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# Pest & Crop Newsletter

Purdue Cooperative Extension Service

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Issue 18, July 28, 2017 • USDA-NIFA Extension IPM Grant

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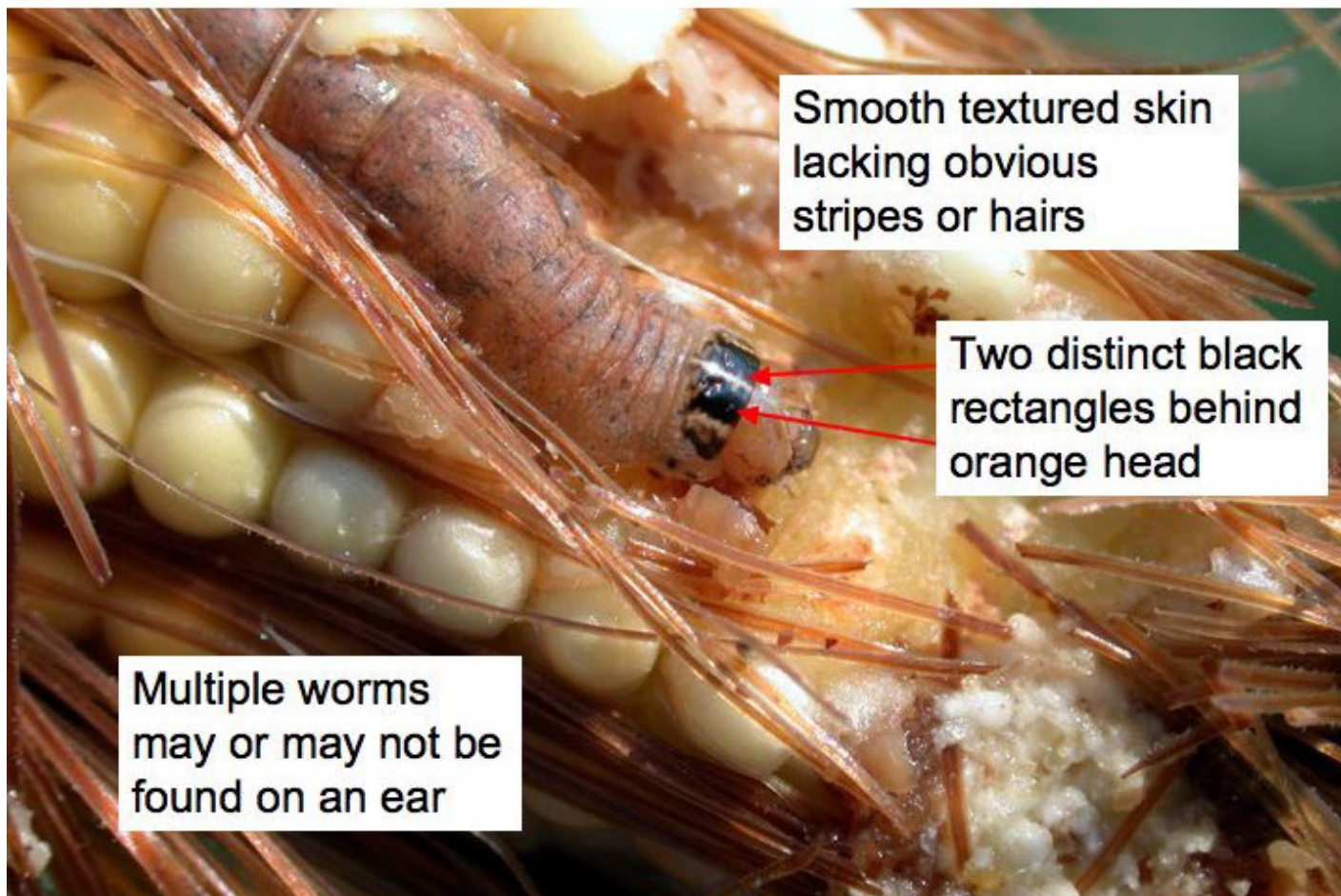
### **Identification of Worms in Silks and Ears – *(John Obermeyer and Christian Krupke)* -**

