

Pest & Crop newsletter

Purdue Cooperative Extension Service and USDA-NIFA Extension IPM Grant

This work is supported in part by Extension Implementation Grant 2017-70006-27140/ IND011460G4-1013877 from the USDA National Institute of Food and Agriculture.

In This Issue

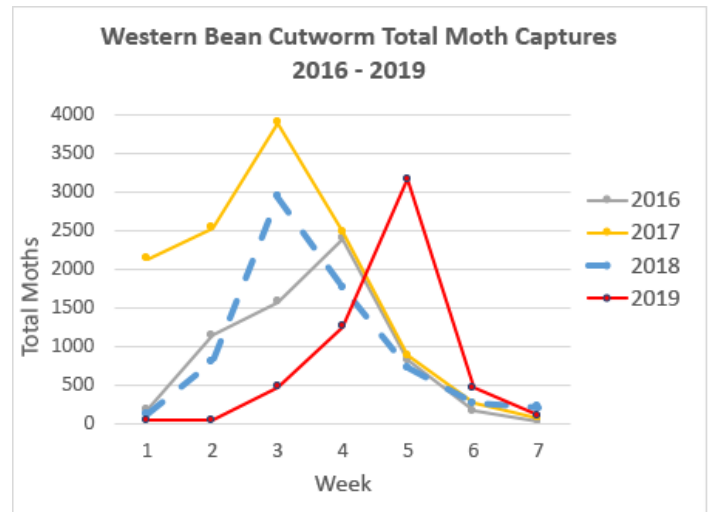
- [Western Bean Cutworm Moth Flight Analysis](#)
- [2019 Corn Earworm Trap Report](#)
- [Mid-Season Field Crop Update for Indiana](#)
- [Indiana Climate and Weather Report - 8/15/2019](#)

Western Bean Cutworm Moth Flight Analysis

(John Obermeyer)

Very few reports of western bean cutworm ear infestations have been received from northern Indiana counties, where risks are greatest. In looking at a comparison of the 4-year moth captures (see graph below), there were plenty of moths flying "Week 5," that being the 3rd week of July. As with our corn phenology, this was much later than normal. Western bean cutworm's egg laying preference is pre-tassel corn, and this year's corn development at that time was anywhere from waist high to post-pollination. Perhaps the lower damage this year can simply be attributed to erratic crop development...likely there is much more we don't understand, e.g., abnormally wet soil conditions in that region this spring.

volunteers, we are all in debt! Please thank any of those cooperators that you may know for their efforts.



Two different sizes of corn earworm (top) versus western bean cutworm (below).

In some areas of the state, there has been much more interest in corn earworm infestations this season, even in yellow-dent corn. Chris DeFonzo, Michigan State University Extension Entomologist, has written a nice article that can be read [HERE](#).

Tracking the western bean cutworm moth flight wouldn't be possible without the many pheromone trap cooperators in our network. To those

2019 Corn Earworm Trap Report

(Laura Ingwell)

2019 Corn Earworm Trap Report

Click here for recent catch information

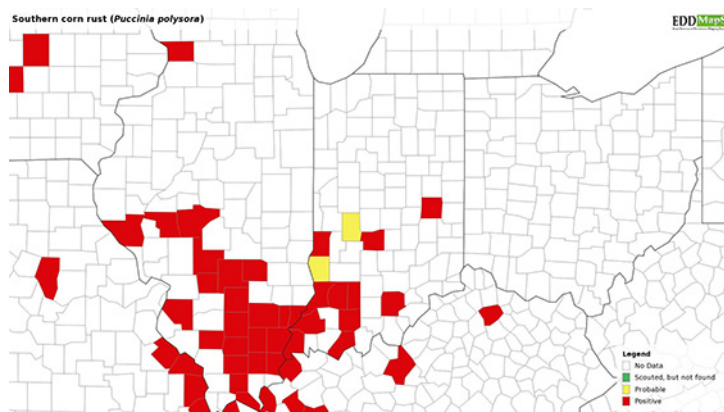


Figure 1. Map of counties confirmed for southern corn rust as of August 15, 2019.

