

North Carolina Pest News

Departments of Entomology and Plant Pathology



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In This Week's Issue . . .

CAUTION !

The information and recommendations in this newsletter are applicable to North Carolina and may not apply in other areas.

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FIELD AND FORAGE CROPS

From: Jack Bacheler, Extension Entomologist

Late Season Cotton Insect Concentrations

At this time of year, as most cotton has become increasingly mature and unattractive to stink bugs and bollworm moths, other cotton which was either planted late or was “lucky” enough to have received good rainfall and is still producing and setting young fruit, may fall victim to high levels of these insects, unless found. These insect pests are able to seek out and concentrate into the remaining attractive cotton fields.

In the case of **stink bugs**, even in still attractive and susceptible cotton fields, if the producer has kept up with the date of first flower, the dynamic threshold can serve as a guide to raising the damage threshold accordingly at this time of year, using a threshold of 20, 30 and 50% internal damage to quarter-sized bolls for weeks of 6, 7, and 8 of the bloom period. Another option late in the season is to use the ruler on the stink bug field card (or any easy-to-tote item that can measure 1¼ inches) to assess the diameters of first position bolls. If 80% of the first position bolls are larger than 1¼ inches in diameter, these bolls can no longer be damaged by stink bugs and the threshold could be at least raised 5-fold from the protective 10% level to 50%. If the latter approach is used, disregard the small, slow-growing bolls in the upper 2 to 3 nodes of the plant.

In our stink bug insecticide efficacy test in Wayne County, quarter-sized bolls from the untreated check plots averaged 48% internal damage (this is not common, by the way). However, both the date of bloom and the proportion of large, safe bolls versus smaller, susceptible bolls put the stink bug threshold somewhere over 50%; therefore, treatment was not justified.

With **bollworms**, most consultants and producers continue to use common sense during the latter part of the growing season. In cases in which most bolls are hard and spotted, the threshold of 3 second stage or larger bollworms per 100 fruit could probably be safely raised to 8 to 10% or more live bollworms. Be careful of the fields that are still attractive and have a moderate to high number of younger bolls, however. The lower threshold is more appropriate here. This also seems to be an exceptionally high year for bolls which have kept their dried blooms. So be sure to include bloom-tagged bolls in your sampling.

Although we have seen **spider mites** in a number of fields this past week, levels were on the low side and the odds of economic damage at this time of year are getting slim.

As has been the case essentially all summer, most areas of the state could stand additional rainfall during the next few weeks to help fill out bolls.

From: Dominic Reisig, Extension Entomologist

Mid-Season Soybean Pest Insecticide Recommendations

Treating mid-season pests in soybeans can be a complicated scenario, with the varied mixture of pest species that you will encounter from field to field. Be sure to scout vigilantly and use the recommended thresholds. To see the thresholds, visit www.nccrops.com, navigate to the "Field Crop Entomology Webpage" link, click on soybean and visit the scouting and thresholds links, as well as the online corn earworm threshold calculator (<http://www.ces.ncsu.edu/plymouth/ent/cewthresholdcalc.html>). Scouting is especially important this year with the wide range of weather conditions we have experienced, affecting planting dates, emergence and growth of soybeans.

Here are some options to consider if you have to spray for these mid-season lepidopteran pests:

- Corn earworms/tobacco budworms only. If corn earworms are present in significant amounts **DO NOT** use a pyrethroid insecticide without mixing 0.5 pound per acre of acephate or an alternative chemistry targeted for lepidopteran pests, such as Belt (2 or more ounces per acre), Larvin (18 or more ounces per acre), Steward (8 or more ounces per acre), or Tracer (Consero is another option similar to Tracer, but I do not have data on this product).
- Yellowstriped armyworms are easily managed with a pyrethroid or acephate application. Any of the materials listed for corn earworms/tobacco budworms will also knock out this pest.
- Bean leaf beetles only. If bean leaf beetles are present and you have not used a pyrethroid and for bean leaf beetles in the past (this year or last year), use a pyrethroid insecticide. If you have been using a pyrethroid for bean leaf beetles, use acephate.
- Stink bugs only. Use a pyrethroid to kill green stink bugs. This will generally only control 60 to 70% of brown stink bugs. You may want to consider at least 0.5 pounds per acre of acephate or greater for better control of brown stink bugs. Green stink bugs have been more prevalent than usual this year, so be sure to scout the field to know what is present.
- Loopers only. Use Belt (2 or more ounces per acre), Intrepid (4 or more ounces per acre), Larvin, Steward or Tracer.
- Beet/fall armyworms only. Use Belt, Intrepid, Larvin, Steward or Tracer.
- Corn earworms/tobacco budworms and yellowstriped armyworms and/or bean leaf beetles and/or stink bugs. Use a pyrethroid insecticide mixed with at least 0.5 pounds per acre of acephate.
- Corn earworms/tobacco budworms and beet/fall armyworms. Use Belt, Intrepid, Larvin, Steward or Tracer.