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This year's Western Bean Cutworm (WBC) flight in northern Indiana counties has been quite impressive. Though it is not over, by looking at the moth captures the past couple weeks (see report) we are past peak flight. Most eggs have been laid by this point, and there were many. We are aware that many fields have been scouted, found over the 5% threshold, and subsequently treated with insecticide. In the next weeks, folks will be out to determine the extent of damaged ears, if any, are present in fields. The distinguishing characteristics between mature western bean cutworm and corn earworm (CEW) larvae are found below. It is a little trickier to determine species when the larvae are small, i.e., early instars. For small caterpillars, you must use skin texture: WBC being smooth and CEW being bumpy. This requires a 10X magnifying lens. Not to add to the confusion, but there are a couple other caterpillars, fall armyworm and European corn borer, that also may be found in the ear. For now though, we will keep it to the two most likely suspects. As we enter later summer, caterpillars will be larger, more obvious and easier to tell apart. We will check back in at that time with another report.

Happy scouting!

# Western bean cutworm

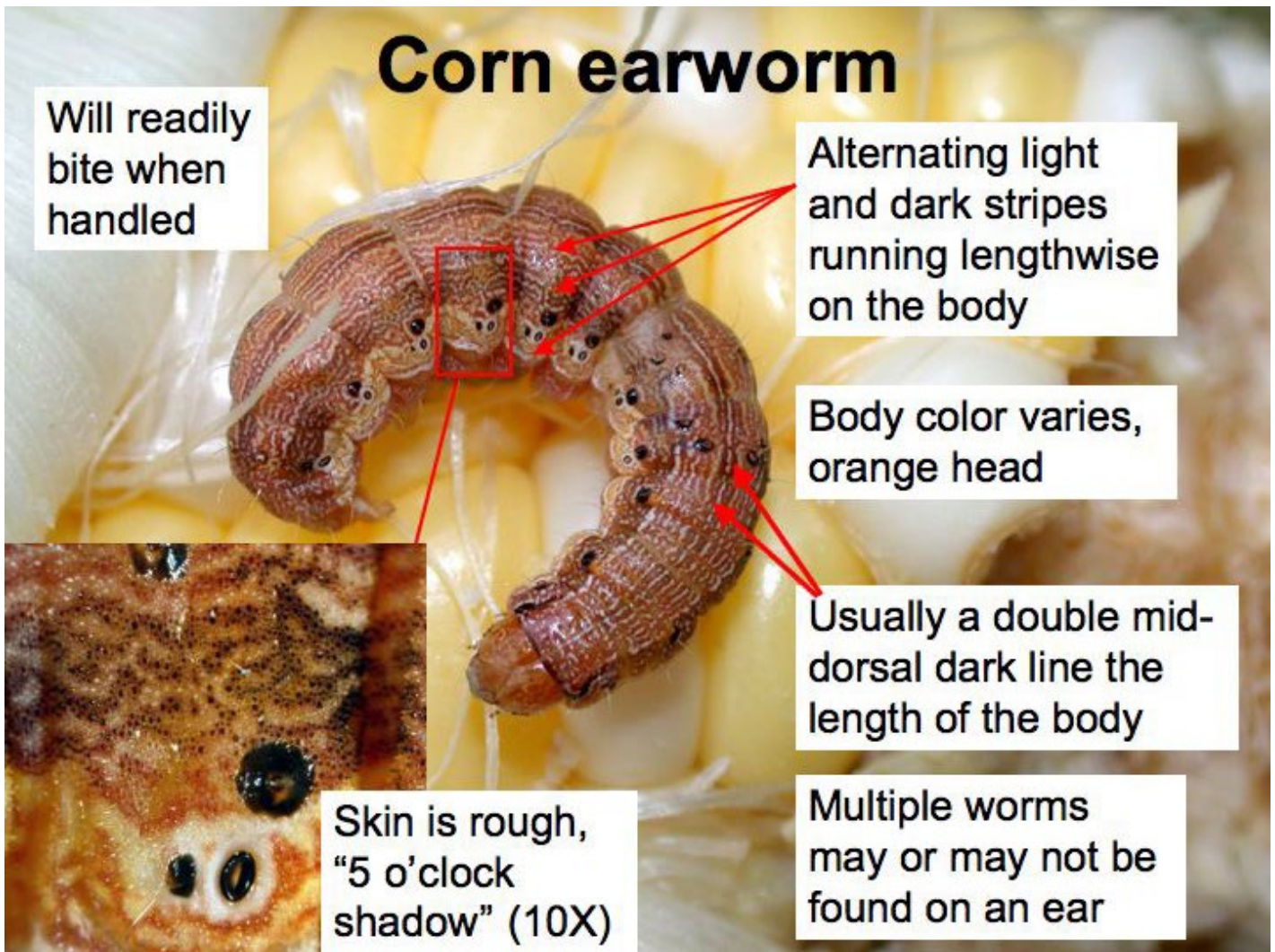


Smooth textured skin  
lacking obvious  
stripes or hairs

Two distinct black  
rectangles behind  
orange head

Multiple worms  
may or may not be  
found on an ear

*Western bean cutworm identifiers.*



*Corn earworm identifiers.*



*Early to late instars of the western bean cutworm. Notice that the distinctive “black rectangles” are lacking on the young larvae.*

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## **Japanese Beetle Treatment Guidelines – (Christian Krupke and John Obermeyer) -**

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- Beetle damage usually looks far worse than it is.
- Corn and soybean damage and treatment guidelines are given.

Japanese beetles have been seen throughout the state for several weeks, some are reporting very high numbers. Though adult emergence is past peak, there is still concern to field crop producers and (especially) homeowners. The one important thing to remember when it comes to Japanese beetles – their presence and damage almost always looks worse than it is.

