



Purdue Cooperative Extension Service

May 6, 2011 - Issue 5

## In This Issue

### Insects, Mites, and Nematodes

- Other Cutworms, Too Early for Black Cutworm
- Black Cutworm Adult Pheromone Trap Report
- Black Light Trap Catch Report

### Plant Diseases

- Fusarium Head Blight Update

### Agronomy Tips

- “Snagged” Wheat Heads and Cold Temperatures

### Weather Update

- Temperature Accumulations

## Insects, Mites, And Nematodes

### Other Cutworms, Too Early for Black Cutworm - (Christian Krupke and John Obermeyer) -

- Many species of cutworms feed on corn and soybean.
- Black cutworm is the most common and damaging species but is a migrant into the state and is slow to develop in these cool temperatures.
- The dingy, variegated, and claybacked cutworm species all overwinter as partially grown larvae.
- The dingy and variegated cutworms are mainly leaf feeders, whereas the claybacked will also cut plants.
- Seed treatments aren't highly effective against these other species, because of their large size when feeding.

We continue to be impressed with the number of black cutworm moths being captured by our pheromone trap cooperators, see “Black Cutworm Adult Pheromone Trap Report.” Though we are wary of the potential impact these larvae could have on the soon planted corn crop, we know that heat units have been slow in coming...as well as the black cutworm's development. One astute agronomist from northern Indiana sent us a report about cutworms feeding on an emerging cornfield (yes, there is some corn out there). Many cutworm species look alike and identification

is often confusing. Generally, the black cutworm is our most commonly found species damaging the crop, which is why most assume it the culprit when damage is found.



Notice the coarse texture, “bumps,” of the black cutworm skin

Black cutworms do not overwinter in the Midwest, which is why we monitor their arrival each spring with pheromone traps. Once they arrive in large numbers (also called “intensive captures”) we begin predicting their development and subsequent damage with heat unit accumulations. We received multiple intensive captures on, and around, April 15 and have begun tracking their development (see accompanying map). There have not been sufficient heat units accumulated this spring for black cutworm to get 1/2 to 3/4 inches long – the size when they begin to cut plants. So, if one is finding cutworm damage on emerged corn at this time, there is another cutworm species to blame...that being one of the dingy, variegated, and/or claybacked cutworms.



Close-up of the dingy cutworm skin shows that it is relatively smooth

The dingy, variegated, and claybacked cutworm species all overwinter in Indiana as partially grown larvae. They actively feed on many forage and weedy plants in the fall, where they cease feeding and become dormant under

mats of plants (e.g., chickweed) for their winter's nap. As temperatures begin to increase in the early spring, they resume feeding. When weeds are killed by spring herbicide applications, they move to alternate food sources... if available, this could include the emerging crop. Because these larvae are about 3/4 inch in length at this time of year, they aren't deterred much by the relatively low-rate of insecticidal seed treatments. Therefore, depending on density of worms and the rate of the crop's growth and development, damage can be quite significant.

The dingy and variegated cutworms are primarily leaf feeders and will rarely cut plants, and if they do, the cutting is above ground level. Because a corn plant up to the 5-leaf stage can withstand severe defoliation without a yield loss (compare it to frost damage), treatment for these cutworms is rarely justified. However, the claybacked cutworm's damage is a mix of leaf feeding and plant cutting so black cutworm thresholds should be followed. To add to the confusion, other species of cutworms may be encountered feeding on crops as well. The sandhill cutworm, as its name implies, is found on sandy knolls. Sandhill and the glassy cutworms tend to be a perennial threat in specific environments, most producers that have experience with them are quite aware of their destructive abilities.



Variegated cutworm have distinct dorsal, yellowish dots on several of both segments.

Identification of these cutworm species is a little tricky and requires a pretty good understanding of morphological characteristics of immature insects, a course taught in Entomology. In short, while using a 10X magnifying lens, carefully analyze the skin texture of the worm. If it is considerably “bumpy,” it is most likely a black cutworm. The other cutworm species have smooth skin. Species identification can be confirmed by sending us live or “pickled” worms. Please contact us before doing so. Happy Scouting!