For more complicated pest situations, it is best to contact your county Extension agent for a recommendation.

Insecticide application tips:

- Pyrethroid insecticides work best when applied in morning or evening (to avoid loss from volatilization) and at higher pressure and volumes (to increase penetration in the canopy).
- Belt works better at higher pressure and volumes, even when there is little to no foliage canopy. In a 2010 trial, I applied Belt at various pressure and volumes on calf-high soybean, with wide rows and foliage that had not lapped the canopy. You can observe the effect of increasing the pressure and volume in Fig. 1.
- Belt can take 3 to 5 days to reduce lepidopteran population densities. When the kill is achieved, this product has the best residual out of any of the products listed in this article.
- Orthene and Larvin are not rainfast and should be applied at least 24 hours before a rainfall event. See blog post <http://www.nccrops.com/?p=114>, which has a link to data from Angus Catchot, Mississippi State University, on rainfastness of pyrethroids and acephate. Note that Larvin is a stomach poison and needs to be ingested. It will work better in the absence of rain.

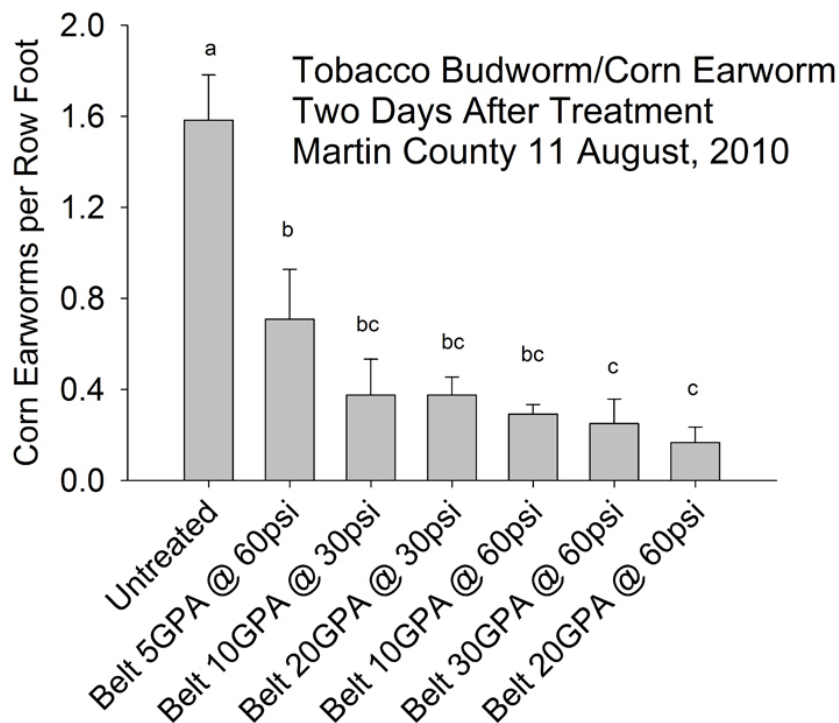


Fig. 1. Effect of pressure and volume of application of Belt on corn earworms/tobacco budworms in soybean. Figure from D. Reisig.