**Field Corn:** Japanese beetle feed on corn leaves, tassels, and silks. Generally, leaf and tassel feeding can be ignored. If beetles are present and feeding on corn silks, an

insecticide should be applied only if on average the silks are being cut off to less than 1/2 inch before 50% pollination has taken place. This rarely happens on a field-wide basis. Edges are typically at much higher levels than the rest of the field, so don't let that dictate treatments. Also, don't be overly excited by this pest's tendency to clump on a few ears within an area and eat the silks down to the husks. With sufficient soil moisture (not a problem in most of the state this year), silks will grow from 1/2 to 1 inch per day during the one to two weeks of pollen shed. Silks only need to be peeking out of the husk to receive pollen. Besides, beetles are often attracted to silks that have already completed the fertilization process even though they are still somewhat yellow. Check for pollen shed and silk feeding in several areas of the field. Don't be overly influenced by what you think you may see from windshield surveys! Get out into fields to determine beetle activity.

**Soybean:** Soybean plants have the amazing ability to withstand considerable leaf damage (defoliation) before yield is impacted. The impact of defoliation is greatest during pod fill because of the importance of leaf area to photosynthesis, and ultimately to yield. Therefore, greater than 15% defoliation during pod fill can be tolerated before yields are economically affected. This defoliation must occur across the whole plant, not just the upper canopy. The beetles often congregate in areas of a field where they are first attracted to weeds such as smartweed and velvetleaf. As in the case of corn, don't be overly alarmed by these bright, iridescent beetles feeding on soybean plants near field edges. Consider that as they feed their defoliation allows for better sunlight penetration into the lower plant canopy!

However, should controls be needed, refer to publications:

***Corn Insect Control Recommendations***

<https://extension.entm.purdue.edu/publications/E-219/E-219.html>

***Soybean Insect Control Recommendations***

<https://extension.entm.purdue.edu/publications/E-77/E-77.html>



*Japanese beetle attracted to wild grape on a fence line next to soybean.*

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## 2017 Western Bean Cutworm Pheromone Trap Report – (John Obermeyer) -

County	Cooperator	WBC Trapped				
		Week 1 6/22/17 - 6/28/17	Week 2 6/29/17 - 7/5/17	Week 3 7/6/17 - 7/12/17	Week 4 7/13/17 - 7/19/17	Week 5 7/20/17 - 7/26/17
Adams	Kaminsky/New Era Ag	0	6	4	0	5
Adams	Roe/Mercer Landmark	0	8	6	1	0
Allen	Anderson/Syngenta Seed	0	4	26	34	14
Allen	Gynn/Southwind Farms	0	8	13	15	19
Allen	Kneubuhler/G&K Concepts/Harlan	0	4	13	4	
Allen	Kneubuhler/G&K Concepts/Koch	0	10	0	4	

