

Pest & Crop Newsletter

Purdue Cooperative Extension Service
and USDA-NIFA Extension IPM Grant



This work is supported in part by Extension Implementation Grant 2021-70006-35390 / IND00001518G-1027053 from the USDA National Institute of Food and Agriculture and NCR SARE Award GNC20-311

In This Issue

- [2024 OISC Clean Sweep Pesticide Disposal Information Form](#)
- [Homeless Insect Stories And Their Aptitude To Survive!](#)
- [2024 Corn Earworm Trap Report](#)
- [Take Time To Self-Evaluate Your Hay Production Management System](#)
- [Update On Disease Risk In Corn In Indiana](#)
- [Will Recent Rain Events Be Enough?](#)

2024 OISC Clean Sweep Pesticide Disposal Information Form

(Nathan Davis, Office of Indiana State Chemist)

The **2024 OISC Clean Sweep Pesticide Disposal** participant form is attached and available via the OISC website at the link below.

Clean Sweep Pesticide Disposal Link:

https://oisc.purdue.edu/pesticide/clean_sweep.html

If you are planning on participating in the program, please complete the attached 2024 OISC Clean Sweep participant form and return the form to me via the contact info on the form. Please keep the info form as that form has the dates and locations.

If you are an organization, such as Extension, Purdue Pesticide Programs, Solid waste Districts, Recycling districts, media and other organizations please forward the attached participant form onto all interested parties. The program would not be a success without all you do getting the word out!

WHAT: An OISC Clean Sweep Pesticide Disposal Program designed to collect and dispose of suspended, canceled, banned, unusable, opened, unopened or just unwanted pesticides (herbicides, insecticides, rodenticides, fungicides, miticides, etc.) is being sponsored by the Office of Indiana State Chemist (OISC). This disposal service is free of charge up to 250 pounds per participant. Over 250 pounds there will be a \$3.00 per pound charge. This is a great opportunity for you to legally dispose of unwanted products at little or no cost.

WHO: All public and private schools, golf courses, nurseries, farmers, ag dealers, public, cities, towns, municipalities and county units of government or others receiving this notice are eligible to participate.

WHEN: 9:00 am to 2:00 pm Local Time

WHERE:

August 13, 2024: Keystone Cooperative – Porter County
210 East 400 South Valparaiso, Indiana 46383

August 14, 2024: NISWMD – Steuben County
2320 West 800 South Ashley, Indiana 46705

August 15, 2024: Becks Foundation Seed Facility – Tipton County

6159 West 550 North Sharpville, Indiana 46068

August 20, 2024: Premier Ag – Daviess County
11815 US-50 Loogootee, Indiana 47553

August 21, 2024: Kova Fertilizer – Decatur County
1330 N. Anderson St. Greensburg, Indiana 47240

August 22, 2024: Hendricks County Fairgrounds
1900 E. Main St. Danville, Indiana 46122

HOW: Complete the enclosed Clean Sweep Pesticide Disposal Participant Form to the best of your ability. Mail, fax or e-mail the completed form to Nathan Davis at 765-494-4331 or cleansweep@groups.purdue.edu no later than Fri., August 9, 2024. Questions may be directed to Nathan at 765-494-7108. Then bring your leak free and safe to transport containers to the collection site. DO NOT mix materials.

*****Empty pesticide containers will not be accepted, please follow label directions for proper disposal of empty pesticide containers*****

*****Bulk containers not documented on form will not be accepted*****

Homeless Insect Stories And Their Aptitude To Survive!

(Christian Krupke) & (John Obermeyer)

Though more of a curiosity, and it is infrequent, it is refreshing for us to receive calls/emails of mysterious and perhaps terrifying insects “threatening” the crop. These are insects that can’t be found in the [Corn & Soybean Field Guide](#). Occasionally, when weed control is delayed in fields, previously unseen insects that were feeding on weeds will switch diets and begin damaging crops. Almost always in isolated and previously weedy areas of the field, these infestations are short-lived. Interestingly, two of the three stories shared below have happened just this past week.