FRUIT AND VEGETABLES

From: Mark Abney, Extension Entomologist

Sugarcane Beetles in North Carolina Sweetpotatoes

I recently spoke with a group of sweetpotato growers with concerns about the pest status of the sugarcane beetle, *Euetheola humilis*, in sweetpotatoes. This insect has been a sporadic but serious pest of sweetpotato in Louisiana for a number of years. Though it is present in North Carolina, the sugarcane beetle has not been reported as a pest of sweetpotatoes in the state. A short fact sheet was recently developed to provide growers, Extension agents, and consultants with pertinent information about this insect as it relates to sweetpotatoes. The fact sheet is attached at the end of this newsletter and available at <http://www4.ncsu.edu/~mrabney2/images/Facts%20about%20sugarcane%20beetle%5B1%5D.pdf>.

From: Hannah Burrack, Extension Entomologist

Grape Root Borer*Volunteer Monitoring Network Trapping Data Now Available

The Grape Root Borer*Volunteer Monitoring Network (GRB*VMN) has been up and running for a month, but the first, substantial trap captures occurred last week. The network consists of 10 locations in seven North Carolina counties (Fig. 2). Trap captures from these sites will be available through the end of October, when the grape root borer flight is expected to end.

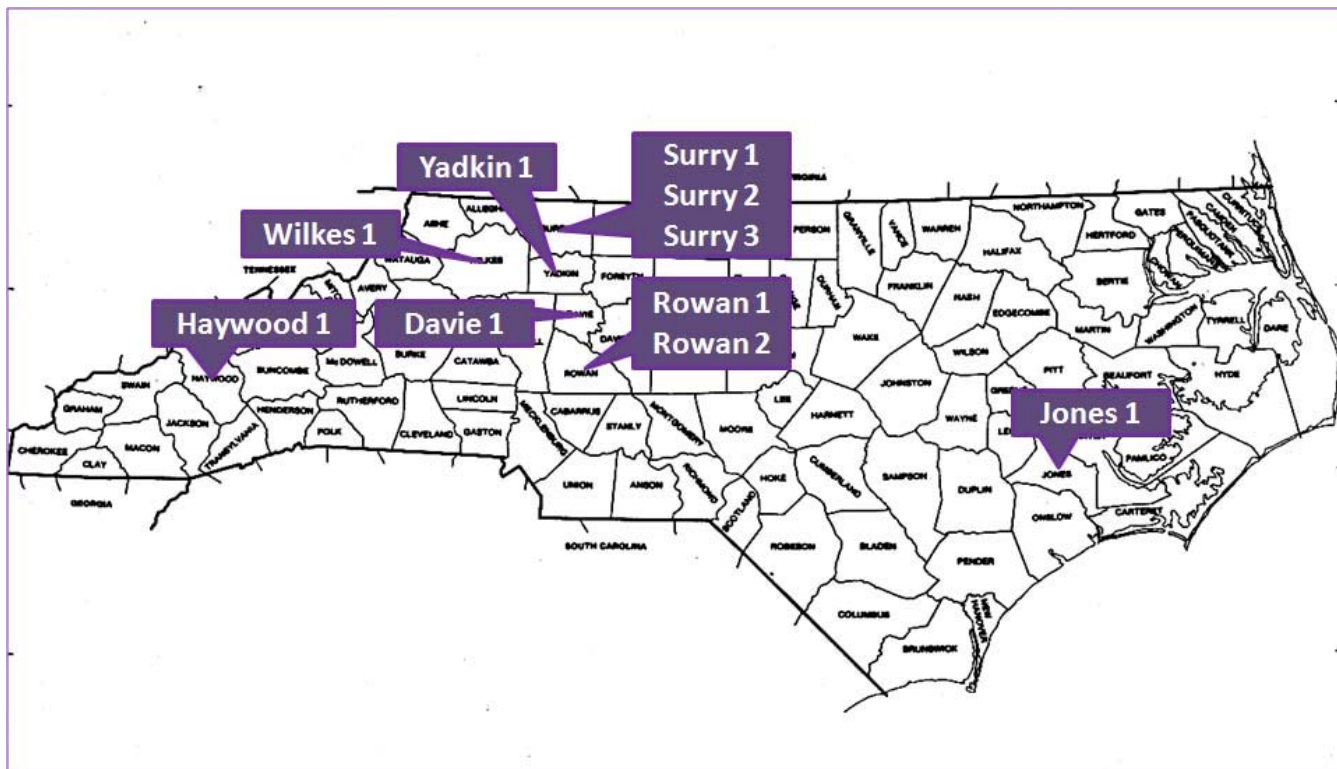


Fig. 2. 2011 GRB*VMN sites. Sites are only identified to the county level and assigned a number for record keeping purposes when there are multiple sites per county. Figure from Hannah Burrack.