Bartholomew	Bush/Pioneer Hybrids	0	0	0	0	0
Clay	Bower/Ceres Solutions/Clay City		0	0	0	
Clay	Bower/Ceres Solutions/Brazil		0	0	0	
Clinton	Emanuel/Boone Co. CES	1	1	1	0	1
Clinton	Foster/Purdue Entomology	0	0	2	1	
DeKalb	Hoffman/ATA Solutions			87	174	167
Dubois	Eck/Purdue CES	0	1	0	0	1
Elkhart	Kauffman/Crop Tech Inc.		35	156	150	95
Fayette	Schelle/Falmouth Farm Supply Inc.	1	1	0	0	0
Fountain	Mroczkiewicz/Syngenta	41	31	14	4	0
Fulton	Jenkins/N. Central Coop/Talma	379	385	167	76	5
Fulton	Ranstead/N. Central Coop/Rochester			309	46	
Gibson	Schmitz/Gibson Co. CES	0	0	2		
Hamilton	Campbell/Beck's Hybrids	3	2	2	2	
Hendricks	Nicholson/Nicholson Consulting	0	1	1	1	2
Jasper	Overstreet/Purdue CES	438	410	304	237	103
Jasper	Ritter/Brodbeck Seeds	302	171	124	97	14
Jay	Boyer/Davis PAC	5	1	0	3	
Jay	Shrack/Ran Del Agri Services	0	0	0	1	
Jay	Temple/Jay County CES/Pennville	0	1	3	2	0
Jay	Temple/Jay County CES/Redkey	3	4	7	2	0
Jennings	Bauerle/SEPAC	0	0	0	1	
Knox	Bower/Ceres Solutions/Vincennes		0	0	0	
Knox	Bower/Ceres Solutions/Freelandville		0	0		
Kosciusko	Klotz/Etna Green	75	112	92	46	
Lake	Kleine/Kleine Farms	0	4	41	11	0
Lake	Moyer/Dekalb Hybrids, Shelby	157	108	63	16	20
Lake	Moyer/Dekalb Hybrids, Schneider	246	151	101	93	63
LaPorte	Rocke/Agri-Mgmt Solutions, Wanatah	120	122	321	138	10
LaPorte	Smith/Co-Alliance/LaPorte	0	11	29	22	7
LaPorte	Smith/Co-Alliance/Fish Lake	6	20	109	107	115
LaPorte	Smith/Co-Alliance/Union Mills	15	19	122	100	40
LaPorte	Smith/Co-Alliance/LaCrosse	35	149	337	112	17
Marshall	Harrell/Harrell Ag Services		4	118	149	6
Marshall	Klotz/SR 10 & SR 331	29	81	130	90	13
Marshall	Miller/North Central Coop			48	43	10



