

Pest & Crop newsletter

Purdue Cooperative Extension Service and USDA-NIFA Extension IPM Grant

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Western Bean Cutworm Moth Season Begins!

(Christian Krupke) & (John Obermeyer)

Pheromone trapping for western bean cutworm moths began this past week. Though typically not initially impressive (see "Western Bean Cutworm Pheromone Trap Report") this is just the beginning of an extended moth emergence and flight, with peak activity expected 2-3 weeks from now. Those in high-risk areas, i.e., sandy soils, high moth flight, northern Indiana counties and western bean cutworm history, should be gearing up for field scouting of corn, even those with Bt-traits.

Remember that WBC larvae are no longer susceptible to most of the Bt traits in our corn hybrids (including those in SmartStax hybrids) and therefore scouting, followed by timely insecticide sprays are really the only reliable control option for the vast majority of producers in the zone where this insect is common. This is principally the northern tier of counties in Indiana, extending into Michigan and parts of Ohio. Only Bt hybrids expressing the Vip3a toxin will offer reliable control of this pest, so be sure to know what you have in your field and scout as needed. See this handy [Bt Trait Table](#) to check where your hybrids fit in terms of the pests managed - this can get confusing, as names and traits change regularly! We will have additional updates in upcoming weeks, particularly if counts rise and eggs and larvae are found feeding in corn ears. Until then, happy scouting!



2023 Western Bean Cutworm Pheromone Trap Report

(John Obermeyer)

County	Cooperator	WBC Trapped						
		Wk 1 6/16/22- 6/22/22	Wk 2 6/23/22- 6/29/22	Wk 3 6/30/22- 7/6/22	Wk 4 7/7/22- 7/13/22	Wk 5 7/14/22- 7/20/22	Wk 6 7/21/22- 7/27/22	Wk 7 7/28/22- 8/3/22
Adams	Roe/Mercer Landmark, Decatur	0						
Allen	Anderson/Blue River Organics, Churubusco	2						
Allen	Gynn/Southwind Farms, Ft. Wayne	2						
Allen	Kneubuhler/G&K Concepts, Harlan	0						
Bartholomew	Bush/Pioneer Hybrids, Columbus	0						
Benton	Nally/Dairyland Seeds, Remington							
Benton	Vickrey/Advanced Agrilytics	10						
Blackford	Thurman/Ceres Solutions, Warren							
Clay	Mace/Ceres Solutions, Brazil	0						
Clay	Fritz/Ceres Solutions, Clay City	0						
Daviess	Brackney/Daviess Co. CES, Montgomery							
Dubois	Eck/Dubois Co. CES, Jasper	0						
Elkhart	Kauffman/Crop Tech Inc., Millersburg	0						
Fountain	Mrocikiewicz/Syngenta, Attica	4						
Hamilton	Campbell/Beck's Hybrids	0						
Hendricks	Nicholson/Nicholson Consulting, Danville							
Hendricks	Tucker/Bayer, Brownsburg							
Howard	Shanks/Clinton Co. CES, Kokomo	0						
Jasper	Overstreet/Jasper Co. CCSI, Wheatfield	1						
Jasper	Ritter/Dairyland Seeds, McCordsburg							
Jay	Boyer/Davis PAC, Powers							
Jay	Shrack/Ran-Del Co.-Alliance, Parker City	0						
Jennings	Bauerle/SEPAC, Butlerville	0						
Knox	Clinkenbeard/Ceres Solutions, Edwardsport	0						

