Purdue Cooperative Extension Service
USDA-NIFA Extension IPM Grant

May 17, 2013 - Issue 7

In This Issue

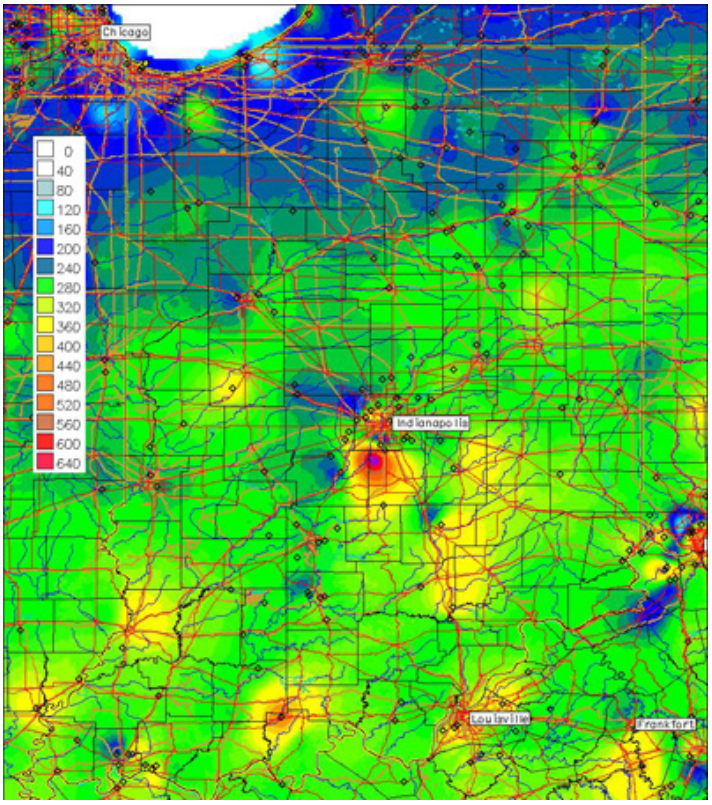
Insects, Mites, And Nematodes

Black Cutworm Development May Coincide With Emerging Corn - (*Christian Krupke and John Obermeyer*)

- Black cutworm moths continue to arrive.
- Larval development will surge with recent high temperatures, scouting of high-risk, emerged fields in southern and central counties is highly recommended.
- Seed insecticides and Bt-corn will provide suppression of this pest, but will NOT control heavy populations, particularly when larvae are large.

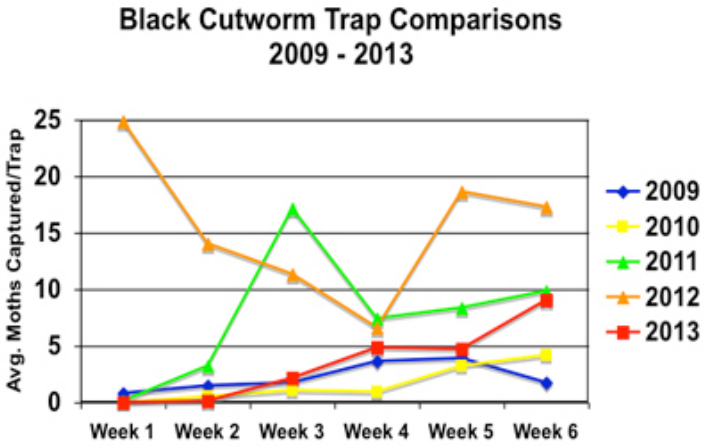
Delayed planting, coupled with significant egg laying in weedy fields combine to create potential for significant cutworm damage this week. We track the development of the black cutworm from the time of an intensive capture (mid-April) to predict first cutting/damage (refer to accompanying map). Based on the growth development model, it takes approximately 300 heat units (above the 50˚F base) from egg hatch to the stage when black cutworm larvae begin to cut plants. Leaf injury, though less noticeable, will likely be present before cutting, as this is done by smaller larvae. Using pheromone trapping of moths and tracking of heat unit accumulations for first cutting is not an exact science, but they do give us a good indication of what to expect and when to start looking. However, without walking fields, it's not possible to predict if individual fields will be infested.

Accumulated Heat Units (Base 50) for Black Cutworm Development Since April 18



With many areas of Indiana just planted (about 30% statewide as of Monday the 13th), moths may have found these weedy fields as an ideal egg-laying site. Tillage at, or just before, planting will provide little control of the eggs or newly hatched larvae – it will mostly serve to move them around a bit. Since black cutworm has been a minor pest the past several years, producers may have a false sense of security with the seed-applied insecticides and/or Bt-corn. Low population densities are the primary reason we have not seen damage.