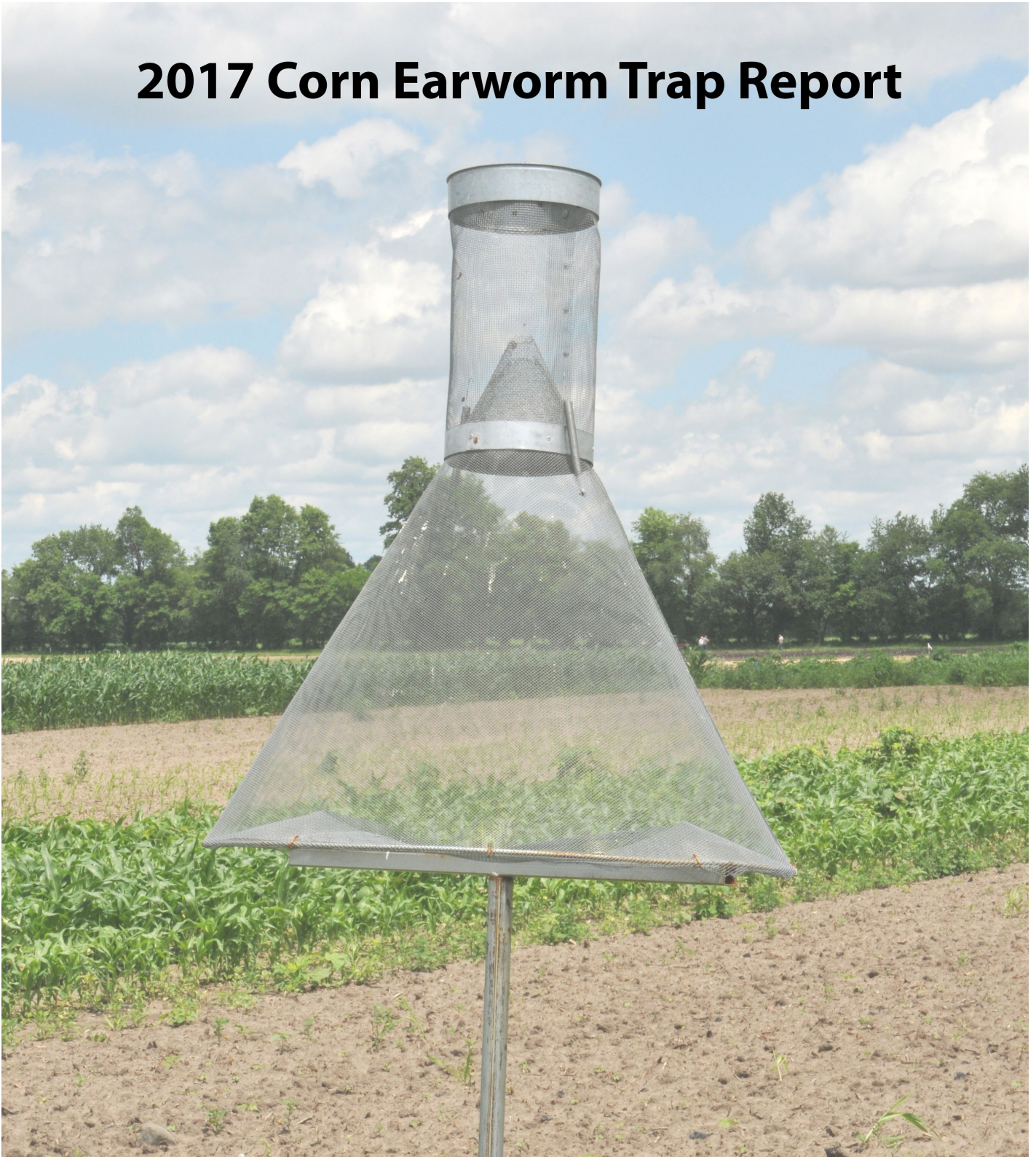
Miami	Early/Pioneer Hybrids	189	216	140	154	9
Newton	Moyer/Dekalb Hybrids, Lake Village	16	139	262	193	32
Porter	Leuck/PPAC	11	17	335	287	68
Pulaski	Capouch/M&R Ag Services	42	49	94	50	20
Pulaski	Leman/North Central Coop	4	22	34		
Putnam	Nicholson/Nicholson Consulting	0	2	0		
Randolph	Boyer/DPAC	2	2	3	0	
Rush	Schelle/Falmouth Farm Supply Inc.		0	0	0	0
Shelby	Fisher/Shelby Co. Co-Op	0	0	0	0	0
Shelby	Simpson/Simpson Farms	4	5	2	0	0
Starke	Capouch/M&R Ag Services	0	184	246	10	7
Starke	David Wickert/Wickert Consulting	5	28	21	10	4
Starke	Larry Wickert/Wickert Consulting	136	292	185	16	4
St. Joseph	Barry/Helena	3	28	108	56	26
St. Joseph	Gary Battles	1	12	16	16	10
St. Joseph	Carbiener/Union Twp.	0	11	50	19	7
St. Joseph	Smith/Co-Alliance/Granger	7	46	87	69	95
St. Joseph	Smith/Co-Alliance/New Carlisle	0	3	69	93	109
Sullivan	Bower/Ceres Solutions/Farmersburg		0	0	0	
Tippecanoe	Bower/Ceres Solutions/Sullivan		0	8	0	
Tippecanoe	Bower/Ceres Solutions/Lafayette		15	25	24	
Tippecanoe	Nagel/Ceres Solutions	1	1	6		
Tippecanoe	Obermeyer/Purdue Entomology	0	0	0	0	0
Tippecanoe	Westerfeld/Monsanto	2	3	0		
Tipton	Campbell/Beck's Hybrids	0	2	0	0	
Vermillion	Bower/Ceres Solutions/Clinton		0	0	0	
Wabash	Enyeart/North Central Coop	1	10	15		4
Whitley	Richards/NEPAC	23	70	39	13	5
Whitley	Richards/NEPAC			182	101	23

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## 2017 Corn Earworm Pheromone Trap Report – (John Obermeyer) -

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# 2017 Corn Earworm Trap Report



*Corn Earworm Trap Report*

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## Update on Southern Rust in Indiana – *(Kiersten Wise, University of Kentucky Plant Pathologist and Tom Creswell, Director of Purdue’s Plant and Pest Diagnostic Lab) -*

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Southern rust of corn, caused by the fungus *Puccinia polysora*, has been detected in several Indiana counties (Figure 1). The detection of southern rust is earlier than normal, and has caused concern because there are many acres of late planted or re-planted corn in the state in 2017 that have the potential to be impacted by the disease. However, whether or not southern rust will develop into a disease of concern will largely depend on the weather.

