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Issue 3, April 22, 2016 • USDA-NIFA Extension IPM Grant

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Armyworm Moth Flight Increases – (Christian Krupke and John Obermeyer) -

- **New traps for armyworm, far more effective in capturing moths.**
- **Armyworm both migrate and overwinter in Indiana.**
- **Mated female moths are looking for lush, tall grasses to lay eggs.**

This year, we have installed Hartstack traps at each of the Purdue Ag Research Farms to monitor

the flight of armyworm in the spring and early summer. The Hartstack trap (also known as Texas cone trap), is a large, bulky, and expensive wire mesh trap used also to monitor corn earworm flights. Up until this week, the captured numbers have not been too impressive, but it's obvious that the recent warmer temperatures have this species on the move; refer to the following "Armyworm Pheromone Trap Report."

Although it is suspected that most armyworm moths migrate into the Midwest from southern states, similar to black cutworm, rising winter temperatures indicate that overwintering here in the Hoosier state is increasingly likely. This may explain why traditional small grain/grass forage growing areas of the state often have higher moth counts. Nonetheless, the important issue is that moths are now plentiful, actively flying, and seeking mates and egg-laying sites. In armyworms, the populations of adults are evenly male and female; so we use the male-only catches in pheromone traps to estimate the female numbers.

Once mated, female moths begin seeking favorable egg-laying sites. Those areas, deemed high-risk for oviposition are dense grassy vegetation (e.g., wheat, grass hay, grass cover crops). With the increase in cover crop adoption, it has been found that cereal rye grass is a favorite for armyworm. That being said, any lush grasses are likely being visited by armyworm moths this and subsequent weeks, until the cover is terminated. If the grass cover crop is terminated at least 10-14 days before planting corn, then the small armyworm larvae will likely starve before the corn emerges. The larvae prefer grasses but will eat anything they can if hungry. Armyworm will attempt to feed on any live plant (e.g., both crops and weeds) once their food source has been killed. However, they will not thrive on broadleaves, such as soybean, initially causing damage, but they will eventually die out from poor nutrition.

Happy Scouting!

Hartstack trap.

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Armyworm Pheromone Trap Report

County/Cooperator	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12
Dubois/SIPAC Ag Center	0	0	348									
Jennings/SEPAC Ag Center	0	0	15									
Knox/SWPAC Ag	0	6	197									

Center												
LaPorte/Pinney Ag Center	0	25	317									
Lawrence/Feldun Ag Center	4	97	155									
Randolph/Davis Ag Center	0	0	0									
Tippecanoe/Meigs	0	4	141									
Whitley/NEPAC Ag Center	7	21	619									

Wk 1 = 3/31/16 - 4/6/16; Wk 2 = 4/7/16 - 4/13/16; Wk 3 = 4/14/16 - 4/20/16

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Black Cutworm Adult Pheromone Trap Report

County	Cooperator	BCW Trapped		
		Week 1 3/31/16-4/6/16	Week 2 4/7/16-4/13/16	Week 3 4/14/16 - 4/20/16
Adams	Kaminsky/New Era Ag	6	6	11
Adams	Roe/Mercer Landmark	0	0	19
Allen	Anderson/Syngenta Seed	0	0	0
Allen	Gynn/Southwind Farms	0	0	2
Allen	Kneubuhler/G&K Concepts	0	0	1
Bartholomew	Bush/Pioneer Hybrids	0	0	0
Clay	Bower/Ceres Solutions - Clay City	0	0	0
Clay	Bower/Ceres Solutions - Clinton	0	0	0
Clay	Bower/Ceres Solutions - Bowling	0	0	1