Many fields, especially those with significant weed/cover crops, are being treated with a foliar insecticide at the time of herbicide burn-down. We understand the proactive approach, especially with the delayed planting. However, these insecticides have their limitations, specifically when subjected to sunlight, rainfall, heat, and dust. Claims of multiple weeks of control with foliar insecticides in spring conditions are simply unfounded; 7-10 days of control is the most optimistic estimate. Remember that these are contact insecticides, and insects will have to walk on the residues as soon as possible. Once they hit the soil, breakdown begins. Some good news: as soil temperatures rise with the sudden surge in temperatures, corn should emerge and grow quickly and "power through" most insect damage. We can manage this pest effectively and have done so in the past: Timely scouting and rescue foliar insecticides *when necessary* are the tried and true approach with black cutworm. Happy scouting!



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

County/Cooperator	4/30/13 - 5/6/13							5/7/13 - 5/13/13						
	VC	BCW	ECB	WBC	CEW	FAW	AW	VC	BCW	ECB	WBC	CEW	FAW	AW
Dubois/SIPAC Ag Center								0	0	0	0	0	0	0
Jennings/SEPAC Ag Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Knox/SWPAC Ag Center	2	0	0	0	0	0	16	0	0	0	0	0	0	9
LaPorte/Pinney Ag Center	0	0	0	0	0	0	13							
Lawrence/Feldun Ag Center	0	0	0	0	0	0	9							
Randolph/Davis Ag Center	0	0	0	0	0	0	12	0	0	0	0	0	0	6
Tippecanoe/TPAC Ag Center	2	1	0	0	0	0	32	0	1	0	0	0	0	17
Whitley/NEPAC Ag Center	2	1	0	0	0	0	18	0	0	0	0	0	0	4

VC = Variegated Cutworm, BCW = Black Cutworm, ECB = European Corn Borer, WBC = Western Bean Cutworm, CEW = Corn Earworm, FAW = Fall Armyworm, AW = Armyworm

Black Cutworm Adult Pheromone Trap Report
Week 1 = 5/2/13 - 5/8/13 Week 2 = 5/9/13 - 5/15/13

County	Cooperator	BCW Trapped		County	Cooperator	BCW Trapped	
		Wk 1	Wk 2			Wk 1	Wk 2
Adams	Kaminsky/New Era Ag	39*	8	Knox	Bower/Ceres Solutions/Vincennes	2	0
Adams	Roe/Mercer Landmark	0	6	Knox	Hoke/SWPAC	13	16
Allen	Anderson/Syngenta Seed	4	6	Lake	Kleine/Kleine Farms	27*	15
Allen	Gynn/Southwind Farms	23*	18*	Lake	Moyer/Moyer Seed Sales - Shelby	4	2
Benton	Babcock/Ceres Solutions	3	10	Lake	Moyer/Moyer Seed Sales - Schneider	10	9
Boone	Campbell/Beck's Hybrids	15*	2	LaPorte	Barry/Kingsbury Elevator	0	0
Boone	Carrell/Lamb Farms Agronomy	11	12	LaPorte	Rocke/Agri-Management Solutions	3	4
Clay	Bower/Ceres Solutions - Brazil	0	0	Miami	Early/Pioneer	3	2
Clay	Bower/Ceres Solutions - Clay City	0	0	Newton	Moyer/Moyer Seed Sales	0	3
Clinton	Foster/Purdue Entomology	22*	20*	Porter	Leuck/PPAC	2	0
DeKalb	Hoffman/ATA Solutions	0	6	Putnam	Nicholson/Nicholson Consulting	7	3
Dubois	Eck/CES	2	2	Randolph	Boyer/DPAC	6	5
Elkhart	Kaufman/Crop Tech1	3	8	Rush	Schelle/Falmouth Farm Supply	0	1
Fayette	Schette/Falmouth Farm Supply	1	0	Starke	Wickert/Wickert Agronomy Services	0	0
Fountain	Mroczkiewicz/Syngenta	9	3	Sullivan	Bower/Ceres Solutions - New Lebanon	0	1
Fulton	Jenkins/N. Central Coop - Rochester	10	0	Sullivan	Bower/Ceres Solutions - Sullivan W	4	3
Fulton	Jenkins/N. Central Coop - Kewanna	2	3	Sullivan	Bower/Ceres Solutions - Sullivan E	0	2
Hamilton	Campbell/Beck's Hybrids	10	2	Sullivan	Bower/Ceres Solutions - Farmersburg	2	2
Hendricks	Nicholson/Nicholson Consulting	76*	91*	Tippecanoe	Bower/Ceres Solutions	2	1
Henry	Schelle/Falmouth Farm Supply	2		Tippecanoe	Nagel/Ceres Solutions	79*	67*
Jasper	Overstreet/Purdue CES	4	2	Tippecanoe	Obermeyer/Purdue Entomology	20*	6
Jasper	Ritter/Brodbeck Seeds	5	1	Tippecanoe	Westerfeld/Monsanto	4	6
Jay	Shrack/RanDel AgriServices	1	0	White	Reynolds	6	1
Jennings	Bauerle/SEPAC	1	0	Whitley	Walker/NEPAC	3	7
Knox	Bower/Ceres Solutions/Frichton	3	0				

*=Intensive Capture...this occurs when 9 or more moths are caught over a 2-night period

Weeds

Control of Dandelion in No-till Corn and Soybean – (*Travis Legleiter and Bill Johnson)*

The warmer, drier conditions of the last couple of weeks have allowed producers to start spring planting operations in a majority of the state. Among those operations have been spring burndowns in no-till fields and from what we have observed so far many of those fields have high populations of dandelion. We have noticed that many fields that have already received a spring burndown often failed to control the dandelions. The increased amounts of dandelion and failed control are a combination of many factors.

