NC STATE UNIVERSITY COLLEGE OF AGRICULTURE & LIFE SCIENCES

North Carolina Pest News

Departments of Entomology and Plant Pathology

Volume 29, Number 16, July 25, 2014

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

In This Week's Issue . . .

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/

ANNOUNCEMENTS AND GENERAL INFORMATION

Field Days Scheduled

Blackland Farm Managers Tour will be held on Wednesday, August 6, 2014, at 8:00 a.m., Tidewater Research Station, 207 Research Station Road, Plymouth, NC. Registration starts at 7:00 a.m. Please contact Rod Gurganus at 252-946-0111 for more information.

2014 Tomato Field Day will start at 3:00 to 6:00 p.m. on Thursday, August 7, 2014, at the Mountain Horticultural Crops Research Station, 74 Research Drive, Mills River, NC. Registration begins at 2:30 p.m. For more information, please contact Jeff Chandler at 828-684-3562.

NC State University A&T State University COOPERATIVE EXTENSION
Empowering People • Providing Solutions

Turfgrass Field Day will be held on Wednesday, August 13, 2014, at 8:30 a.m., Lake Wheeler Road Field Lab, 3920 Dr. Bill Gilbert Way, Raleigh, NC. Registration starts 8:00 a.m. Please contact Jenifer Jordan at 919-513-1131 for more information. Please pre-register.

Landscape Professional Field Day will start at 8:45 a.m. on Friday, August 15, 2014, at the JC Raulston Arboretum and Horticultural Field Laboratory, 4415 Beryl Road, Raleigh, NC. Registration begins at 7:30 a.m. For more information contact Barbara Fair at 919-513-2804. Please pre-register before August 1 or registration is available on site.

FIELD AND FORAGE CROPS

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

Tobacco Insect Scouting Report – July 17, 2014

It is now week twelve for our weekly scouting report and pest pressure is lower compared to the past few weeks. Due to topping at most sites, tobacco budworm populations are down, and hornworms have not yet become an issue. Although numbers are low, flea beetles have started to make their way back onto the plants at some of our locations including one of our Eastern locations, as well as both our Piedmont locations.

Scouting Report, Eastern 1 – Grower Standard Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No treatment	0 beetles/plant – No treatment	0 – No treatment	0 – No treatment	0 – No treatment	None observed

Scouting Report, Eastern 2 – IPM Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	0 beetles/plant – No treatment	0% tobacco budworm infested plants – **No treatment**	0 hornworms/plant – No treatment	0 – No Treatment	6% plants had tbw eggs on flowers

Scouting Report, Eastern 3 – Grower Standard Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No treatment	0.08 beetles/plant – No treatment	0% tobacco budworm infested plants – **No treatment**	0 – No treatment	0 – No treatment	None observed

Scouting Report, Eastern 4 – IPM Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	0 beetles/plant – No treatment	2.5% tobacco budworm infested plants – **No treatment**	0 hornworms/plant – No treatment	0 – No Treatment	None observed

Scouting Report Piedmont 1 – Grower Standard Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	5% aphid infested plants – No treatment	0.13 flea beetles/plant – No treatment	0% tobacco budworm infested plants – **No treatment**	0 – No treatment	0 – No treatment	2.5% of plants observed had parasitized tobacco budworms

Scouting Report, Piedmont 2 – IPM Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	0.02 flea beetles/plant – No treatment	0% tobacco budworm infested plants – **No treatment**	0 – No treatment	0 – No Treatment	10% of plants observed had parasitized tobacco budworms

Here are the scouting reports from the control plots for our experiments at the Upper Coastal Plain Research Station near Rocky Mount, NC, and the Lower Coastal Plain Research Station near Kinston, NC. 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 – **No data taken due to topping****

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

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infestation	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	0 beetles/plant – No treatment	4% tobacco budworm infested plants – No treatment	0% Hornworm infested plants – No treatment	0 – No Treatment	1% of plants infected with TSWV

On Station, Rocky Mount – Control plants treated with imidacloprid

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infestation	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	0 – No treatment	7% tobacco budworm infested plants – No treatment	0% Hornworm infested plants – No treatment	0 – No Treatment	1% plants infected with TSWV

(Originally posted at: http://tobacco.ces.ncsu.edu/2014/07/tobacco-insect-scouting-report-july-17-2014/)

Tobacco Insect Scouting Report – July 25, 2014

It is now week thirteen of scouting and one of our locations has begun the harvest! There has been little change in insect activity, although there has been a slight decrease in budworm density and an increase in flea beetles population. Since the tobacco plants are almost ready to harvest, the flea beetles numbers that we are seeing are of no significance and will not cause much damage to the plants. No pests are close to the threshold amounts.

