

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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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

Plant Disease and Insect Clinic Offers Information on the Internet

The Plant Disease and Insect Clinic at North Carolina State University “diagnoses all kinds of plant problems for homeowners, gardeners, landscapers, growers and farmers.” In consultation with expert faculty in the Departments of Entomology and Plant Pathology, they recommend ways to

treat or prevent the problems that they diagnose. The Plant Disease and Insect Clinic's website (<http://www.cals.ncsu.edu/plantpath/extension/clinic/>) provides pest alerts, information on sample submission, directions to the clinic, and much more. The Clinic staff also maintains a blog, twitter account and facebook page to offer timely information on plant diseases, insects, and other topics of interest. These are available at:

Blog: <http://ncsupdicblog.blogspot.com/>

Twitter: http://twitter.com/#!/NCSU_PDIC

Facebook: <http://www.facebook.com/pages/NCSU-PDIC/104673106277956?sk=wall>

FIELD AND FORAGE CROPS

From: Jack Bacheler, Extension Entomologist

Cotton Insects on the Way

With the hot weather, the **major bollworm moth flight** is getting underway in our southeastern counties a little early. In the past, if the bollworm threshold of three live, 1/8-inch or larger bollworms per 100 fruit is found on *BG II* or *WideStrike* cotton, the moth flight in a given area has probably been underway for a week to 10 days, or more. Scouts should be particularly alert in fields that have been treated with a pyrethroid or an organophosphate insecticide within the past ten days, or so, for stink bugs or plant bugs. By this time next week, we should be able to get a handle on the flight's possible progression and size.


Although **plant bugs** have been present at higher levels than in recent years, probably less than one field in ten has been treated to date based on telephone calls from consultants and producers. Hopefully, in most areas plant bugs will begin to fade as the bloom period advances. Also, plant bug damaged to bolls will be at least partially accounted for due to the routine inspection of stink bug-damaged bolls for similar internal damage.

Although boll damage from **green and brown stink bugs** is typically less in dry years than in years of adequate or excessive moisture, this season is far from over. Plus, the stink bug threshold has already been reached in a few scattered early-planted fields that are into their third week of bloom. In one field in Wayne County this week, approximately 40% of the quarter-sized bolls were damaged by stink bugs. Hopefully this was an exceptional situation, but illustrates the need for routine scouting. In all cases, we recommend that producers and scouts only sample quarter-sized bolls of just under one inch in diameter for internal stained lint or warts on the inner boll wall surface. Larger bolls are less likely to be an indicator of recent damage. Follow the new dynamic stink bug threshold of 50, 30, 10, 10, 10, 20 30 and 50% boll damage on weeks 1, 2, 3, 4, 5, 6 and 7 of the bloom period, respectively, and the other guidelines listed on the card (Fig. 1). This will provide growers their best chance of managing stink bugs profitably. If not already in hand, ask you county Extension office or our office at North Carolina State University for our *Southeast Stink Bug Decision Aid Card*.

A few more cases of **cotton aphid** outbreaks have been reported during the past week. Prior to treating for cotton aphids, be sure that most plants in the field are infested with aphids and that no aphid mummies or parasitic fungi are present. This is one case in cotton that biocontrol commonly works to significantly reduce or even eliminate cotton aphids.

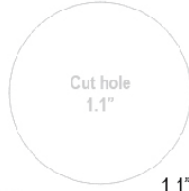
Decision aid for stink bug thresholds in Southeast cotton

- 1 Pull random sample of quarter size diameter bolls, avoid field edges. (boll sizes between 0.9" and 1.1")
- 2 1 boll / acre, no less than 25 / field.
- 3 Sort bolls into two piles: those with and those without, obvious external lesions.
- 4 Crack and inspect bolls with external lesions for internal damage (boll wall warts, stained seed or lint).
- 5 If threshold is not met for that week, (see chart) check the remaining bolls for internal damage.
- 6 Treat field only if the threshold is met for that week.



Cut hole
0.9"

Bolls should fit through the large hole but not the small one.




Cut hole
1.1"


Week of bloom	Threshold (% internal boll damage)
1	50%
2	30%
3	10%
4	10%*
5	10%*
6	20%
7	30%
8	50%

*Consult state guidelines for scouting intervals


Decision aid for stink bug thresholds in Southeast cotton




Stained seed and lint




Boll wall warts




AG-730



External lesions




Cut hole
1.1"




Cut hole
0.9"

Boll diameter should be between 0.9" and 1.1"



Quarter size boll



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Fig. 1. Stink bug decision aid field card. Images from Jack Bacheler.

Be sure to report any unusual or potentially-damaging insect outbreaks to us so that we can share this information with others. Hopefully, by this time next week we will have gained a better appreciation about the status of upcoming stink bug and other insect issues.

Upcoming Cotton and Soybean Insect Scouting Schools

Northampton County: July 19 at 9:30 a.m. in Jackson, NC at the Extension Office located at 9495 NC Highway 305. Contact Craig Ellison at 252-534-2831 or craig_ellison@ncsu.edu for details.

Halifax County: July 19 at 2:00 p.m. in Halifax, NC at the County Government Center, 359 Farrell Lane. Contact Arthur Whitehead at 252-583-1683 or arthur_whitehead@ncsu.edu for details.

