Purdue Cooperative Extension Service **August 4, 2006 - Issue 19**

In This Issue

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

Leafhopper Continues To Threaten Alfalfa - (*John Obermeyer, Christian Krupke, and Larry Bledsoe)*

- Regrowth is most at risk to feeding damage
- Damage has already occurred once "hopper burn" is noticed

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>.

Hopper burn cannot be reversed by treating

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

- Earworm moth activity has surged
- Late-market sweet corn and late-planted seed corn are at greatest risk to damage
- Several insecticide applications at silking may be necessary for "worm" free corn

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.

Pheromone traps have been recently full of earworm moths

Black Light Trap Catch Report - (*John Obermeyer*)

County/Cooperator	7/18/06 - 7/24/06							7/25/06 - 7/31/06						
	VC	BCW	ECB	SWCB	CEW	FAW	AW	VC	BCW	ECB	SWCB	CEW	FAW	AW
Dubois/SIPAC Ag Center	0	0	2	1	0	2	1	0	1	2	0	5	0	2
Jennings/SEPAC Ag Center	0	0	1	0	0	0	0							
Knox/SWPAC Ag Center	0	0	1	0	2	0	1	0	0	8	2	16	1	4
LaPorte/Pinney Ag Center	0	1	10	0	0	0	8	0	0	10	0	1	0	10
Lawrence/Feldun Ag Center	0	0	8	0	1	0	7	0	5	2	0	30	0	8
Randolph/Davis Ag Center	0	0	2	0	0	0	1	0	0	3	0	3	0	3
Tippecanoe/TPAC Ag Center	3	3	2	0	0	0	39	0	0	6	0	0	0	17
Whitley/NEPAC Ag Center	1	3	4	0	0	0	30	0	1	8	0	10	0	8

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

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

Agronomy Tips

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).

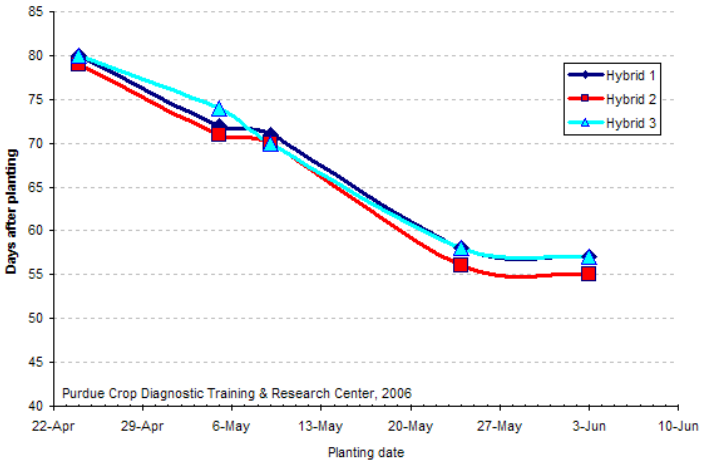


Fig. 1. Days from planting to 50% silk emergence for three corn hybrids planted across a range of dates in west central Indiana, 2006.

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

Nielsen, R.L. (Bob). 2006. Late Planting/Replanting & Relative Hybrid Maturity. Corny News Network, Purdue Univ. Online at <http://www.kingcorn.org/news/articles.06/HybridMaturity-0516.html> [URL verified 7/31/06].

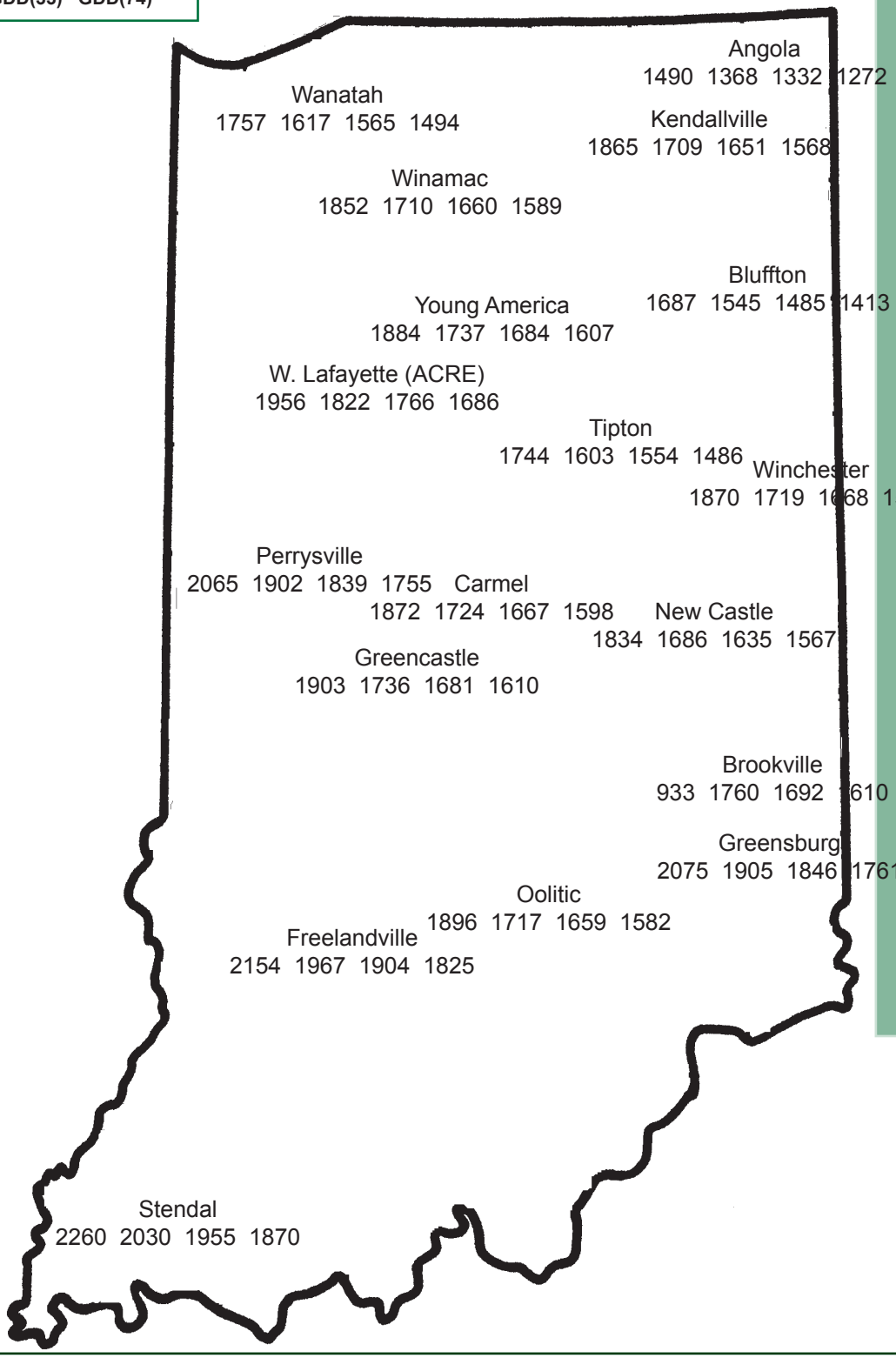
For other Corny News Network articles, browse through the CNN Archives at <http://www.kingcorn.org/news/archive.html>. For other information about corn, take a look at the Corn Growers' Guidebook at http://www.kingcorn.org.

Weather Update

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

MAP KEY
Location
GDD(2) GDD(10) GDD(33) GDD(74)



4" Bare Soil Temperatures 8/2/06

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