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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 . . .

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

Results of an On-line Survey of *North Carolina Pest News* Readers

In the fall of 2010, an on-line survey of *North Carolina Pest News* readers was conducted to determine the use and value of the newsletter. A total of 52 individuals responded to the on-line survey. Twenty-three percent of the survey respondents were county Extension agents, 15% landscapers, nursery managers or golf course superintendents, 8% farmers or farm managers, 8% agricultural consultants, 8% Master Gardeners or other volunteers, 6% pesticide dealers or distributors, 4% North Carolina Department of Agriculture and Consumer Services personnel, 4% pesticide industry representatives, 4% aerial applicators of pesticides, 2% land-grant university Extension specialists and researchers, and 2% pest control operators. The majority of survey respondents (72%) read the newsletter every week, while the remainder read the newsletter less often.

Approximately 94% of the survey respondents reported that they read the *North Carolina Pest News* to increase their knowledge of current diseases and insect pests, 33% sent electronic or printed copies of selected sections or articles to other persons (i.e., clients, co-workers, friends, etc.), and 21% incorporated selected sections or articles into their own publications (newsletters, pest alerts, etc.). Additionally, 14% of respondents sent electronic or printed copies of the entire newsletter to other persons, while 2% placed links to the newsletter from their Internet site.

When asked to indicate which sections of the newsletter they read, 77% of survey respondents reported that they read the announcements and general information section, 62% the ornamentals and turf section, 56% the field and forage crop section, 56% the fruits and vegetables section, 37% the insect light trap data, and 31% the residences, structures and communities section. Rating the usefulness of the *North Carolina Pest News*, approximately 60% of the survey respondents reported that the newsletter was "extremely useful," 29% "very useful," and 11% "somewhat useful."

Comments offered by survey respondents provided insight into the use and value of the *North Carolina Pest News* to readers. Examples of comments include:

"I am so thankful that as a consultant I have access to such up-to-date and useful information. It is an asset that I hope I never have to do without.

"As a garden center employee I really like to know what pests to look out for, and the control suggestions are very helpful.

"*I have found this information source extremely informative and most timely. Several times an article was published on Monday and I actually experienced the subject matter of the publication within days. In particular the alert about the cane borers of the blackberries and raspberries was most timely. After reading the piece about them I saw the borers in action on some plants of mine.*

"Thank you for doing this in this format. It is quite helpful to me in my business in conjunction with Amanda Stone, our extraordinary agent in Buncombe County.

"This is the kind of proactive tool that we need out here to do our jobs. It's incredibly helpful to have this information available before problems reach a critical stage. And I think it reflects really well on our organization when I can tell clients that I was recently updated on this issue by a specialist from NC State University. It sounds like we are in touch. Do whatever you can to involve other specialists to add comments about plant phenology and what we should and should not be seeing. It's a very valuable type of in-service training for Agents.

"I thank all who contribute their time and expertise in putting the newsletter together. I greatly enjoy the knowledge I receive from it and the occasional humor placed in it makes it delightful and fun to read."

The editor would like to thank everyone who participated in the on-line survey last fall. The results of this confidential survey help the editor and contributors to the *North Carolina Pest News* document the usefulness of the newsletter to the readers and improve its quality in the future. A similar survey will be initiated in August or September of 2011.

FIELD AND FORAGE CROPS

From: Jack Bacheler, Extension Entomologist

Thrips on Cotton

Thrips damage. Several thrips species, especially tobacco thrips, and their damage are a major annual headache for most cotton producers. On tobacco, peanuts, tomatoes and some other crops, tobacco thrips can vector tomato spotted wilt virus (TSWV), resulting in severe damage and crop loss, even with minimal thrips feeding. Although cotton is not susceptible to TSWV, it is nevertheless extremely susceptible to mechanical damage from thrips, particularly in the cotyledon to 3-true leaf stage. This feeding can result in maturity delays and high yield losses.

Thrips levels. As most cotton producers have found from experience, thrips levels and damage potential can vary from year to year and from field to field. Additionally, when thrips levels are high and cotton is growing slowly, the potential for damage to seedling is greatest. This high damage potential is often most common in cotton planted during the last week in April and during the first week of May . . . but not always. Due to a late fourth generation thrips flight in 2010, cotton planted during mid May shouldered much of the peak of the tobacco thrips flight, while cotton planted early fared better with thrips levels (although on early planted cotton fewer thrips can result in competitively greater damage to slow growing seedlings).