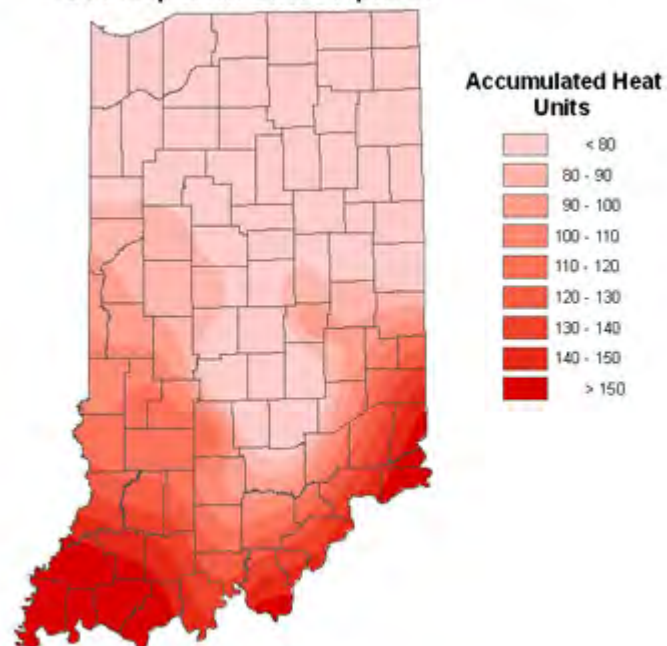
Claybacked cutworm skin texture is similar to the dingy, mostly smooth





Sandhill cutworm are smooth and almost translucent

### Accumulated Heat Units (Base 50) For Black Cutworm Development Since April 15



Analysis by Indiana State Climate Office  
Web: <http://www.idclimate.org>

### Black Cutworm Adult Pheromone Trap Report Week 1 = 4/21/11 - 4/27/11 Week 2 = 4/28/11 - 5/4/11

County	Cooperator	BCW Trapped		County	Cooperator	BCW Trapped	
		Wk 1	Wk 2			Wk 1	Wk 2
Adams	Kaminsky/ New Era Ag	0	2	Jennings	Bauerle/SEPAC	0	0
Adams	Roe/Mercer Landmark	18	8	Knox	Bower/Ceres Solutions/Oaktown	20	2
Allen	Anderson/Syngenta Seed			Knox	Bower/Ceres Solutions/Vincennes	7	23*
Allen	Gynn/Southwind Farms	1	4	Knox	Bower/Ceres Solutions/Frichton	2	3
Allen	Hoffman/ATA Solutions	20*	14*	Knox	Hoke/SWPAC	0	2
Benton	Babcock/Ceres Solutions	10*	12	Lake	Kleine/Kleine Farms	75*	50*
Clay	Bower/Ceres Solutions - Brazil	4	0	Newton	Ritter/Purdue CES	1	8
Clay	Bower/Ceres Solutions - Clay City	2	0	Porter	Leuck/PPAC	16	5
Clinton	Foster/Purdue Entomology	4	20*	Putnam	Nicholson/Nicholson Consulting	1	
Dubois	Eck/Debois Co. Purdue CES	1	1	Randolph	Boyer/DPAC	0	2
Elkhart	Willard/Crop Tech Inc.	14*	46*	Rush	Schelle/Falmouth Farm Supply	0	1
Fayette	Schelle/Falmouth Farm Supply	1	9	Starke	Wickert/Wickert Agronomy Services	0	
Fountain	Mroczkiewicz/Syngenta	12	9	Sullivan	Bower/Ceres Solutions - Sullivan W	0	1
Fulton	Jenkins/N. Central Coop - Kewanna	18*	1	Sullivan	Bower/Ceres Solutions - Sullivan E	6	4
Fulton	Jenkins/N. Central Coop - Rochester	13*	30*	Tippecanoe	Bower/Ceres Solutions - West Point	5	7
Hamilton	Beamer/Beck's Hybrids - Atlanta	11	4	Tippecanoe	Nagel/Ceres Solutions	31*	16*
Hamilton	Beamer/Beck's Hybrids - Sheridan	0	1	Tippecanoe	Obermeyer/Purdue Entomology	2	11
Hendricks	Nicholson/Nicholson Consulting	2	8	White	Reynolds/ConAgra Snack Foods	0	1
Henry	Schelle/Falmouth Farm Supply	1	5	Whitley	Walker/NEPAC	1	17*
Jasper	Overstreet/Purdue CES	2	3				
Jay	Shrack/RanDel AgriServices	0	1				