Scouting Report, Eastern 1 – Grower Standard Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No treatment	0.18 beetles/plant – No treatment	0 – No treatment	0 – No treatment	0 – No treatment	None observed

Scouting Report, Eastern 2 – IPM Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	0.46 beetles/plant – No treatment	0% tobacco budworm infested plants – **No treatment**	0 hornworms/plant – No treatment	0 – No Treatment	0.04 stink bugs/plant

Scouting Report, Eastern 3 – Grower Standard Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No treatment	2.7 beetles/plant – No treatment	0% tobacco budworm infested plants – **No treatment**	0 – No treatment	0 – No treatment	0.03 stilt bugs/plant

Scouting Report, Eastern 4 – IPM Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	3.5 beetles/plant – No treatment	0 tobacco budworm infested plants – **No treatment**	0 hornworms/plant – No treatment	0 – No Treatment	0.05 stink bugs/plant 0.05 stilt bugs/plant

Scouting Report Piedmont 1 – Grower Standard Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 aphid infested plants – No treatment	0.28 flea beetles/plant – No treatment	0% tobacco budworm infested plants – **No treatment**	0 – No treatment	0 – No treatment	0.08 parasitized budworms/plant 0.1 stilt bug/plant

Scouting Report, Piedmont 2 – IPM Field

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infested plants	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	0.4 flea beetles/plant – No treatment	0% tobacco budworm infested plants – **No treatment**	0 – No treatment	0 – No Treatment	0.04 stink bugs/plant 0.06 stilt bugs/plant

Here are the scouting reports from the control plots for our experiments at the Upper Coastal Plain Research Station near Rocky Mount, NC, and the Lower Coastal Plain Research Station near Kinston, NC. 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 – **No data taken due to topping****

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

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infestation	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	0 beetles/plant – No treatment	0% budworm infested plants – No treatment	0% Hornworm infested plants – No treatment	0 – No Treatment	1% plants infested with TSWV

On Station, Rocky Mount – Control plants treated with imidacloprid

Insect observation	No. aphid infested plants	Flea beetles/plant	Percent tobacco budworm infestation	Hornworms/plant	Percent cutworm damaged plants	Other insects
Treatment needed?	0 – No Treatment	0 beetles/plant – No treatment	4% budworm infested plants – No treatment	0% Hornworm infested plants – No treatment	0 – No Treatment	1% plants infested with TSWV

(Originally posted at: http://tobacco.ces.ncsu.edu/2014/07/tobacco-insect-scouting-report-july-25-2014/)

ORNAMENTALS AND TURF

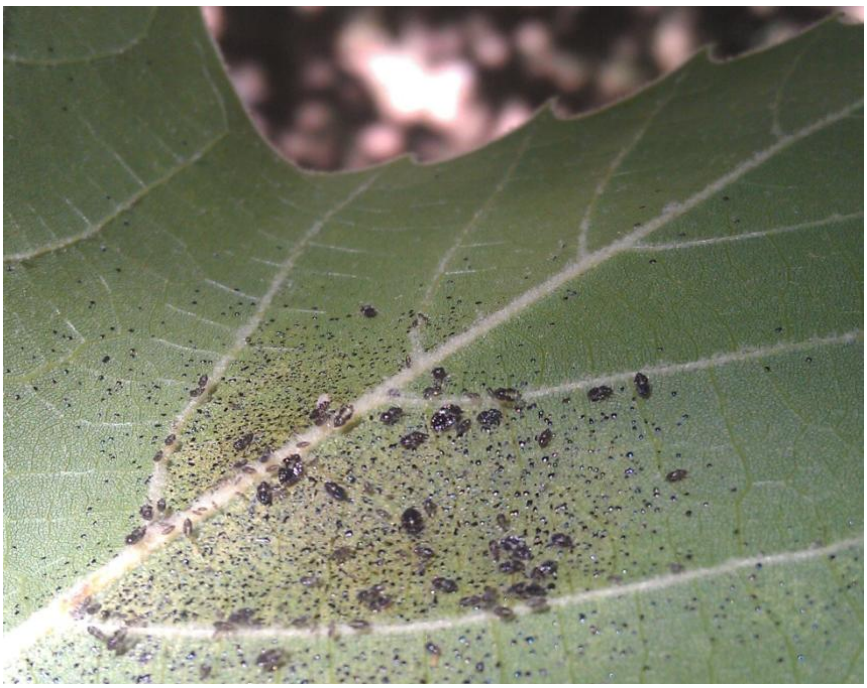
From: Steve Frank, Extension Entomologist