Thrips flight predictions. Although primarily developed for minimizing TSWV damage on tobacco via timing Admire treatments based on the predicted timing and intensity of the third and fourth generation thrips flights, this weather-based tool for thrips predictions developed by George Kennedy's group here at North Carolina State University may have application to cotton. Although cotton doesn't suffer from something serious like TSWV, cotton producers would benefit from information on the timing and intensity of our major thrips flights. Even though thrips flights will be subject to some variation based on upcoming weather patterns, at this point it appears that our major fourth generation tobacco thrips flight which impacts cotton producers will be at least two weeks later that our long term average. More information on this subject will be included in next week's issue of the *North Carolina Pest News*.

From: Dominic Reisig, Extension Entomologist

Stink Bugs Should Not be a Widespread Concern in Wheat

For the past couple weeks, I have had questions on stink bugs in wheat. Specifically questions have focused on: 1) what sort of damage stink bugs might cause to the wheat; and 2) if treating stink bugs in wheat might reduce their abundance as they move into corn. However, I haven't heard or seen any cases where I think treatment would be beneficial, much less needed.

By and large, the brown stink bug (Fig. 1) is the main stink bug in North Carolina wheat, and rice stink bug (Fig. 2) can also be prevalent. We picked up a few green stink bugs (Fig. 3) in wheat on April 21.

Fig. 1. Brown stink bug adult. Image from Dominic Reisig.

Fig. 2. Rice stink bug adult. Image by Russ Ottens, University of Georgia. (http://bugwood.org/).

Fig. 3. Green stink bug adult. Image from Dominic Reisig.

First, stink bugs can damage wheat, but only in very high numbers. Thresholds from other states are in the range of two stink bugs per ten grain heads. Stink bugs feed on the developing tissue and will damage wheat as the grain is filling. The milk and dough stages are known to be especially susceptible. Germination will be affected before yield, so seed producers will want to treat at lower population abundances than those listed.

Although I have heard reports of treatments going out for stink bugs, I have not heard of populations in the state anywhere that are close to threshold levels. We are also sweeping stink bugs from over 75 fields across the state and have not seen anything to be concerned about.

Secondly, you can easily kill stink bugs in wheat with a pyrethroid insecticide. We know that stink bugs move from wheat to corn. Stink bugs probably move back and forth between wheat and corn before completely moving into corn after the wheat harvest. Corn can be devastated by stink bug feeding while the ear is developing (Fig. 4). Maybe killing stink bugs in the wheat can prevent this movement into corn.

Brown stink bugs can complete a generation in wheat. Perhaps the adults can be killed before they can reproduce. Brown stink bug adults are very mobile and they feed on a lot of other hosts (like weeds in the ditch bank). I think that more stink bugs would move in from surrounding areas if a treatment were applied now. Remember that most of the insecticides registered on wheat have a 30 day pre-harvest interval. A lot can happen in that time. Also, think about what your neighbors are doing. Is there a concerted effort to eliminate stink bugs in wheat across the landscape? As a result, I do not think that treating wheat for stink bugs at this stage will have a large impact on corn.

Fig. 4. Corn injured by stink bug. Note the purplish staining as a result of the cells ruptured from feeding punctures. Image from Dominic Reisig.

FRUIT AND VEGETABLES

From: Mark Abney, Extension Entomologist

Vegetable Insect Updates Now Available on Facebook and Twitter

You can now receive instant updates on issues relating to vegetable insects from the Vegetable Entomology Program at North Carolina State University on Facebook (NC State Vegetable Entomology) and Twitter (*@ncsuveg*).

ORNAMENTALS AND TURF

From: Steven Frank, Extension Entomologist

Boring Times are Upon Us

A number of clearwing borers are active that can damage ornamental trees and shrubs. This week we captured over a hundred lesser peach tree borers in a single trap (Fig. 5). The lesser peachtree borer, *Synanthedon pictipes* (http://www.insectimages.org/browse/subthumb.cfm?sub=2155), is primarily a pest of peach and cherry trees including ornamental cherry. We also caught a lot of dogwood borers, *Synanthedon scitula*. Dogwood borers have a wide host range that includes dogwood (*Cornus florida*), but also cherry and apple. In both species adults emerge from tree trunks in spring (now!) and lay eggs on the bark of host trees. Larvae hatch and bore through bark and into trees. Existing bark damage is a preferred oviposition site. The primary means of prevention for susceptible trees is maintaining healthy trees and protecting trees from mechanical damage to bark. In addition, a contact insecticide such as permethrin can be sprayed on tree bark to deter oviposition and successful entry by larvae.

Fig. 5. Lesser peachtree borers in pheromone traps. Images by Steve Frank.

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.