Tar Spot - we are starting to find tar spot around the region. Thus far in the 2019 season, it has been found active in field in five counties with a previous history, Elkhart, Kosciusko, LaPorte, Porter, Pulaski, and St. Joseph (figure 2). We have seen variable symptoms from a few stroma on a leaf to many (figure 3). We again are requesting if you have any suspect locations to please update us and send a sample. I am especially interested in surrounding counties such as Lake, Jasper, Fultop, Marshal, Lagrange, Steuben, Noble, DeKalb, and Starke or anything in the northern part of Indiana. See this link on a short guide to collecting.

<https://extension.purdue.edu/fieldcroppathology/wp-content/uploads/2019/07/Please-Help-Us-Collect-Field-Crop-Disease-Samples.pdf>

Mid-Season Field Crop Update for Indiana

(Darcy Telenko)

Corn

Southern Rust is now confirmed in 11 counties in Indiana (figure 1). These include Daviess, Dubois, Gibson, Henry, Knox, Martin, Morgan, Posey, Spencer, Vigo and Washington counties and suspected in Sullivan and Putnam. Keep scouting and if you suspect it, please send a sample to the Purdue Plant Pest Diagnostic Lab (PPDL). Southern corn rust does not over winter in Indiana. The spores are blown-up on weather systems from tropical regions each year - for up to date information the <https://corn.ipmPIPE.org/southerncornrust/> website is tracking the movement.

Southern corn rust is generally not an annual problem in Indiana, except when it arrives earlier in the season (like this year) and/or we have a delayed crop (again like this year). Southern rust can cause significant yield loss if it builds up to high levels during silking and corn fill. Therefore, it is very important to keep a close eye out for this disease this season to make timely management decisions. Check out following southern rust publication for more images of southern rust and other diseases that might mimic it at <https://crop-protection-network.s3.amazonaws.com/publications/cpn-2009-southern-rust.pdf>.

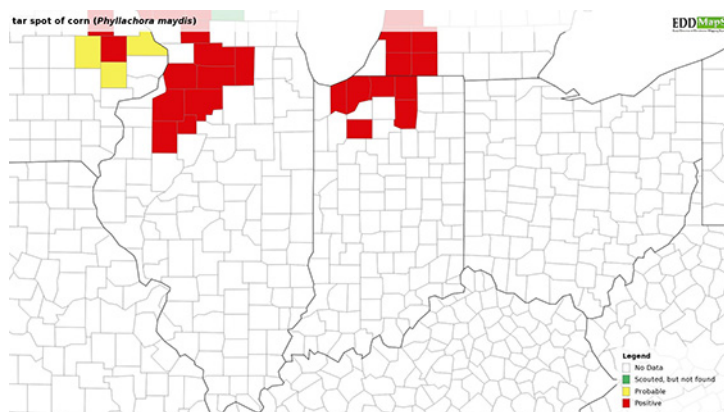


Figure 2. Map of counties confirmed for tar spot as of August 15, 2019.



Figure 3. An example of a leaf with just one tar spot stroma (left) and a leaf with multiple stroma (right). (Photo Credit: Darcy Telenko)

Soybeans

We are starting to find a few foliar diseases in soybean in Indiana.

Downy mildew caused by *Peronospora manshurcia* is commonly found on soybean but rarely causes serious yield loss. Symptoms appear as irregularly shaped, pale green to light yellow spots. If you flip the leaf over you will likely see the distinctive sporulation on the underside, (see figure 4). Older lesions will turn brown with yellow-green margins.



Figure 4. Downy mildew symptoms on upper leaf – pale green to light yellow spots and the underside showing the sporulation. (Photo Credit: Darcy Telenko)

Frogeye leaf spot caused by *Cercospora sojina* is a foliar disease can cause significant yield losses. We have started to find a few frogeye lesions in our soybean sentinel and research trials locations (see figure 5).



Figure 5. Frogeye lesions on soybean. (Photo Credit: Darcy Telenko)

susceptibility and inoculum availability. Infected debris from previous crops is the primary source of inoculum for this disease. Any practice that helps reduced or bury the infected residue will help reduced inoculum in a field such as fall tillage or soybean- corn crop rotation. There are a number of varieties available with frogeye resistance. Fungicide spray application after growth stage R1 can reduced severity, while applications made at R3 are considered most effective for frogeye. There are number of fungicides available to use for frogeye management. The North Central Regional Committee on Soybean Diseases (NCERA-137) annually releases foliar fungicide efficacy tables for control of the major foliar soybean diseases in the US. This resource is found at the following link:

<https://crop-protection-network.s3.amazonaws.com/publications/fungicide-efficacy-for-control-of-soybean-foliar-diseases-filename-2019-03-25-121546.pdf>.