The redheaded flea beetle has been observed feeding on corn leaves and silks, as well as soybean foliage. The redheaded flea beetle (*Systema frontalis*) normally feeds on weed species, especially giant ragweed. When weeds are burned down the beetles look no further than the crop for food and will feed on leaves to a small extent. Plants near the field edge where non-crop plants will also be damaged, one of the common “edge effects” we see in many cropping systems. This feeding, while it catches attention, is nothing more than superficial, won’t affect pollination or yield and certainly doesn’t warrant treatment. But it’s worthwhile to know what this insect is, and why it’s suddenly feeding on corn.



Redheaded flea beetle feeding on corn silks. (Photo Credit: John Obermeyer)



Redheaded flea beetle feeding on soybean leaf. (Photo Credit: John Obermeyer)



Redheaded flea beetle feeding on giant ragweed leaf dusted with corn pollen. (Photo Credit: John Obermeyer)

Burrower bugs (*Sehirus cinctus*) are 1/8- to 1/4-inch-long insects with sucking mouthparts. The adults are black with a thin gray line around the edge of the body. The smaller nymphs, or immatures, are red and black. Both stages can be seen crawling over and under the soil and surface residue or accumulating in cracks in the soil surface. Burrower bugs can be abundant in and around no-till soybean and cornfields, as well as gardens and lawns. The species uses its sucking mouthparts to feed on sap from the roots of a wide variety of plants and developing

seeds of henbit (a common mint species, think of the purple fields early this spring). There is no indication that burrowing bugs cause any injury to crops but densities of these bright red insects have raised the concern of pest managers and homeowners.



Adult burrower bug on henbit. (Photo Credit: John Obermeyer)



Burrower bug nymphs. (Photo Credit: Kevin Black)

Just when we think things couldn't get any weirder, we received calls from southern counties concerning "catalpa-like" worms in soybean fields. It's another classic case of insects left without a food source after herbicide application. Sphinx moth caterpillars (Sphingidae), or better known as hornworms, have been found where purslane had been terminated. The hornworms were quite happy feeding on the weed until it died, then the caterpillars began to scurry about trying to find an alternate food source. The worms were not observed feeding on soybean foliage, but they were so numerous they created quite a concern.



Color and size variation of hornworms shown feeding on remnants of purslane.
(Photo Credit: John Obermeyer)

Please keep sharing these eerie mysteries, and happy scouting!



Cut and raked forage is in windrows waiting for dry down to the proper moisture content for baling hay. (Photo Credit: Brooke Stefancik, Currently, a Ph.D. student at the University of Georgia)

2024 Corn Earworm Trap Report

(Laura Ingwell)

2024 Corn Earworm Trap Report

**Click here for
recent catch
information**



Take Time To Self-Evaluate Your Hay Production Management System

(Keith Johnson)

Managing forages for hay production requires much skill. Excellent hay producers understand that yield, quality and persistence are key for a perennial forage production system to be successful.

The following table includes several statements that are essential for a successful hay business. Take time to self-evaluate how good a job **you** have been doing with each statement given. Rankings “Strongly Disagree” or “Disagree” require some attention to have a topnotch hay production system. As you continue with the 2024 hay harvest, make improvements where the ranking hasn’t made a “Strongly Agree” or “Agree” ranking.

If you have not developed a team of resource people that can help you with your questions about forage management, a good starting point is to contact your county’s Purdue Extension Agriculture and Natural Resources Educator and Natural Resources Conservation Service personnel. These individuals have a network within their own organizations and know local-regional agribusinesses and producers that will be able to help you with your questions.

An excellent resource to have on-hand to answer many questions about forage management is Purdue Extension publication ID-317. The new fourth edition of the “Forage Field Guide” contains 324 pages of information for forage and livestock producers and the agricultural industries that serve them. The new edition features updates and changes throughout, including revised fertility recommendations, new photos, and other valuable updates. It still provides valuable species, scouting, and harvest information. The Purdue Forage Field Guide can be purchased at the Purdue Education Store ([Forage Field Guide, fourth edition \(purdue.edu\)](https://www.purdue.edu/forage-field-guide)). For forage-input providers, front and back custom covers are an option with a minimum order of 100 copies.



The "Purdue Forage Field Guide" is a valuable resource in helping make proper management decisions.

Developing excellent hay management skills require much effort, but improving your knowledge and using it will improve profitability.