	Green			
Clay	Bower/Ceres Solutions - Brazil	0	0	1
Clinton	Emanuel/Boone Co. CES	0	2	11
Clinton	Foster/Purdue Entomology	0	0	6
DeKalb	Hoffman/ATA Solutions	1	0	1
Dubois	Eck/Purdue CES	2	9	17
Elkhart	Barry/Helena			
Elkhart	Kauffman/Crop Tech Inc.	1	4	7
Fayette	Schelle/Falmouth Farm Supply Inc.			1
Fountain	Mroczkiewicz/Syngenta	1	2	13
Fulton	Jenkins/N. Central Coop - Airport	0	0	1
Fulton	Jenkins/N. Central Coop - Landfill	0	0	0
Gibson	Schmitz/Gibson Co. CES	0	0	0
Hamilton	Campbell/Beck's Hybrids	3	4	64*
Hamilton	Truster/Reynolds Farm Equipment	0	1	0
Hendricks	Nicholson/Nicholson Consulting	9	11	45*
Jasper	Overstreet/Jasper Purdue CES		0	0
Jasper	Ritter/Brodbeck Seeds			1
Jay	Boyer/Davis PAC	0	0	12
Jay	Shrack/Ran-Del Agri Services	0	0	13*
Jay	Temple/Jay County CES - Redkey	0	0	4
Jay	Temple/Jay County CES - Pennville	0	0	0
Jennings	Bauerle/SEPAC	0	1	0
Knox	Bower/Ceres Solutions - Fritchton	0	2	1
Knox	Bower/Ceres Solutions - Vincennes	5	7	10*

Lake	Kleine/Kleine Farms	7	13	13
Lake	Moyer/Dekalb Hybrids - Shelby	0	1	17*
Lake	Moyer/Dekalb Hybrids - Schneider	1	1	10
LaPorte	Rocke/Agri-Mgmt Solutions	0	0	1
Madison	Truster/Reynolds Farm Equipment	0	0	0
Miami	Early/Pioneer Hybrids	0	0	2
Miami	Myers/Myers Ag Service	0	0	
Newton	Moyer/Dekalb Hybrids	2	0	13
Porter	Leuck/PPAC	0	4	6
Pulaski	Capouch/M&R Ag Services	0	0	2
Putnam	Nicholson/Nicholson Consulting	1	1	4
Randolph	Boyer/DPAC	0	1	4
Rush	Schelle/Falmouth Farm Supply Inc.		1	1
Shelby	Fisher/Shelby County Co-op	0	0	0
Shelby	Simpson/Simpson Farms	1	4	15
Sullivan	Bower/Ceres Solutions - Farmersburg	0	0	1
Sullivan	Bower/Ceres Solutions - Sullivan E	0	0	5
Sullivan	Bower/Ceres Solutions - Sullivan W	0	1	0
Tippecanoe	Bower/Ceres Solutions			0
Tippecanoe	Nagel/Ceres Solutions	2	0	41*
Tippecanoe	Obermeyer/Purdue Entomology	1	1	0
Tippecanoe	Westerfeld/Kremer/ Monsanto	0	0	5
Tipton	Campbell/Beck's Hybrids	0	0	36*
Whitley	Walker/NEPAC1 - Main	1	2	33*

Whitley	Walker/NEPAC2 - Kyler	3	4	34*

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

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Wheat Disease Update – (Kiersten Wise and Anna Freije) -

Wheat growth stages vary widely across the state, and intermittent rains and warmer temperatures may influence foliar disease development over the next week. Currently, disease levels have been low, but there are a few diseases to keep in mind when scouting wheat.

Stripe rust of wheat has now been reported in several counties in southern Indiana. The disease is generally 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. It is important to consider variety susceptibility to stripe rust, growth stage, and disease spread before applying a fungicide for stripe rust management.