Cotton Scouting Schools

Bertie County: July 20 at 9:30 a.m. in Windsor, NC, probably at the Windsor Community Building. Contact Richard Rhodes at 252-794-5317 or richard_rhodes@ncsu.edu for details.

Area Cotton Scouting School for Edgecombe, Nash and Wilson Counties: July 21 at 4:00 p.m. at the American Legion Building in Elm City in Wilson County. Heading north from Wilson, NC on Highway 301, take the East Langley Road exit and head toward Elm City. Proceed four blocks beyond the railroad tracks and turn right onto American Legion Road. Contact Art Bradley at 252-641-7815 or art_bradley@ncsu.edu or Norman Harrell at norman_harrell@ncsu.edu for details.

Both indoor and outdoor training will be provided at each of the above training sessions. These educational programs are presently offered to the public without a fee.

FRUIT AND VEGETABLES

From: Mark Abney, Extension Entomologist

Worm Control in Sweet Corn: The 2011 Edition

Sweet corn producers will remember the 2010 growing season for many years because of the tremendous caterpillar pressure in the crop. Growers experienced heavy damage in spite of using management strategies that had performed well in the past. Though several factors may have contributed, the primary reason for the increased damage was likely the overwhelming number of moths laying eggs in the crop. Corn earworm populations were extremely high for several weeks, and fall armyworms and European corn borers joined the party in big numbers as well. The damage seen in 2010 has growers wondering what 2011 holds in store and what can be done to prevent the losses experienced last year.

No one knows for certain why corn earworm populations were abnormally high in 2010, nor is it possible to predict what populations will be like this year. To date, worm pressure has been light in sweet corn research trials at the Central Crops Research Station in Clayton, North Carolina. A look back

at light trap data maintained by cotton entomologist Jack Bachelier shows that we typically see an upswing in corn earworm moth activity in the last two weeks of July. Peak moth flights may occur from late July to late August in a given year and vary by location, but highest populations are usually recorded in August. In 2010, peak moth catches exceeded 100 moths per night at many locations. At ten trap locations catches greater than 200 moths per night were reported.

Pyrethroid insecticides have been used alone and in combination with other products for earworm control in sweet corn for many years. Studies have shown, and experience in the field has affirmed, that pyrethroid insecticides alone will no longer provide satisfactory control of corn earworm in sweet corn. A tank mix with a pyrethroid and methomyl (Lannate) is currently recommended for earworm control in conventional sweet corn production systems. Though not always practical, ground application is preferred to aerial sprays.

Will 2011 insect pressure in sweet corn be a repeat of 2010? No one can say. Either way, corn earworm will be present, and diligent worm management will be needed to prevent damage to the crop.

Follow the North Carolina State University Vegetable Entomology Program on Twitter (@ncsuveg) and Facebook (NC State University Vegetable Entomology) for up to date pest information for North Carolina's vegetable industry.

ORNAMENTALS AND TURF

From: Steve Frank, Extension Entomologist

Mimosa Webworms

In Raleigh we are seeing the initial webbing created by mimosa webworms. These are annual pests of mimosa trees which many people, including me, consider pests in their own right. However, if you are you of the many folks who love mimosa trees sans messy caterpillar webbing then it is time for action. The best way to prevent heavy infestations and extensive webbing is to prune out the nest when they are small (i.e., now). Moths overwinter as adults so reducing the abundance of caterpillars in your tree could help reduce infestations next year. Most insecticides available for caterpillar control will also control mimosa webworms, but remember that contact is difficult since they live in water proof bags so rely on stomach poisons for best control. For more information on caterpillars, see *Ornamentals and Turf Insect Information Note No. 7* at <http://www.ces.ncsu.edu/depts/ent/notes/O&T/shrubs/note07/note07.html>.

Maple Mites

Midsummer damage to maples is often attributed to the twospotted spider mite. However, I visited several nurseries this week and found the culprit was actually the maple mite, *Oligonychus aceris*. This mite feeds on maples and causes severe damage to maple leaves in midsummer. Leaves are yellow and stippled (Fig. 2) and mite debris is evident on the underside of leaves (Fig. 3). Growers report more damage on *Autumn Blaze* than other maple varieties. However it is common on *October Glory* and most commonly grown varieties.



Fig. 2. Maple mite damage on maple leaf. Image from Steve Frank.



Fig. 3. Maple mite damage on underside of maple leaf. Image from Steve Frank.

Management recommendations are the same as for twospotted spider mites (see the July 1, 2011 issue of *North Carolina Pest News* at http://ipm.ncsu.edu/current_ipm/11PestNews/11News12/pestnews.pdf).

However, to my knowledge no efficacy tests have been conducted on this particular species. Remember that any damage done to the leaves will remain for the rest of the season and will not be corrected by treatments nor will the debris wash off from treatments or irrigation. Therefore, be sure to determine if live mites are present before repeating a treatment based on damage or debris.

For additional information on twospotted spider mites, see *Ornamentals and Turf Insect Information Note No. 25* at <http://www.ces.ncsu.edu/depts/ent/notes/O&T/flowers/note25/note25.html>.

INSECT TRAP DATA

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
*****
    
```

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    -   -   -
*****
    
```

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

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
*****
    
```

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

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

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*****
                        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 12         2      4         -     -         -     -
*****
    
```

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
*****
    
```

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
*****
    
```

CEW = corn earworms; GSB = green stink bugs

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

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.