The highest number of trap captures is currently in Davie County (Fig. 3) with a few other locations catching some moths. It is interesting that our flight appears to be occurring so late in the year, since reports of moth captures began in July last year. We are monitoring the grape root borer flight in North Carolina to better understand when and where our highest populations occur. This information is important when making grape root borer management decisions, in particular whether or not to use currently labeled pesticides which must be used either 30 days before harvest or after harvest.

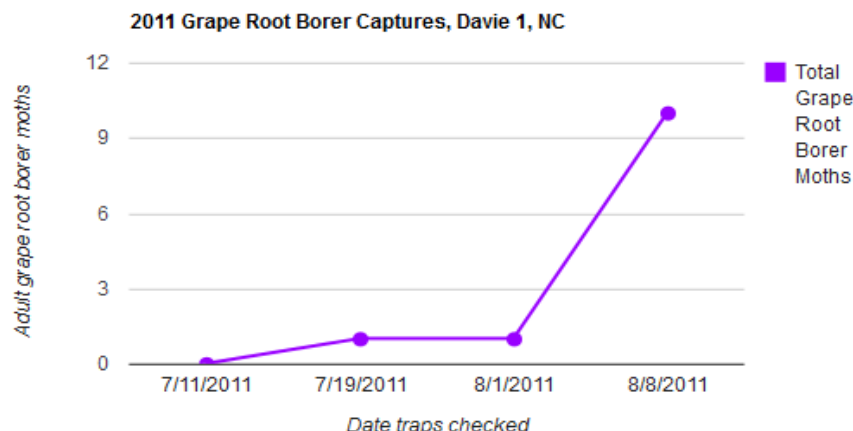


Fig. 3. Davie County, North Carolina grape root borer moth trap captures.

If you are interested in monitoring grape root borers yourself, go to the following website for more information: <http://ncsmallfruitsipm.blogspot.com/2011/06/do-it-yourself-grape-root-borer.html>.

Source: NC Small Fruit, Specialty Crop and Tobacco IPM Blog (<http://ncsmallfruitsipm.blogspot.com/>).

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      -    -
August 6            -    -      -    -      -    -      -    -
August 7            -    -      -    -      -    -      -    -
August 8           42    8      37   19      20    0      -    -
August 9           12    3      32    6      3    1      -    -
August 10          6    2      14   10      5    1      12    0
August 11          -    -       4    1      -    -      5    1
*****
    
```

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    -    -    -    -
August 8        1    2    47    3    1    -    -    -    -
    
```

```

August 10   -   -   34   6   -   3   -   -   -
August 12   -   -   14   1   -   18  -   -   -
*****
    
```

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
August 8        0            21             1             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
August 5	10	0	2	28	0	0	1	0	2
August 8	4	1	0	19	0	1	0	1	5

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

From: Arthur Whitehead, Jr., County Extension Director, Halifax County

Light Trap Data from Halifax County

Date	Hobgood			East Enfield			Weldon		
	CEW	BSB	GSB	CEW	BSB	GSB	CEW	BSB	GSB
July 11	0	0	0	-	-	-	-	-	-
July 13	4	0	6	-	-	-	-	-	-
July 15	0	0	0	-	-	-	-	-	-
July 18	0	0	0	12	0	0	3	0	0
July 20	2	0	4	0	0	0	6	0	0
July 22	2	0	1	15	0	2	4	0	0
July 25	0	0	4	9	0	0	7	0	1
July 27	1	0	1	14	0	0	10	0	1
July 29	-	-	-	-	-	-	-	-	-
August 1	1	0	1	0	0	10	10	0	1
August 3	0	0	0	12	2	0	2	0	0
August 5	1	0	2	8	0	0	1	0	3