Southern rust can be a damaging disease, and foliar fungicide applications between tassel (VT) and milk (R3) can help protect plants from infection and disease development. However, it is important to consider corn growth stage AND weather conditions before deciding on a fungicide application. If the weather is hot, (mid-80s and above), humid, and there are heavy dews and rainfall, then southern rust may develop and spread more quickly. **Cooler, less humid weather will cause the disease to develop and spread slowly.**

Yield potential should also be a consideration, and high-yield potential fields should be prioritized when making management decisions. Farmers trying to decide if a fungicide application is warranted can scout fields carefully and frequently and watch the weather to determine if and when a fungicide application is needed.

There are several fungicides available that provide very good control of southern rust. Fungicide efficacy of specific fungicide products for corn diseases are described in the updated fungicide efficacy table for management of corn diseases, which is developed by the national Corn Disease Working Group:

<http://www.extension.purdue.edu/extmedia/BP/BP-160-W.pdf>.

Just remember that common rust, caused by *Puccinia sorghi*, and southern rust are easy diseases to confuse, and any suspected samples should be sent to the Purdue Plant and Pest Diagnostic Laboratory ([PPDL](#)) for confirmation before deciding on a management tactic. Weather conditions have favored continued development of common rust, but fungicide applications for common rust in hybrid corn are unlikely to be economically beneficial.

The Purdue Extension publication "[Diseases of Corn: Common and Southern Rust](#)" has more information on distinguishing between common and southern rust, and

additional details on both diseases.