Hay Management Considerations - What are you doing right; what can be done better?

Statement	S t r o n g l y D i s a g r e e	Disagr	Unde	Agree	Stron gly Agree
<p>I soil test at least every third year and apply lime and fertilize based on the test results.</p> <p>I can produce hay profitably "on paper" with reasonable assumptions about yield, quality and input costs.</p> <p>I scout my fields for the presence of weeds, insects and diseases.</p> <p>I know the proper moisture levels to ted, rake and bale hay to retain top quality.</p> <p>I utilize available technologies to reduce the amount of rain-damaged hay.</p> <p>I really try to harvest first cutting hay before the grass begins pollination.</p> <p>I protect high quality hay from weather damage.</p> <p>I have a marketing plan to sell hay.</p> <p>I harvest perennial forages for the last time six weeks before a killing freeze occurs.</p> <p>I use forage testing to determine what hay should be fed to different livestock types and how it is best supplemented.</p>					

Update On Disease Risk In Corn In Indiana

(Darcy Telenko)

We are starting to see common diseases in the lower canopy of corn, as we were out scouting this past week as early planted corn has begun to tassel in Indiana. A few diseases that I have seen and samples sent into the Purdue Plant Pest Diagnostic Clinic (PPDL) included gray leaf spot, tar spot, and common rust in corn. We are tracking the activity of tar spot (map-Figure 1) and southern rust (map - Figure 2). On the tar spot map, you can see gray areas where we have detected the tar spot in past years. In Indiana, we have confirmed tar spot for this season in 15 counties as of June 28, 2024. These include Porter, LaPorte, Benton, Warren, Carroll, Tipton, Grant, Johnson, Shelby, Rush, Bartholomew, Jackson, Knox, Gibson, and Dubois counties. Tar spot is at a low severity in most samples, but we have received a few that the disease is increasing in the lower leaves and moving up into the mid-canopy in some of these fields, but we suspect with the current weather conditions the disease will continue to be detected in fields in Indiana. We will continue to monitor and provide updates - please keep sending us samples.

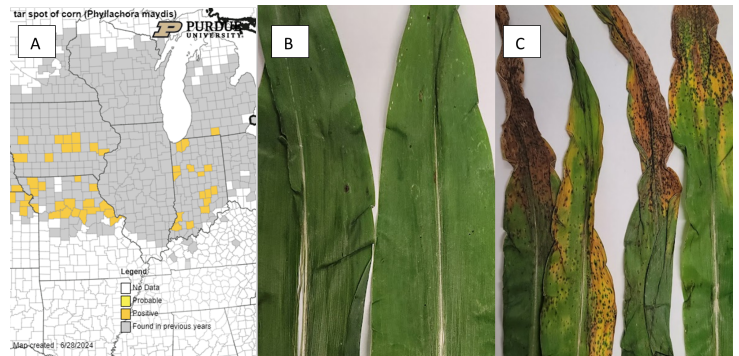


Figure 1. June 28, 2024 map of tar spot activity (A), and images of tar spot on corn in both the mid (B) and lower (C) canopy from samples submitted to the Purdue Plant Pest Diagnostic Lab (PPDL). Map source: <https://corn.ipmPIPE.org/tarspot/>

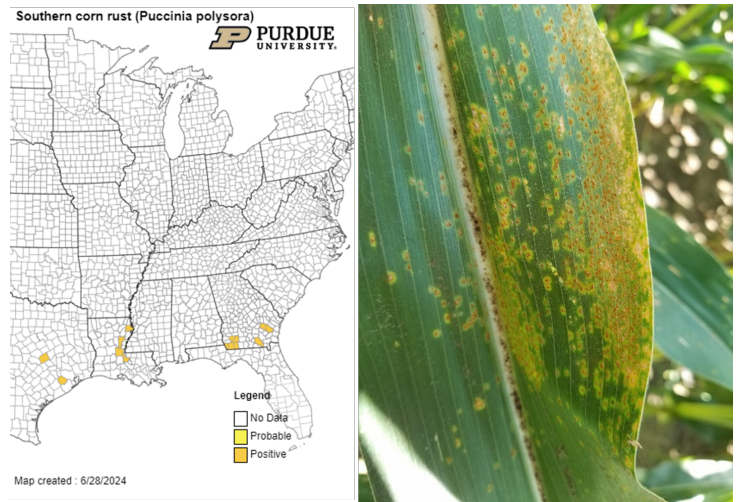


Figure 2. July 16, 2021 Southern corn rust map. Image of southern corn rust. As for southern rust (Figure 2), it has yet to be detected in Indiana. We have seen some common rust, so it is important to keep an eye out and send samples in the PPDL if you suspect southern rust.