Abbreviations: CEW = corn earworms;
 GSB = green stink bugs; BSB = brown stink 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
August 6  0      39       0       0       1       1       0       0
August 7  0      25       0       1       3       0       0       0
August 8  0       5       0       1       2       0       0       0
August 9  0       5       0       2       1       2       0       0
August 10 0      20       0       3       2       0       0       0
August 11 0      15       1       3       5       0       0       0
August 12 0      10       1       1       1       1       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*
August 5	13	1	11	3,1*
August 8	14	1	24	1

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

Date	Woodland			Conway			Galatia			Seaboard			Gaston			W. Gaston			Jackson		
	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	8	3	2	25	0	1	4	8	0	-	-	-	-	-	-	35	5	1
August 8	1	0	0	12	2	0	18	0	0	8	2	0	-	-	-	-	-	-	58	6	1
August 10	0	0	0	8	2	0	6	0	0	6	2	0	-	-	-	-	-	-	61	2	0
August 12	2	0	0	2	0	0	-	-	-	2	0	0	-	-	-	-	-	-	36	0	0

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     -      -
August 5         58      0     -      -
August 8          -      -     -      -
*****

```

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
August 5        25         5         76
August 8         9          4        180
August 12       18         6        292
*****

```

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
August 8      7      0      0      0      0      6      0      0      0
August 10    13      0      0      0      0      1      0      0      0
August 12     8      0      0      0      0      0      0      0      0
*****
    
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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

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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 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	-
August 10	16	0	295	5	34	0

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	-
August 8	2	1	26	1
August 10	3	-	12	-
August 12	-	-	4	-

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

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*****
                        Number of Adult Insects
*****
                        Kenly      Fountain  Pender's
*****                  *****
Date                    CEW  GSB      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        -    -
August 8                25    2       17    8        3    2
August 10               8    0       13    6        5    0
August 12              10    0        3    0        -    -
*****
    
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CEW = corn earworms; GSB = green stink bugs

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.

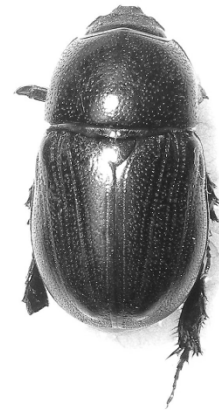
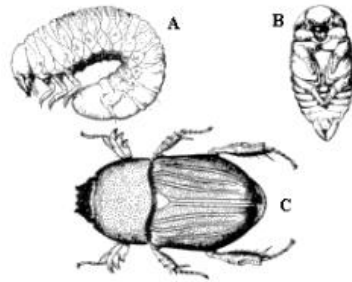
Quick Facts about the Sugarcane Beetle, *Euethola humilis*

•General history

- Sugarcane beetles are scarabs, similar to Japanese beetles, June beetles, chafers, etc.
- Probably native to North America
- First noted as a pest of corn in North Carolina in 1888
- Periodic pest of corn up to present day
- Recently more abundant in managed turf grass (last 10 years)
- Unlike other grubs, the **adult stage** of the sugarcane beetle **causes crop damage**. **Grubs** are **not** known to be **pests**.
- Adults are long lived and can be present throughout the warm months.

•Known hosts

- Corn
- Sugarcane
- Rice
- Sweetpotato
- Tobacco
- Strawberry
- Roses



•Life cycle in North Carolina

- One generation per year
- Adults (C) overwinter in the soil.
- Overwintering adults emerge in spring, lay eggs (June) and die.
- Grubs (A) develop in summer and pupate (B) in late summer and fall.
- Adults emerge (August- October) and feed in preparation for overwintering.

•Chemical and cultural control

- Seed treatments can be effective in corn.
- Only Lorsban and Belay have been shown to reduce damage in sweetpotato (in LA).
- Planting sweetpotato early reduces damage in LA.

•Pest status in North Carolina sweetpotato

- There have been no reports of damage to sweetpotato by sugarcane beetle in NC.
- The potential for damage does exist.

•Status of research on sugarcane beetle in North Carolina

- Turf grass Entomology Program at NCSU is currently studying the beetle
 - Recently characterized the life cycle and studied feeding preference in cool vs. warm season turf grasses

For additional information contact: *Mark R. Abney, NCSU Dept. of Entomology @ 919.515.2745 or at mark_abney@ncsu.edu*