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Knox	Edwards/Ceres Solutions, Fritchton	0						
Kosciusko	Jenkins/Ceres Solutions, Mentone	0						
Lake	Kleine/Rose Acre Farms, Cedar Lake	0						
Lake	Moyer/Dekalb	3						
Lake	Hybrids/Shelby	1						
LaPorte	Moyer/Dekalb							
LaPorte	Hybrids/Schneider							
LaPorte	Deutscher/Helena Agri, Hudson Lake							
LaPorte	Rocke/Agri-Mgmt. Solutions, Wanatah							
Miami	Early/Pioneer Hybrids, Macy							
Montgomery	Delp/Nicholson Consulting, Waynetown							
Newton	Moyer/Dekalb Hybrids, Lake Village	0						
Perry	Lorenz/Lorenz Farms, Rome 1	0						
Perry	Lorenz/Lorenz Farms, Rome 2	0						
Porter	Boyer/PPAC, Wanatah							
Posey	Schmitz/Purdue CCSI, Blairsville							
Posey	Schmitz/Purdue CCSI, Cynthiana							
Pulaski	Capouch Chaffins/M&R Ag Services, Medaryville							
Pulaski	Leman/Ceres Solutions, Francesville	0						
Putnam	Nicholson/Nicholson Consulting, Greencastle	1						
Randolph	Boyer/DPAC, Farmland							
Rush	Schelle/Falmouth Farm Supply Inc., Carthage	0						
Scott	Tom Springstun/Scott Co. CES, Scottsburg	0						
Shelby	Fisher/Shelby County Coop, Shelbyville							
St. Joseph	Carbiener, Bremen	0						
St. Joseph	Deutscher/Helena, New Carlisle							
Starke	Capouch Chaffins/M&R Ag Services, Monterey							
Starke	Capouch Chaffins/M&R Ag Services, San Pierre							
Sullivan	McCullough/Ceres Solutions, Farmersburg	0						
Sullivan	McCullough/Ceres Solutions, Dugger	0						
Tippecanoe	Bower/Ceres Solutions, Lafayette	10						
Tippecanoe	Nagel/Ceres Solutions, W. Lafayette	0						
Tippecanoe	Obermeyer/Purdue Entomology, ACRE	0						
Tippecanoe	Vickrey/Advanced Agrilistics	1						
Tippecanoe	Westerfeld/Bayer Research, W. Lafayette	0						
Tipton	Campbell/Beck's Hybrids	0						
Vigo	Lynch/Ceres Solutions, Clinton	0						
Whitley	Emley/NEPAC/Schrader	0						
Whitley	Emley/NEPAC/Kyler	0						

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

So Lush, So Green, and Oh So Poisonous

(Keith Johnson)

It is that time of year when the yew (pronounced like the letter "U") is likely in need of a trim to look best as a landscaping plant. Yews have been used as a common landscaping shrub or small tree for decades. They have closely spaced, glossy, rather tough, dark green, linear pointed-end leaves that are 1.5 - 2 inches long. Hard-to-see male and female flowers are found on separate plants and form fleshy red to yellow fruits that contain a single seed.

Many plants have poisonous compounds that can cause all kinds of concerns, and even death, if consumed. The interactions that I have had with veterinarians, suggest that the yew is right at or near the top of plants that cause livestock death. A disheartening scenario is when yew trimmings are thrown over the fence by the livestock owner or neighbor thinking that the trimmings would make a great snack for the livestock. Fresh or dry trimmings, it doesn't matter. The result will be the same - death.

Yews are hardy perennial landscaping plants, but don't toss the trimmings to your equine, herd, or flock or they won't see the light of the next day.



A yew bush used as landscaping is in need of a trim. Don't feed the trimmings to livestock or death will occur. Photo provided by Keith Johnson.

National Forage Week - A Time to Celebrate Forages

(Elysia Rodgers), (Keith Johnson) & (Anna Morrow)

National Forage Week (June 18 - 24) is concluding this week. The leadership team of the Indiana Forage Council, a not-for-profit organization (www.indianaforage.org), decided it was important to share on the council's Facebook page the contributions forage crops provide the world. If you did not see the daily posts, they follow.

NATIONAL FORAGE WEEK

June 18-24, 2023

Why Celebrate Forages?

- Forages cover about 55% of the land area in the U.S.
- Forages are defined as the edible parts of plants that provide feed for grazing animals or that can be harvested for feeding.
- Forages support grazing livestock and wildlife habitat, enhance crop diversity, and provide ecosystem services to society.
- There are about 14,000 species of grass in the United States.
- One acre of forage protects around 2 million pounds of soil.
- Legume forages like alfalfa and clover add nitrogen to the soil, reducing the need for added fertilizer.

small to

TALL

<https://indianaforage.org>

FORAGES FEED THEM ALL

2023 National Forage Week

<https://indianaforage.com>

IN 2022, US HAY EXPORTS EXCEEDED 4 MILLION METRIC TONS FOR THE 4TH YEAR IN A ROW!