Indiana Climate and Weather Report – 8/15/2019

(Beth Hall)

Even the climate models are confused by this year's weather. When the August monthly outlook was released (July 31st; national Climate Prediction Center) it showed significant confidence that August would have below-normal temperatures and below-normal precipitation. However, the shorter-range outlooks (that update daily) the last few days, seem to contradict that prediction. Whether it is the 6-10-day (August 20-24), the 8-14-day (August 22-28) Figure 1 or the 3-4-week experimental outlooks (August 25 – September 7), all are predicting significant confidence for above-normal temperatures and precipitation. Given the recent development of drought conditions across the state, these climate predictions (particularly for precipitation) are strongly desired! Will those climate outlooks verify? The current 7-day quantitative precipitation forecast is indicating very little precipitation over the next seven days. That is slightly below normal for this time of the year in Indiana (Figure 2). It is a roller coaster ride, it seems.

Management practices for frogeye are aimed reducing soybean

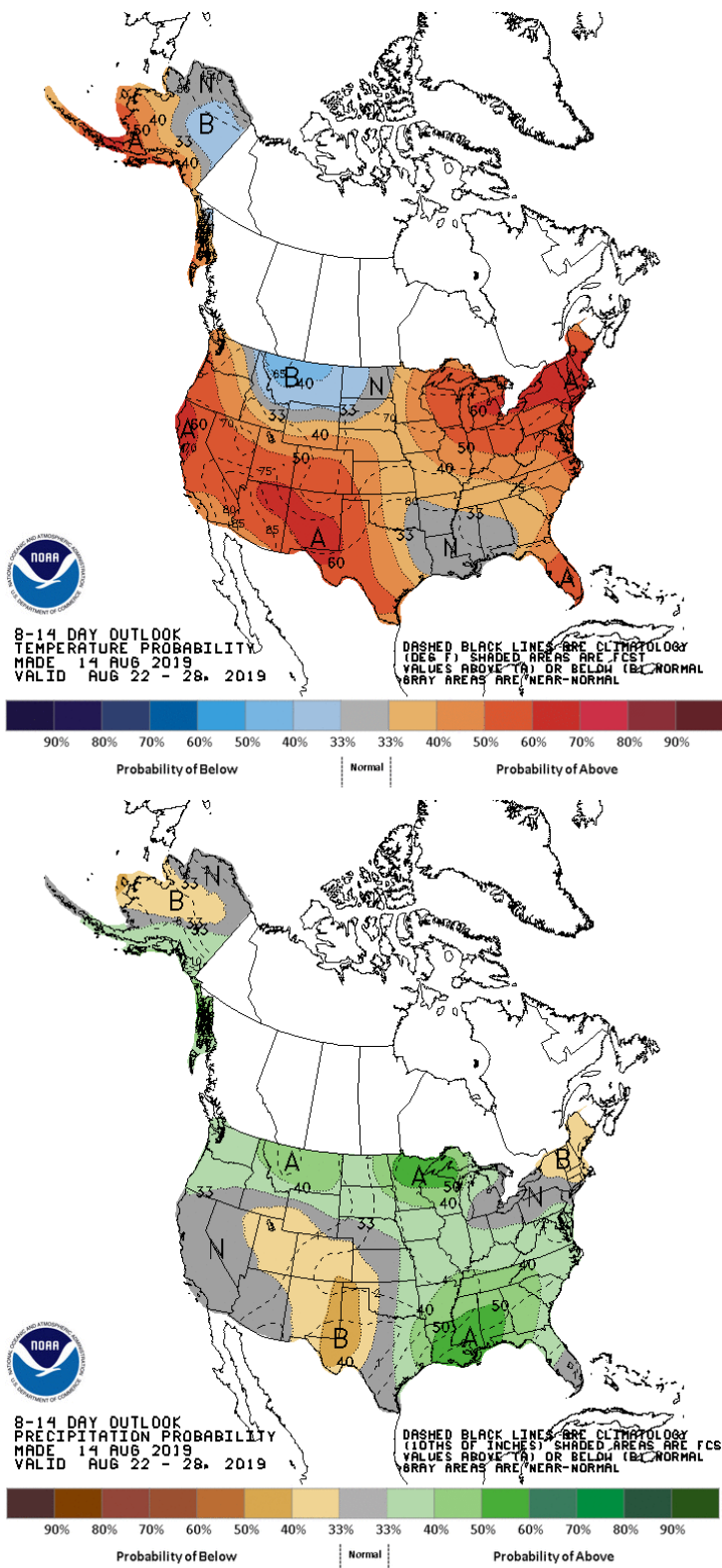
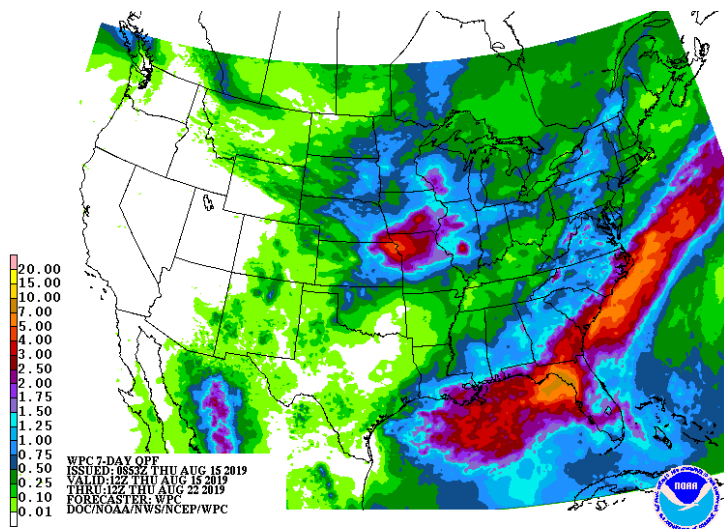