Reports of virus diseases have also been prevalent across southern and central Indiana. Virus diseases of wheat are difficult to tell apart in the field and require laboratory testing for accurate diagnosis. Infected plants typically first appear in uneven patches of yellow or light green within a field, which can be confused with nitrogen deficiency or winter injury (Figure 2). Often, symptoms appear first in low or poorly-drained areas of the field. The cool temperatures we experienced over the last two weeks enhanced symptom development of virus diseases in infected fields. Warmer temperatures will help reduce the appearance of symptoms and plants will appear to recover. Several wheat viruses may cause these symptoms, and Purdue Extension Bulletin BP-146 describes the symptoms and management of each of the wheat virus diseases in detail. This bulletin can be accessed at the following website: https://mdc.itap.purdue.edu/item.asp?Item_Number=BP-146-W.

The Purdue Plant and Pest Diagnostic Laboratory provides testing for the presence of wheat spindle streak (or yellow) mosaic virus (WSSMV), soil-borne wheat mosaic virus (SBWMV), and 5 strains of Barley yellow dwarf virus (BYDV) with a multiplex PCR detection assay. Contact the PPDL (https://ppdl.purdue.edu/PPDL/contacts.html) for testing fees. For an accurate diagnosis it is important to dig and submit entire plants exhibiting symptoms (see submission information at https://ppdl.purdue.edu/PPDL/physical.html). Although no control methods are available to reduce symptoms in currently infected plants, it is still important to get an accurate diagnosis for management of future wheat plantings. The best way to manage virus diseases is to plant resistant varieties in areas with a previous history of the diseases.

Producers in southern IN should start thinking about monitoring the Fusarium head blight risk map over the coming weeks in anticipation of wheat head emergence and flowering: http://www.wheatscab.psu.edu/.

Figure 1. Stripe rust on wheat. *(Photo Credit: Greg Shanner)*

Figure 2. Wheat exhibiting symptoms of soilborne virus diseases.

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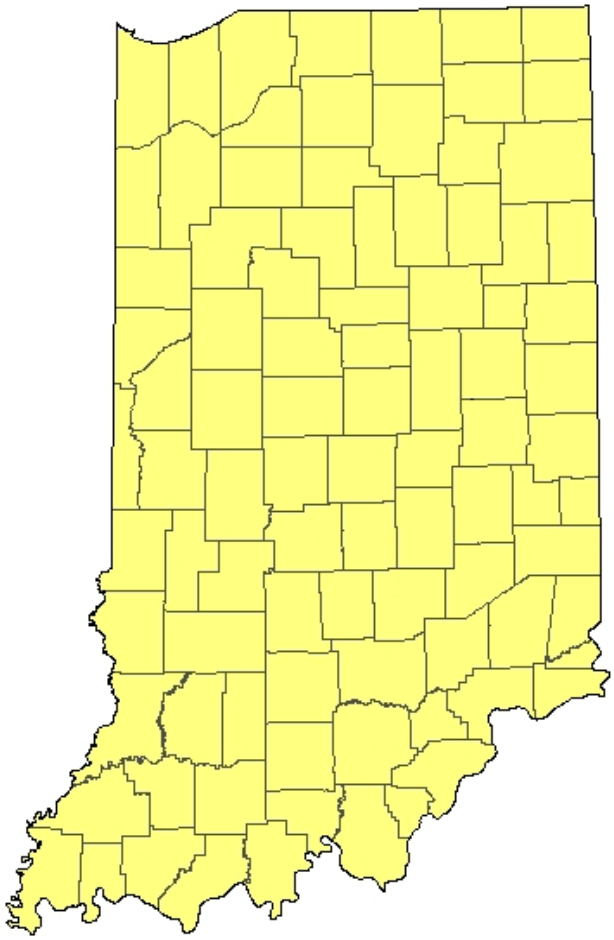
WEATHER UPDATE

Precipitation

Total Precipitation
April 14 - 20, 2016
CoCoRaHS network
(321 stations)