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

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

County/Cooperator	4/19/11 - 4/25/11							4/26/11 - 5/2/11						
	VC	BCW	ECB	SWCB	CEW	FAW	AW	VC	BCW	ECB	SWCB	CEW	FAW	AW
Dubois/SIPAC Ag Center	0	0	0	0	0	0	0							
Jennings/SEPAC Ag Center	0	0	0	0	0	0	7							
Knox/SWPAC Ag Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LaPorte/Pinney Ag Center	0	2	0	0	0	0	14	0	1	0	0	0	0	25
Lawrence/Feldun Ag Center	0	4	0	0	0	0	8	0	3	0	0	0	0	6
Randolph/Davis Ag Center	0	2	0	0	0	0	18							
Tippecanoe/TPAC Ag Center	0	4	0	0	0	0	21	0	2	0	0	0	0	17
Whitley/NEPAC Ag Center	0	4	0	0	0	0	32							

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

## Plant Diseases

### Fusarium Head Blight Update – (Kiersten Wise)

Wheat in southern Indiana is heading out and some fields will begin to flower this week. The recent rainy weather may have caused concern about development of Fusarium head blight, or scab, but the cool temperatures this week have kept many areas majority at low to medium risk for Fusarium head blight according to the wheat scab risk model that was discussed in last week's Pest and Crop article. This risk assessment tool can be accessed through <http://www.wheatscab.psu.edu/>.

There is a slight chance of rain later in the week in southern IN, followed by warmer weather. The wet, warm weather could increase the risk for infection by the fungus that causes FHB. This fungus, *Fusarium graminearum*, infects wheat during flowering, beginning at Feekes 10.5.1, and prefers rainy, warm, and humid weather conditions for infection and disease development.

Producers in southern areas of Indiana that have Fusarium head blight-susceptible varieties planted may choose to apply a fungicide. Fungicide applications need to be made at Feekes 10.5.1, or early flowering. There are several fun-

gicides available for Fusarium head blight control, and these 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: [http://www.ppdl.purdue.edu/ppdl/wise/NCERA\\_184\\_Wheat\\_fungicide\\_chart\\_2010\\_v2.pdf](http://www.ppdl.purdue.edu/ppdl/wise/NCERA_184_Wheat_fungicide_chart_2010_v2.pdf).

Caramba, Prosaro, and Proline were given a rating of "good" based on a designation system from the Regional Wheat Disease Committee. Products containing only tebuconazole (Folicur, others) were rated as fair, and propiconazole alone (Tilt, others) was rated as poor for management of Fusarium head blight. Remember, fungicides that have a strobilurin mode of action are not labeled for Fusarium head blight suppression. Be sure to follow label restrictions on how many days must pass between fungicide application and harvest.

Low levels of foliar diseases such as Septoria/Stagonospora leaf blotch have been observed in some fields, but overall, foliar disease levels are low. We will need to continue to monitor the level of risk for Fusarium head blight development in wheat in central and northern Indiana as the crop approaches heading in these areas.



## Agronomy Tips

### **“Snagged” Wheat Heads and Cold Temperatures -** (Shaun Casteel)

Wheat acres in Indiana have had a challenging season since last fall: bone-dry soils at planting (stand establishment), prolonged winter with freezing rain, sleet, and snow (winter survival), and cold and wet soils during green-up (nitrogen rates and losses due to topdressing timings). The recent colder temperatures are now causing some abnormal growth of wheat that is near the heading stage.

Many wheat fields are in the boot to head stages in southern Indiana with the central and the northern areas to follow. Cold temperatures will slow the growth rate of wheat and the emergence of the head. The extended time for head emergence can result in funny looking wheat. The tip of the head will “snag” at the flag leaf collar and begin to split the leaf sheath at the boot (Figure 1). The plant will continue to push the head, and it will begin to extend out the leaf sheath split. The tip of the head will often stay “snagged” as the head continues to slowly emerge (Figure 2). The “snagged head” will eventually pull away from the flag leaf collar or

push through the flag leaf collar. A “snagged head” will usually straighten depending on how “snagged” it is. Figure 3 shows a semi-straightened head that resulted from an earlier “snag.” “Snagged” wheat heads should not negatively influence grain yield.