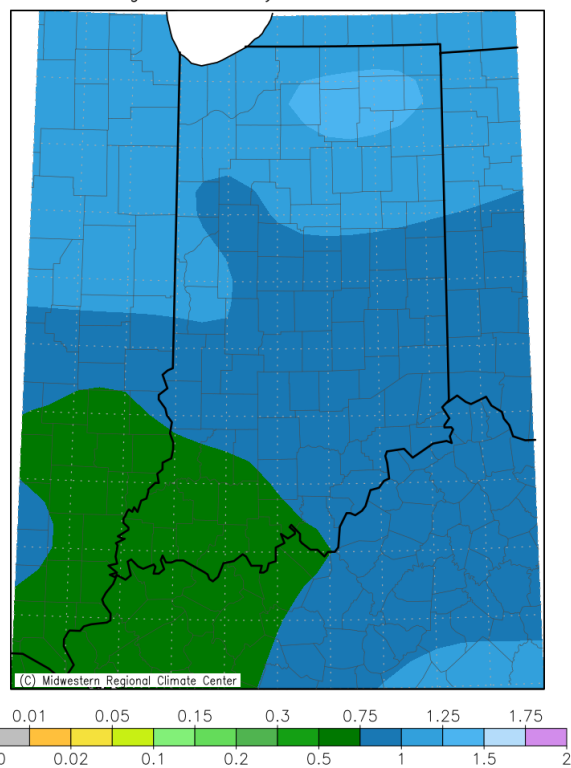
Figure 1. Climate outlook for August 22-28, 2019 that indicates the probability for either above- or below-normal temperature (above) and precipitation (below).

It is the policy of the Purdue University that all persons have equal opportunity and access to its educational programs, services, activities, and facilities without regard to race, religion, color, sex, age, national origin or ancestry, marital status, parental status, sexual orientation, disability or status as a veteran. Purdue is an Affirmative Action Institution. This material may be available in alternative formats. 1-888-EXT-INFO Disclaimer: Reference to products in this publication is not intended to be an endorsement to the exclusion of others which may have similar uses. Any person using products listed in this publication assumes full responsibility for their use in accordance with current directions of the manufacturer.



Accumulated Precipitation (in): August 15 to August 22

Averaged over 30 years: 1981 to 2010



Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 8/14/2019 11:48:34 AM CDT

Figure 2. Quantitative precipitation forecast for August 15-22, 2019 (top) compared to the 30-year average of precipitation for Indiana during the same time period (bottom).