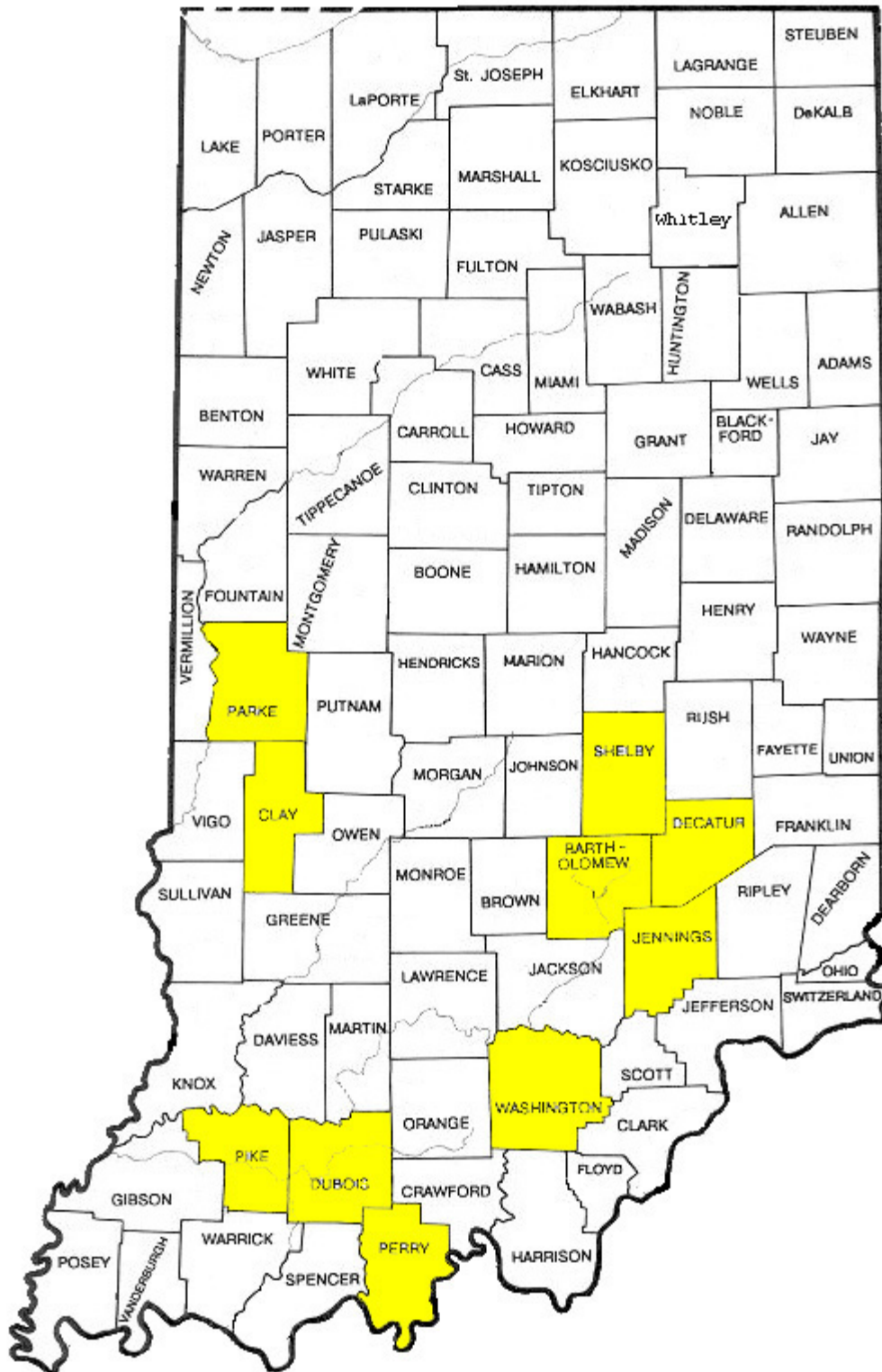


Figure 1. Confirmed findings of counties with southern rust, July 28, source [P&PDL](#).

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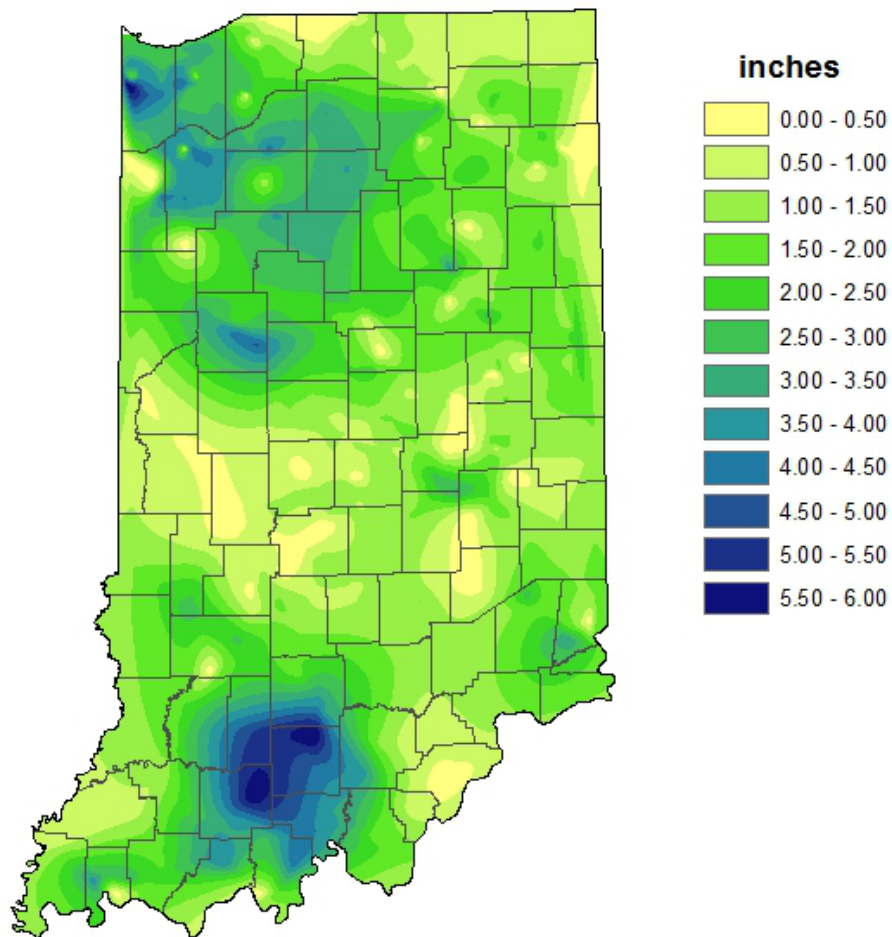
## WEATHER UPDATE