The sudden increase in dandelion populations is due to weather conditions from last summer through this spring. Last years summer drought lead to the destruction or early harvest of many corn fields followed by a fall that provided some rainfall relief. Dandelion plants emerge in the fall and spring and in such case as last year the early opening of cornfield canopies and a moist fall were perfect conditions for the fall emerging dandelion. The dandelion plants that emerged were likely allowed to persist through the winter and have now taken advantage of the delayed spring and have produced large rosettes that are no doubt hard to control.

Dandelion is a hard to control weed anyway, but when allowed to establish as it has in many fields this spring it is especially hard to control. The most effective time to control dandelion is in the fall with a 2,4-D plus chlorimuron (Canopy/Cloak DF/EX) herbicide application. Spring burndowns should contain more than just glyphosate and 2,4-D to

achieve effective control of dandelion. In no-till corn the best burndown option is Lumax/Lexar plus 2,4-D ester. The addition of chlorimuron or cloransulam to a glyphosate plus 2,4-D tank mix will achieve the best dandelion efficacy in no-till soybean, with chlorimuron having the superior control.

Producers who have already applied a spring burndown and failed to control dandelion still have a few options for control of those dandelion plants that were not controlled. In corn a post emerge application of dicamba or dicamba plus steadfast ATZ will provide additional control. Combinations of HPPD inhibitors Callisto or Laudis/Corvus plus atrazine will also control previously injured dandelion plants in corn. As similar to the burndowns an addition of Classic or Firstrate to the glyphosate tank will help suppress previously injured dandelion in soybean.

Producers who have experienced increased dandelion pressure this spring should consider scouting their fields this fall for dandelion seedlings and consider a fall burndown to decrease populaitons that will occur next spring.

For further information on dandelion control refer to the Ohio and Indiana Weed Control Guide. Specific dandelion recommendations can be found on page 158.

Plant Diseases

Update on Fusarium Head Blight and Stripe Rust of Wheat - (*Kiersten Wise*)

Wheat growth stages vary across the state, but many fields are flowering or beginning to flower in areas of southern/central Indiana. These regions are at low to moderate risk for Fusarium head blight (FHB) development, however the intermittent rains and warmer temperatures will likely increase risk of disease development.

Stripe rust of wheat has now been reported in several counties in southern IN. The disease is at low incidence and severity in fields. The fungus that causes stripe rust (*Puccinia striformis*) produces a yellowish or orange spore, and pustules appear in a row on infected leaves, giving it a "striped" appearance (Figure 1). Purdue Extension Bulletin BP-79-W, "Identifying Rust Diseases of Wheat and Barley" is available to aid in diagnosis of stripe rust, and can be found at the following link: <https://mdc.itap.purdue.edu/item.asp?itemID=19349>. Fungicide applications for FHB management in these areas will also limit development of stripe rust.

Fields should be scouted for stripe rust prior to the decision to make a fungicide application. Stripe rust has not been confirmed in central or northern IN yet, but may develop and coincide with the timing of a fungicide application for FHB suppression in these areas. Fungicide applications to manage FHB need to be made at Feekes 10.5.1, or early flowering. The fungicides available for Fusarium head blight control are also effective at managing stripe rust, should the need arise. Foliar fungicides available for control are listed in the foliar fungicide efficacy table developed by the North Central Regional Committee on Management of Small Grain Diseases or NCERA-184 committee, and through the Purdue Extension bulletin BP-162-W: <https://ag.purdue.edu/btny/Extension/Pages/ExtPubs.aspx>.

The foliar disease Septoria/Stagonospora leaf blotch has been observed in fields throughout the state, but is still at relatively low levels in most of Indiana. Symptoms of this disease are now visible on the leaves just below the flag leaf in areas in central Indiana. Fungicides applied at flowering for FHB suppression will also provide some level of protection from foliar disease on the flag leaf. Producers in northern IN who are considering a foliar fungicide application for Septoria/Stagonospora leaf blotch control through boot stage should keep in mind that applications made prior to flowering will NOT suppress FHB or the associated mycotoxin deoxynivalenol, or DON. If the risk for FHB increases after foliar fungicide applications are made, it may be necessary to make another application at flowering for FHB suppression.

Producers in central and northern IN should carefully monitor the Fusarium head blight risk map over the coming weeks as wheat is beginning to flower: <http://www.wheatscab.psu.edu/>. If temperature and humidity increase, the risk for disease development could increase in other northern and central counties in the state and fungicide applications to suppress disease may be necessary.

Figure 1. Stripe rust on wheat. (*Picture courtesy: Greg Shaner*)

Weather Update