In This Issue

Insects, Mites, and Nematodes
• Soybean Aphid Update
• Leafhopper Continues to Threaten Alfalfa
• High Corn Earworm Moth Flight
• Black Light Trap Catch Report

Agronomy Tips
• Replanted Corn Fields Catching Up

Weather Update
• Temperature Accumulations

Weeds
• Herbicide Resistance Screening Available at Michigan State University Diagnostic Services

Insects, Mites, and Nematodes

Soybean Aphid Update – (John Obermeyer, Christian Krupke, and Larry Bledsoe)

- Some colonization taking place in some fields
- White dwarfs are already being seen, likely high heat is stressing aphids

If one looks long and hard enough, soybean aphid can be found in soybean fields but overall densities remain very low. Observations from commercial and research fields are that a few plants are being found loaded with aphids, indicating that colonization is just beginning. However, we still have not seen treatable infestations anywhere in the state. Also found with those few aphid heavy plants were lady beetle adults and larva. Some white dwarfs have been seen, indicating that the aphids are stressed, likely a result of the extreme heat. Throughout most of the Midwest, soybean activity has been very light, including winged adult flights as monitored by the suction trap network <http://www.ncpmc.org/traps/index.cfm>.

Soybean growth and development continues to make excellent progress and moisture doesn’t appear to be a limiting factor for the crop. Though we are not completely out of the woods for this season with regard to aphids, the clearing is in sight. What a contrast from last year!

Occasional plants are thick with aphids

http://www.entm.purdue.edu/newsletters/
Leafhopper Continues To Threaten Alfalfa - (John Obermeyer, Christian Krupke, and Larry Bledsoe)

High populations of potato leafhopper continue their assault on alfalfa fields. There have been observations of high numbers of leafhoppers coming to lights at night and black light traps have been full of them. Undoubtedly, the hot conditions have contributed to this population explosion.

Producers are encouraged to inspect new growth soon after cutting for potato leafhopper; this is when alfalfa is most susceptible to feeding, leading to reduced yields and protein levels. Remember, once yellowing or “hopper burn” is seen, the damage has already been done. Refer to Pest&Crop #12, for sampling and management guidelines. For recommended insecticides, see E-220, Alfalfa Insect Control Recommendations – 2006. This and other field crop related publications can be viewed electronically at <http://www.entm.purdue.edu/entomology/ext/targets/e-series/fieldcro.htm>.

Pheromone traps have been recently full of earworm moths

High Corn Earworm Moth Flight – (John Obermeyer and Christian Krupke)

Corn earworm moths are becoming quite numerous in pheromone traps. This surge in moth activity should concern producers with corn that is late in development compared with other fields in the area. Earworm moths are attracted to fields with yellow silks for egg laying.

Pest managers need to carefully monitor their corn earworm pheromone and/or black light traps to determine moth numbers. The proper strategy for managing earworms is to apply insecticides to fresh, green silks when moths are flying. Two or three applications of approved insecticides spaced 4-5 days apart will usually provide adequate control. Experience has shown that more applications at lower rates provide better control that fewer applications at higher rates, even when the same total volume of insecticide is used.

Black Light Trap Catch Report - (John Obermeyer)

<table>
<thead>
<tr>
<th>County/Cooperator</th>
<th>7/18/06 - 7/24/06</th>
<th>7/25/06 - 7/31/06</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VC</td>
<td>BCW</td>
</tr>
<tr>
<td>Dubois/SIPAC Ag Center</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jennings/SEPAC Ag Center</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Knox/SWPAC Ag Center</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>LaPorte/Pinney Ag Center</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Lawrence/Feldun Ag Center</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Randolph/Davis Ag Center</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tippecanoe/TPAC Ag Center</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Whitley/NEPAC Ag Center</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

VC = Variegated Cutworm, BCW = Black Cutworm, ECB = European Corn Borer, SWCB = Southwestern Corn Borer, CEW = Corn Earworm, FAW = Fall Armyworm, AW = Armyworm

Leafhopper burn cannot be reversed by treating
Weeds

Herbicide Resistance Screening Available at Michigan State University Diagnostic Services - (Steven Gower, Michigan State University and Bill Johnson, Purdue University)

Herbicide resistance in weeds is a growing concern for growers, due largely to the recent occurrence and spread of glyphosate-resistant horseweed and occasional failures to control giant ragweed and common lambsquarters in Roundup Ready crops. Currently, there are more than 180 weed species resistant to one or more herbicides in the world (Heap 2006). These weeds have developed resistance to very effective herbicides in field, vegetable and fruit crops, as well as tree plantations and nurseries.