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### Precipitation

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## Total Precipitation Jul 20 - 26 2017 CoCoRaHS network (379 stations)



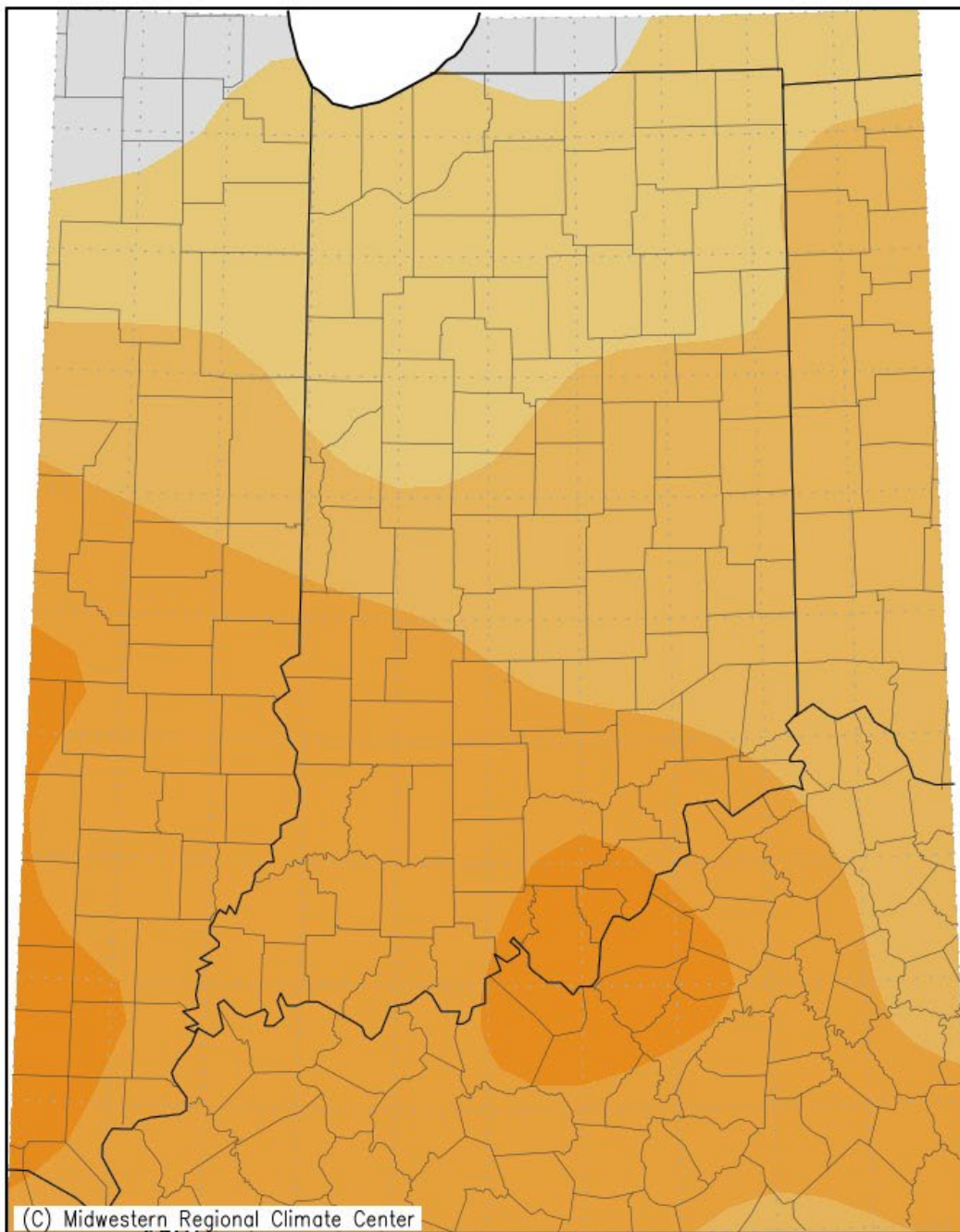
Analysis by Indiana State Climate Office  
Web: <http://www.iclimat.org>

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## Temperature

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# Average Temperature (°F): Departure from Mean July 18, 2017 to July 24, 2017



Mean period is 1981–2010.



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



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## THANKS FOR READING

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