USDA'S FOREIGN AGRICULTURAL SERVICE

Top 5 International Import Countries

- JAPAN
- CHINA
- SOUTH KOREA
- UNITED ARAB EMIRATES
- SAUDI ARABIA

<https://indianaforage.com>

Grazing cover crops provides soil health benefits to cropped acres and economical forage to livestock.

2023 National Forage Week



Celebrate every day with an appreciation for all that forages do for the world. Have some ice cream and a hamburger. It is a great indirect way to eat forages!

Worth Mentioning Again – Overgrazing Perennial Pastures During Hot and Dry Weather Has Long Term Consequences – Don’t Do It

(Keith Johnson)



If plants could cry out, they would yell “Stop” when overgrazing begins to occur. Note the visible manure in the upper center and the crushed aluminum can in the lower center of the photograph. If the pasture was properly grazed, the manure and aluminum can would not have been visible at the distance that the photograph was taken. Picture contributed by Keith Johnson, Purdue University Extension Forage Specialist

This week, the calendar transitioned from spring to summer. Lack of rainfall in most of Indiana has unfortunately continued to be a concern to vegetation wellbeing, pastures included.

You likely were told to clean up all the food on your plate when you were a child sitting at the kitchen or dining room table. That was a good recommendation to reduce food waste and to make sure the dollars earned by your parent or guardian were not “thrown in the trash”.

Consider this – If the soil in the pasture is the plate and the forages growing in the soil is the food on the plate to be eaten, having livestock, analogous to the child at the table, grazing the soil bare of vegetation is a concern.



This Photo by Unknown Author is licensed under CC BY. Grazing a pasture “clean” like the plate above is not a wise decision for plant regrowth.

The figure below found in “Forages Volume 1 – an introduction to grassland agriculture” is an excellent illustration of what happens to root biomass and vegetative regrowth when overgrazing occurs and time is not allowed for plant recovery.



FIG 2.8. Root development of grasses with (A) no defoliation, (B) moderate defoliation, and (C) close, continuous defoliation. Root development depends on photosynthate produced by the leaf area, and leaf area depends on water and nutrients (especially nitrogen) that are absorbed from the soil. (Adapted from Walton 1983.)

If the illustration above doesn’t convince you of the negative consequences of overgrazing, the University of Kentucky Forage website time lapse video simulating orchardgrass response differences to intensity of vegetation removal should provide insight. Within the information shown by clicking on the link <http://forages.ca.uky.edu/grazing>, review “UK Orchardgrass” video found in the upper left corner. Keep the video content in

your mind when you leave some residual growth in the pasture. You are doing the right thing!

Information found within the link

<https://www.extension.purdue.edu/extmedia/ID/ID-528-W.pdf>

provides a checklist of ideas that should be considered to feed beef cattle during dry weather. While the emphasis is on beef cattle, there are many components of the publication that have value for all livestock species. Review the information in the publication now so a plan can be developed if it needs to be put into action. Doing nothing, is not a wise plan.

Drought Expands and Expected to Continue

(Austin Pearson)

Below-normal temperatures continued through the first 21 days of June as the state average temperature was 68.3°F, which was 1.8°F below the 1991-2020 climatological normal. Temperature departures were 1-5°F below normal across the state, with larger departures in eastern and southern Indiana (Figure 1, Left). Maximum temperatures were near normal for the entire state, and minimum temperatures ran 1-9°F below normal (Figure 1, Right). Dry air and limited overnight cloud cover are to blame. Several locations measured minimum temperatures in the 40s at some point this month, but Franklin County recorded a chilly 36°F on June 9th. This station also tied with Shelby County for the second highest temperature recorded so far this month, 95°F, which occurred on June 3. Dubois County hit 97°F on June 4th. There were more than 20 daily low temperature records broken or tied during the second week of June. Over the last week, maximum temperatures ran 1-3°F above normal stretching from west central to northeast Indiana, and 1-6°F below normal to the southern and eastern portions of the state. Modified Growing Degree Days (MGDDs) have accumulated between 600 and 1300 units in the state (Figure 2, Left), which is near normal to over 120 units below normal (southeastern Indiana).