Confirming herbicide-resistant weed populations is the first step of any resistance management program. Verification will provide producers with the knowledge to implement the best possible management strategies, with the ultimate goal of preventing or limiting the spread of herbicide-resistant weeds.

For 2006, Purdue University weed scientists will continue screening weed samples for tolerance to glyphosate, but not other herbicides. Samples can be sent to:

Bill Johnson or Glenn Nice
Department of Botany and Plant Pathology
Lilly Hall of Life Sciences
915 West State Street
West Lafayette, IN 47907

There is no charge for this service and the cost is covered by a grant from the Indiana Soybean Board for this year. In 2007, it is unlikely that we will be able to do this for free.

Sampling Procedures:

1. Send either mature seeds or seedheads.
2. Collect seed or seedheads from 20 to 40 widely plants through the field.
3. Air dry seed/seedheads prior to packaging to prevent mold.
4. Label the package containing the seed or seedheads with the sample reference, name, and location.
5. Mail the samples and the survey form together to the address listed above.

This address will take you to a Herbicide Resistant Weed Screen form: <http://www.btny.purdue.edu/weedscience/2003/Articles/sform9-2-03.pdf>.

If herbicide resistance to herbicides other than glyphosate is suspected in any weed species, samples may be submitted to MSU Diagnostic Services for a resistance screen. In most circumstances, a whole plant pot assay established from seed will be the standard test for herbicide resistance confirmation. Mature, high quality seed or seedheads should be collected from suspicious plants in late summer or fall and submitted in a paper bag or envelope. Do not seal plants or seed in plastic!

Fees associated with herbicide-resistant weed testing for fields in Indiana are $75 per sample per herbicide site of action (i.e., ACCase inhibitors, ALS inhibitors, Photosynthesis inhibitors). Each additional site of action is $30 per sample. Samples submitted from Michigan producers are $50 per site of action and $20 for each additional site of action.

Please contact Steven Gower (517-432-9693, sgower@msu.edu) with any questions regarding resistance confirmation or sample collection. Samples can be mailed to:

Michigan State University
Diagnostic Services
101 Center for Integrated Plant Systems
East Lansing, MI 48824-1311
Attn: Steven Gower
Replanted Corn Fields Catching Up - (Bob Nielsen)

The ragged tall/short corn appearance of the hundreds, if not thousands, of Indiana fields that were partially replanted back in late May and early June following the atrocious emergence of most anything planted from May 5 through May 10 have dogged growers’ outlooks on life ever since. Many of those replanted areas are finally coming into the pollination period; later than desired but earlier than might be expected given the difference in planting dates between the original and replanted parts of the fields.

As I pointed in an earlier article (Nielsen, 2006), later planted corn tends to “catch up” by moving through parts of its life cycle more quickly. The accompanying graph depicts the decrease in number of days from planting to silking for three hybrids planted across a range of dates in west central Indiana in 2006 (Fig. 1).

All three hybrids planted May 5 at the beginning of the so-called “evil planting window” flowered 71 – 74 days later in mid-July. The same three hybrids planted 29 days later on June 3 were flowering late last week (late July); only 55 – 57 days after planting.

Even though the two planting dates varied by 29 days, the silking dates only varied by 12 to 14 days. Obviously, two weeks difference in flowering within a field still represents the potential for significant grain moisture differences at harvest. However, because late-planted corn “catches up” to a degree, the grain moisture differences will not be as large as some growers may have originally feared.