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

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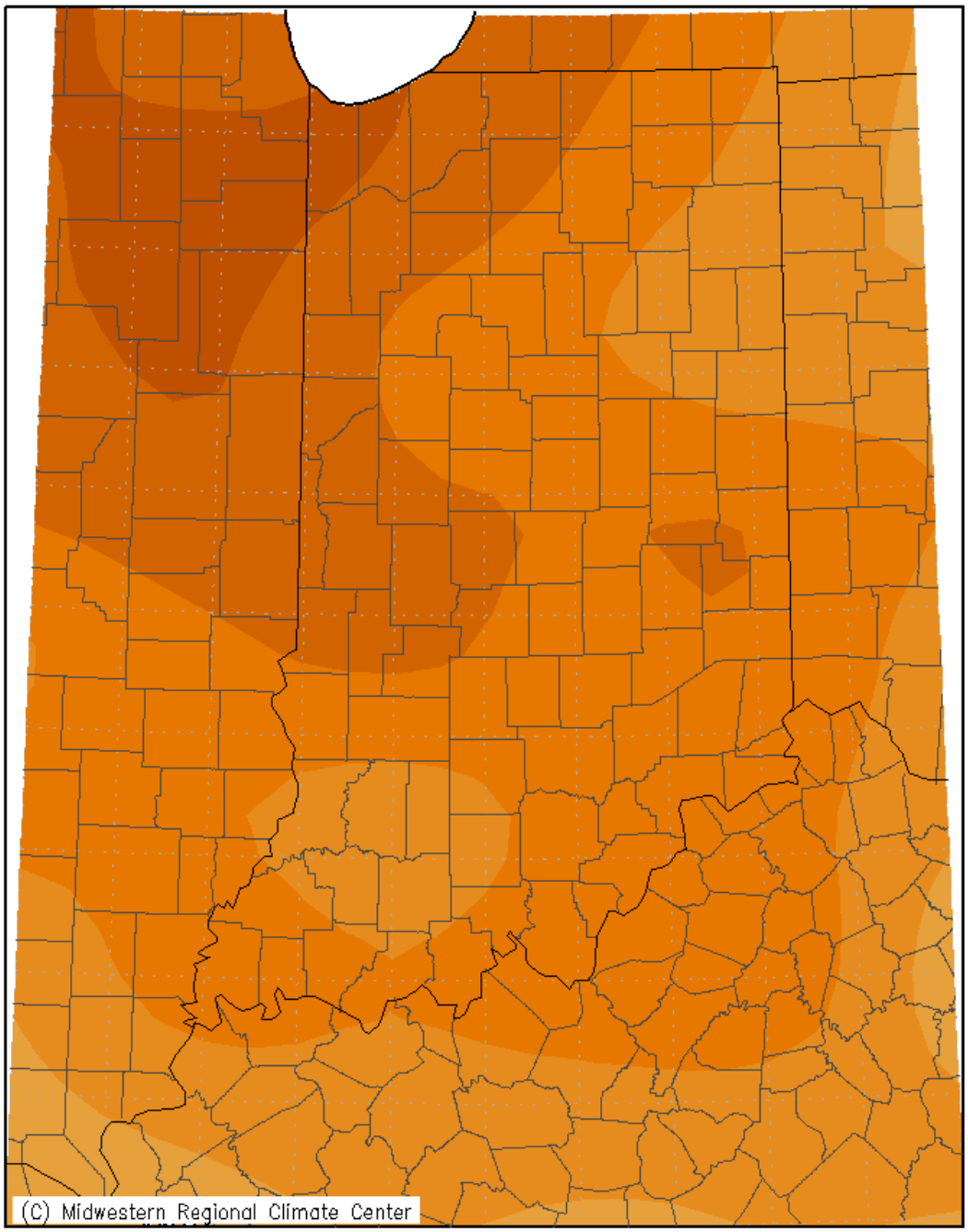
Temperature

Average Temperature (°F): Departure from Mean
April 13, 2016 to April 19, 2016



Mean period is 1981–2010.

Indiana State Climate Office www.iclimate.org
Purdue University, West Lafayette, Indiana
email: iclimate@purdue.edu

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THANKS FOR READING

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