Last week, the state had some relief as the rain returned for most. The state average precipitation (June 1-21) was 1.33 inches, which was 1.63 inches below normal or 45 percent of normal. The heaviest precipitation fell in eastern and southern Indiana, where more than 1 inch fell in spots (Figure 3, Left). Still, all locations received below-normal precipitation. West-central and other isolated areas received less than 25 percent of normal precipitation (Figure 3, Right). Warren, Benton, and Tippecanoe Counties were the driest, receiving less than 10 percent of normal precipitation for the period. Johnson County had the highest precipitation total in the state, 2.90 inches (June 1-21), most of which (1.95 inches) was measured on June 12.

The June 20 US Drought Monitor brought expansions of Severe Drought (D2) and Moderate Drought (D1) categories in the state and some improvement in the east (Figure 4). Over 10 percent of the state is in D2, which doubled in size from the previous week. Eastern Indiana saw a 1-category improvement due to the rain last week and even introduced no drought in portions of Adams,

Jay, Randolph, and Delaware Counties. Southern Harrison County also improved to no drought this week. Overall, conditions continue to worsen as most locations have burned through the moisture that arrived last week. Yards are dormant, crops are stressed, water levels are low, and producers are concerned about hay production, and burn bans have been enforced in Newton, Jasper, Benton, Warren, Fountain, and Vermillion Counties. Keep in mind, the ongoing drought is a regionwide issue. Over 92 percent of the Midwest is at least Abnormally Dry (D0) or in some level of drought. Unfortunately, the pattern is not expected to change much.

The precipitation forecast through June 29 calls for less than 0.75 inches for the entire state (Figure 5). Notice that forecast precipitation amounts are less than 0.25 inches for areas in D2 and D1 drought categories. The Climate Prediction Center has elevated confidence in continued below-normal to near-normal temperatures and near-normal precipitation through July 5th. The US Seasonal Drought Outlook, released on June 15, expects persistence and development of drought in the state through September (Figure 6). Drought conditions will likely worsen before it gets better.

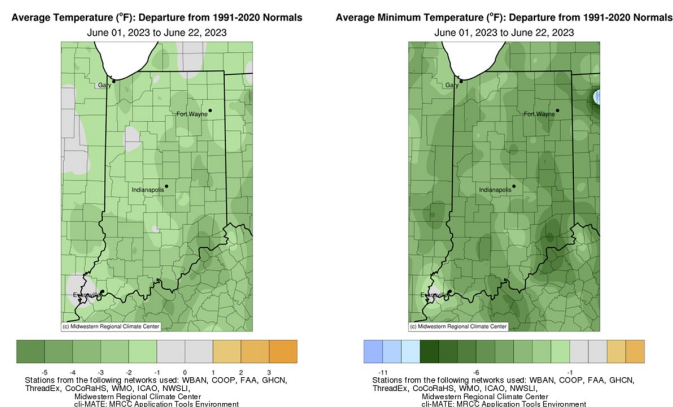


Figure 1: Average temperature (left) and Average Minimum Temperature (right) for June 1-22 represented as the departure from the 1991-2020 climatological normal.

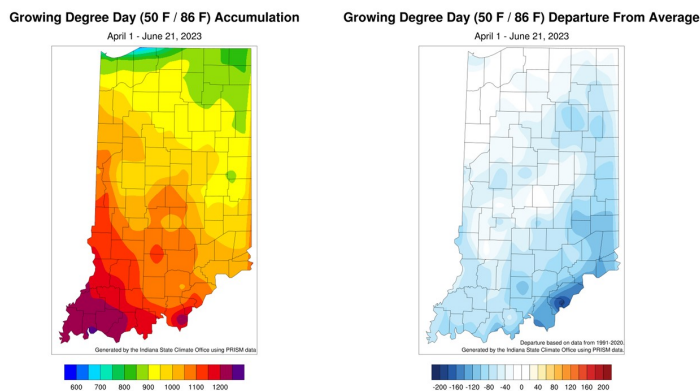


Figure 2: Total Accumulated Indiana Modified Growing Degree Days (MGDDs) April 1-June 21, 2023 (left) and Total Accumulated MGDDs represented as the departure from the 1991-2020 climatological normal (right).