Sycamore Lace Bugs Cause Yellow Leaves

This week I have gotten three samples from the Plant Disease and Insect Clinic with sycamore lace bug, *Corythucha ciliata*. I had just taken some pictures of these beautiful critters last week when I was in Asheville. They really do a number on sycamore leaves and this time of year heavily infested sycamores look pretty bad. The other lace bugs that are important landscape pests are the azalea lace bug and hawthorn lace bug. Like these, the sycamore lace bug causes stippling damage by piercing the underside of leaves with its stylet and sucking out the fluids. Large yellow and gray areas develop on the top of the leaves. In some cases, most leaves on a tree can be entirely covered in stippling damage.

Sycamore lace bugs are a native insect. They overwinter as adults under bark or in other sheltered spots and become active soon after bud break. They lay eggs in leaves and complete their lifecycle in around 30 days. However, research from China, where this is an invasive pest, shows that at high temperatures this happens much faster, even twice as fast. This suggests that it could be more abundant in hot urban areas where sycamores are often planted in parking lots and along roads. My anecdotal suggests this is true. Sycamores are wetland trees and probably are not very happy in hot, sunny, dry spots, but lace bugs clearly are.

Management of sycamore lace bugs will be similar as for other lace bugs, but you are typically dealing with large trees instead of small azalea bushes or cotoneaster. Thus systemic insecticides applied as a drench can be a good option. Applications of horticultural oil should also help keep abundance low just by killing adults and nymphs that are present.



Sycamore lace bug nymphs. Photo: S. D. Frank.

Impatiens Necrotic Spot Virus

In the last month we have had several samples come into the Plant Disease and Insect Clinic with impatiens necrotic spot virus (INSV). These have primarily been greenhouse crops like impatiens and mums, but the virus can infect over 200 plant species. It is a lethal virus spread by thrips feeding. Managing INSV is critical because it can easily over run your crop and cause long-term problems. Thrips become infected with the virus while feeding as larvae. After they pupate, thrips spread the virus to new plants when they feed as adults.

Thus, INSV management starts with thrips management. The essence is to start with sanitation. Thrips can feed on hundreds of plants so any weeds growing in or near your greenhouse can support thrips feeding and egg laying. Get rid of pet plants and mother plants. Maybe you or your grandmother want to overwinter last year's peppers or begonias, but do not do it. These can serve as reservoirs for thrips and virus and keep your house constantly infected.

If you have INSV in the greenhouse, get rid of all plants that show symptoms and consider getting rid of all plants that thrips have fed on. Plants do not immediately show symptoms, but they can still infect thrips. So even if you get rid of plants with visible spots thrips may continue to get infected and spread the virus. Get rid of thrips with insecticide applications or ramp up an existing biological control program to get thrips under control. Now is not the time to start a biological control program. Keep an eye out for tell tale rings and spots on leaves so you can keep ahead of this virus and of course monitor for thrips with sticky cards to keep ahead of them.

You can read more about thrips management in an Insect Note and recent article in *GrowerTalks*.

http://www.ces.ncsu.edu/depts/ent/notes/O&T/flowers/ort072e/ort072e.htm

https://ecoipm.files.wordpress.com/2013/03/viewarticle-3.pdf

If you would like to see thrips defend themselves from predatory mites by butt slappin' them watch the video here:

http://ecoipm.com/2014/07/24/thrips-vs-mites-an-epic-fight/

INSV on impatiens. Photo: Robert Wick, University of Massachusetts, Bugwood.org.

INSECT TRAP DATA

From: Mike Carroll, Agricultural Extension Agent, Craven County

Light Trap Data from Craven County

Date	Number of Adult Insects				
	BW*	GSB	BSB	FAW	THW
July 16	------ Date Initiated -------				
July 18	13	0	0	0	1
July 21	28	0	0	0	2
July 23	30	1	0	0	1

BW = bollworms; GSB = green stink bugs; BSB = brown stink bugs;
FAW = fall armyworms; THW = 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								
	West Edgecombe			Coakley			Lawrence		
Date	CEW	BS	GS	CEW	BS	GS	CEW	BS	GS
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	-	-	-

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

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