Figure 2. Tip of wheat head “snagged” on the flag leaf collar as the rest of the head is pushed out the side.



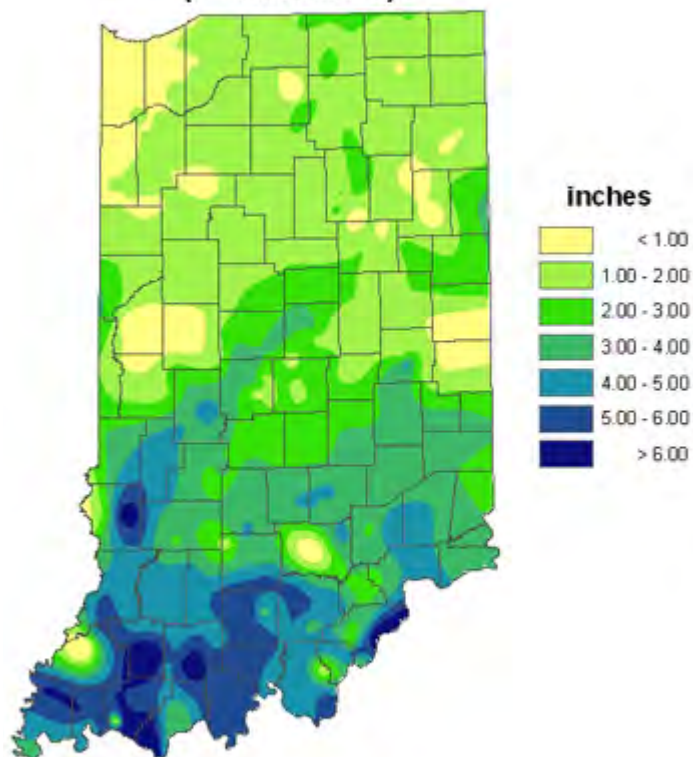
Figure 1. Tip of wheat head “snagged” on the flag leaf collar and thus, head splitting the leaf sheath.



Figure 3. Semi-straightened wheat head that resulted from a “snag” during head emergence.

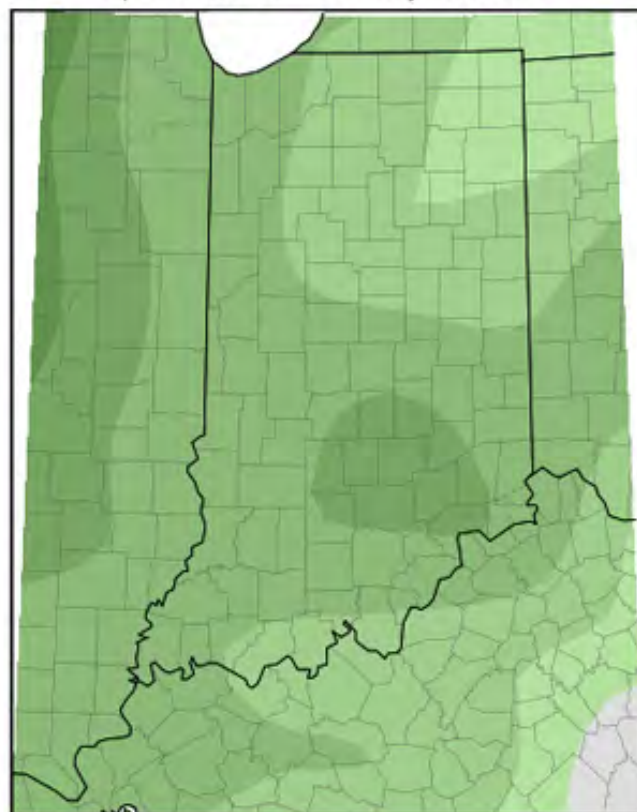
# Weather Update

## Total Precipitation April 28 - May 4 CoCoRaHS network (444 stations)



Analysis by Indiana State Climate Office  
Web: <http://www.iclimate.org>

## Average Temperature (°F): Departure from Mean April 28, 2011 to May 4, 2011



Indiana State Climate Office [www.iclimate.org](http://www.iclimate.org)  
Purdue University, West Lafayette, Indiana  
email: [iclimate@purdue.edu](mailto:iclimate@purdue.edu)