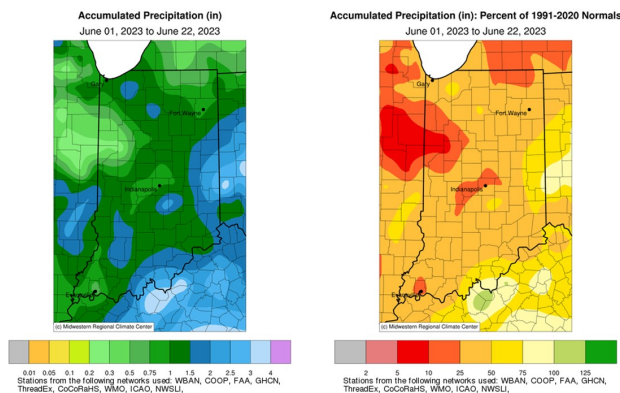


Figure 3: Interpolated map displaying accumulated precipitation for June 1-22, 2023 (left). Interpolated map displaying accumulated precipitation as a percent of the 1991-2020 climatological normal (right).

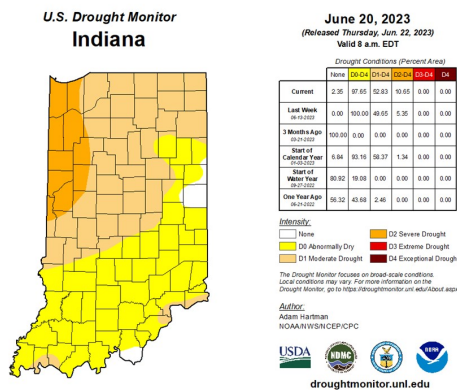


Figure 4: June 20, 2023, US Drought Monitor. The US Drought Monitor is released every Thursday morning by 8:30 AM.

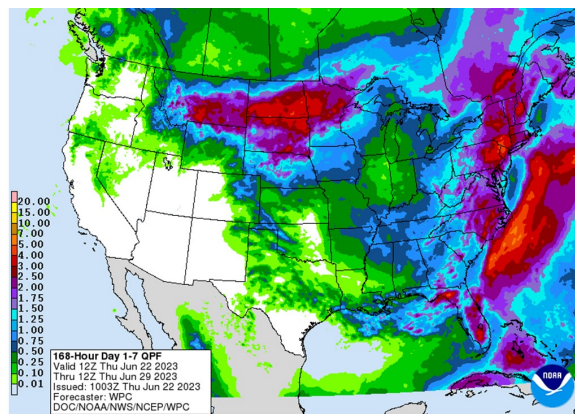


Figure 5: NWS Weather Prediction Center 7-day quantitative precipitation forecast for the continental United States, valid June 22-29, 2023.

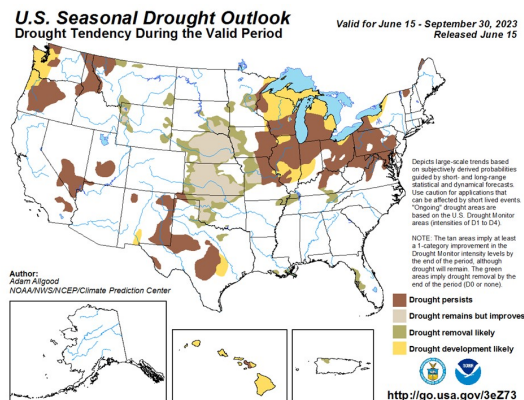


Figure 6: US Seasonal Drought Outlook valid for June 15-September 30, 2023, which is available via the Climate Prediction Center.

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