Continue to scout your field to determine if any of these diseases are present. Gray leaf spot, northern corn leaf blight and tar spot are the diseases that are most commonly managed by fungicides in Indiana. For these diseases fungicides applied at VT-R1 are most effective at preventing yield loss. Scouting will help determine the level of disease

pressure in a field and help you make an informed decision. See link below for fungicide efficacy tables.

We just released a tar spot specific article on “Fungicide Application Reminders to Optimize Management of Tar Spot and Return on Investment in Corn” on Crop Protection Network. I suggest you check it out here <https://doi.org/10.31274/cpn-20240618-0>. I also made a brief video talking about fungicide timing for tar spot based on our research <https://www.youtube.com/watch?v=qObD-ld9G88>.

To make a decision for applying a fungicide there are four things I consider -

1. Disease risk in a field - do you have a previous history of the disease
2. Current disease activity - do you find the disease in the lower canopy while scouting
3. Weather conditions - will there continue to be favorable weather moisture and rain for foliar diseases? Check out the [Tarspotter](#) or [Field Prophet](#) Apps
4. Return on investment - will the yield protected by a fungicide cover the additional cost of the application?

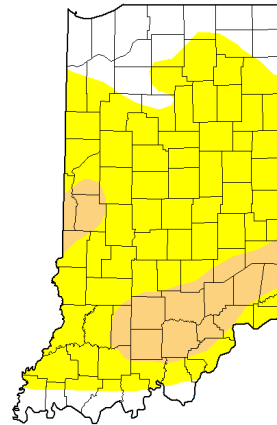
For fungicide recommendations please see the 2024 fungicide efficacy tables developed for corn: <https://doi.org/10.31274/cpn-20190620-002>

Will Recent Rain Events Be Enough?

(Beth Hall)

Last week, temperatures were higher than normal, and the lack of precipitation was causing lawns to turn brown, creek and lake levels to drop, and some crops to start showing stress. The U.S. Drought Monitor introduced *Abnormally Dry (D0)* conditions across much of the state with concerns that a drought could be right around the corner. In fact, this week’s U.S. Drought Monitor (that considers data through early Tuesday morning of this past week) expanded the *Abnormally Dry (D0)* zone a bit and introduced some *Moderate Drought (D1)* areas in west-central and southeast Indiana (Figure 1). To use a highly scientific term ... “Yikes!”. However, since early Tuesday morning, showers and even some strong storm events have passed through our region. Power outages and downed trees reminded us that our atmosphere still has some moisture and energy to wake us up from our parched state. Another round passed through on Wednesday and this weekend has even more rain in the forecast. Will this be enough, or will this just put us into a false sense of security?

U.S. Drought Monitor Indiana



June 25, 2024
(Released Thursday, Jun. 27, 2024)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	19.07	80.93	15.70	0.00	0.00	0.00
Last Week 06-18-2024	25.84	74.16	0.00	0.00	0.00	0.00
3 Months Ago 03-26-2024	83.59	16.41	0.00	0.00	0.00	0.00
Start of Calendar Year 01-01-2024	10.70	89.30	81.12	12.88	0.00	0.00
Start of Water Year 10-01-2023	1.38	98.62	85.30	0.00	0.00	0.00
One Year Ago 06-27-2023	1.76	98.24	79.50	33.62	0.00	0.00

Intensity:
 None
 D0 Abnormally Dry
 D1 Moderate Drought
 D2 Severe Drought
 D3 Extreme Drought
 D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/about.aspx>

Author:
Adam Hartman
NOAA/NWS/NCEP/CPC



Figure 1. U.S. Drought Monitor map for Indiana based on conditions through June 27, 2024.

