tobacco budworms

From: Kevin Johnson, County Extension Director, Wayne County

Light Trap Data from Wayne County

	Number of Adult Insects			
	Goldsboro			
Date	GSB	BSB	CEW	HW
July 6	0	2	0	0
July 8	2	1	-	-
July 11	-	3	3	3
July 13	1	8	4	1
July 15	-	1	1	-
July 18	-	-	2	-
July 20	2	-	4	-
July 22	1	3	29	-
July 25	9	3	50	-
July 27	3	3	85	2
July 29	10	3	45	1
August 1	10	-	61	-
August 3	6	2	68	-
August 5	6	3	30	-

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

Cooperator: Willie Howell (Goldsboro)

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

Light Trap Data from Wilson County

	Number of Adult Insects			
	Kenly		Fountain	
Date	CEW	GSB	CEW	GSB
July 13	-	-	1	9
July 15	2	0	1	2
July 18	3	0	2	1
July 20	0	3	2	2
July 22	3	1	0	7
July 25	2	2	7	5
July 27	7	1	9	5
July 29	19	2	8	9
August 1	30	5	9	4
August 3	15	2	7	3
August 5	50	1	13	5

CEW = corn earworms; GSB = green stink bugs

Locations: Kenly and Fountain
Monitored by: Norman Harrell and Barbara Smith