Thanks to Greg Bossaer, Purdue White Co. Extension, for triggering the notion for this article.

Related References


Fig. 1. Days from planting to 50% silk emergence for three corn hybrids planted across a range of dates in west central Indiana, 2006.
## Temperatures as of August 2, 2006

GDD(2) = Growing Degree Days from April 12 (2% of Indiana’s corn planted), for corn growth and development  
GDD(10) = Growing Degree Days from April 26 (10% of Indiana’s corn planted), for corn growth and development  
GDD(33) = Growing Degree Days from May 3 (33% of Indiana’s corn planted), for corn growth and development  
GDD(74) = Growing Degree Days from May 10 (74% of Indiana’s corn planted), for corn growth and development

<table>
<thead>
<tr>
<th>Location</th>
<th>GDD(2)</th>
<th>GDD(10)</th>
<th>GDD(33)</th>
<th>GDD(74)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wanatah</td>
<td>1757</td>
<td>1617</td>
<td>1565</td>
<td>1494</td>
</tr>
<tr>
<td>Kendalville</td>
<td>1865</td>
<td>1709</td>
<td>1651</td>
<td>1568</td>
</tr>
<tr>
<td>Winamac</td>
<td>1852</td>
<td>1710</td>
<td>1660</td>
<td>1589</td>
</tr>
<tr>
<td>Bluffton</td>
<td>1687</td>
<td>1545</td>
<td>1485</td>
<td>1413</td>
</tr>
<tr>
<td>Young America</td>
<td>1884</td>
<td>1737</td>
<td>1684</td>
<td>1607</td>
</tr>
<tr>
<td>W. Lafayette (ACRE)</td>
<td>1956</td>
<td>1822</td>
<td>1766</td>
<td>1686</td>
</tr>
<tr>
<td>Tipton</td>
<td>1744</td>
<td>1603</td>
<td>1554</td>
<td>1486</td>
</tr>
<tr>
<td>Winchester</td>
<td>1870</td>
<td>1719</td>
<td>1668</td>
<td>1593</td>
</tr>
<tr>
<td>Perrysville</td>
<td>2065</td>
<td>1902</td>
<td>1839</td>
<td>1755</td>
</tr>
<tr>
<td>Carmel</td>
<td>1872</td>
<td>1724</td>
<td>1667</td>
<td>1598</td>
</tr>
<tr>
<td>New Castle</td>
<td>1834</td>
<td>1686</td>
<td>1635</td>
<td>1567</td>
</tr>
<tr>
<td>Greencastle</td>
<td>1903</td>
<td>1736</td>
<td>1681</td>
<td>1610</td>
</tr>
<tr>
<td>Brookville</td>
<td>933</td>
<td>1760</td>
<td>1692</td>
<td>1610</td>
</tr>
<tr>
<td>Greensburg</td>
<td>2075</td>
<td>1905</td>
<td>1846</td>
<td>1761</td>
</tr>
<tr>
<td>Oolitic</td>
<td>1896</td>
<td>1717</td>
<td>1659</td>
<td>1582</td>
</tr>
<tr>
<td>Freelandville</td>
<td>2154</td>
<td>1967</td>
<td>1904</td>
<td>1825</td>
</tr>
<tr>
<td>Stendal</td>
<td>2260</td>
<td>2030</td>
<td>1955</td>
<td>1870</td>
</tr>
</tbody>
</table>

**Location**  
Max.  Min.
---  ---
Wanatah | 100 | 78
Columbia City | 90 | 77
Lafayette | 99 | 81
Farmland | 98 | 80
Butlerville | 94 | 78
Vincennes | 102 | 86

**DISCLAIMER** Reference to products in this publication is not intended to be an endorsement to the exclusion of others which may have similar uses. Any person using products listed in this publication assumes full responsibility for their use in accordance with current directions of the manufacturer. It is the policy of the Purdue University Cooperative Extension Service, David C. Petritz, Director, that all persons shall have or disability. Purdue University is an Affirmative Action employer.  
1-888-EXT-INFO (398-466)  
<http://www.ces.purdue.edu/extmedia>