It is useful to first assess our precipitation deficit. Since June 1, 2024, most of Indiana has received 2-3 inches less precipitation than what has been normal for this same period from 1991-2020 (Figure 2). A few rain events will need to be gully washers to try and make that up, and even if those heavy rainfall events occur, how much of that will be “effective”. In other words, what percentage of that precipitation will be absorbed by the soils and vegetation, as well as the groundwater supplies, instead of running off into drainage stream systems? Additionally, a significant amount of moisture is evaporating and transpiring - a natural process that peaks this time of year - each day. When stagnant heat events settle in and bring mostly sunny skies, this can rapidly offset much of the precipitation that may have been absorbed.

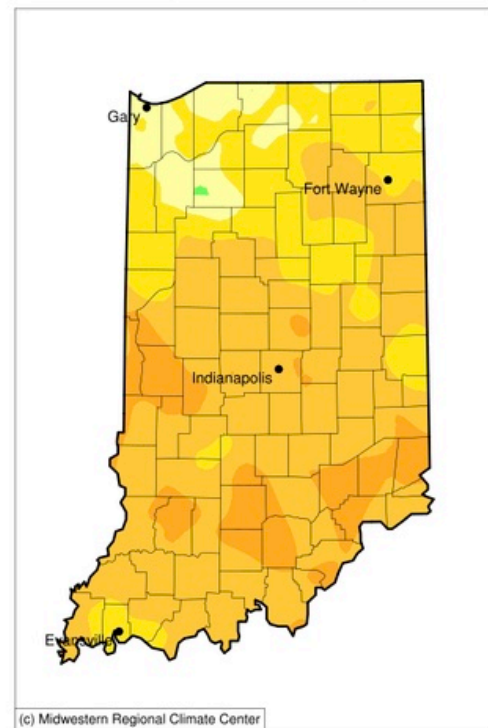


Figure 2. Precipitation departure from normal (inches) for June 1-26, 2024.

Fortunately, the 7-day precipitation forecast is calling for another round of precipitation this weekend (should mostly benefit northern Indiana) with the middle of next week bringing a bit more (Figure 3). While amounts are relatively moderate, this pattern of rain every few days is ideal and should hopefully discourage any potential drought from intensifying rapidly over the next few weeks. The 6-14-day climate outlooks (through July 10th) are favoring above-normal temperatures (with confidence increasing in the latter half of this period) and above-normal precipitation (with only slight confidence). Precipitation is likely to be more localized with definite winners and losers across the state. Hopefully, over time, it will all be a wash, and everyone will get enough rain to keep things growing and water supplies flowing!

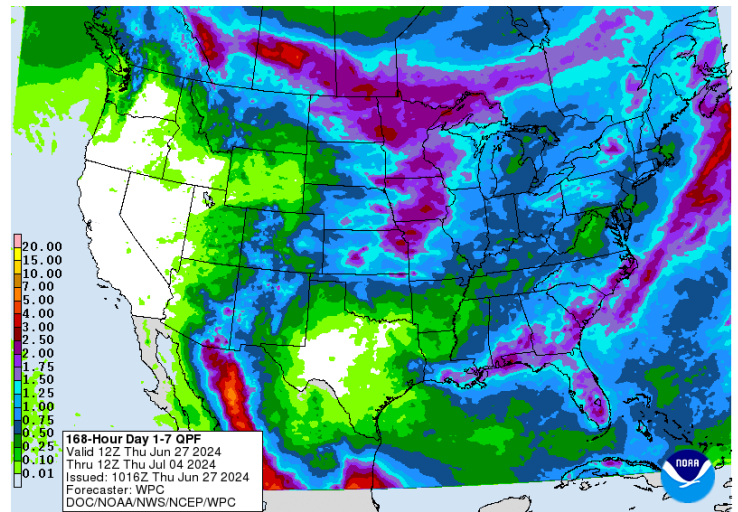


Figure 3. Precipitation amounts (inches) forecasted for June 27 through July 4, 2024.

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.

Pest&Crop newsletter © Purdue University - extension.entm.purdue.edu/newsletters/pestandcrop
Editor: Tammy Luck | Department of Entomology, Purdue University, 901 Mitch Daniels Blvd, West Lafayette, IN 47907