In This Issue

From the Editor's Desk

(Petrus Langenhoven, plangenh@purdue.edu, (765) 496-7955)

Welcome to the *Vegetable Crops Hotline* (VCH), Purdue Extension's exclusive newsletter for people in the business of growing vegetables.

In this issue, we highlight watermelon vine decline, disease, pest, and herbicide issues and provide an update on vegetable pricing at the Clearspring Auction. Included are lots of information about educational opportunities at the Throckmorton/Meigs Purdue Agricultural Center (July 20, registration closes on July 14), the Southwest Purdue Ag Center (July 26), the Purdue Student Farm (July 27, registration closes on July 21), and the Pinney Purdue Agricultural Center (August 10 and August 24). We have saved a place just for you. Register now to reserve your spot. Registration links are available in this issue and on the EVENTS tab of the Vegetable Crops Hotline Newsletter webpage. Registration details for the Pinney Purdue Ag Center field days will be provided at a later date.

Website links

Frequently we include links to websites or publications that are available online. If you can't access these resources or can't see the web address, don't hesitate to contact your local Extension office or us to request a hard copy of the information.

Remember that all previous articles published in the VCH newsletter are available on the VCH website vegcropshotline.org.

We would like to hear from you.

ANR Educators and Growers, reach out to us if you are experiencing a vegetable production-related issue you think other growers need to know of. Remember, we have a great Horticulture Team that can assist you. A complete list is available HERE.

Send us pictures of success stories, activities, or issues in your county or on your farm. Please include a description and provide the name of the person that needs to get credit for the picture. These pictures could be used in future *Vegetable Crops Hotline Newsletter* articles. Submit your stories HERE.

Do not hesitate to contact me, Petrus Langenhoven, at plangenh@purdue.edu if you have any questions or suggestions to improve the newsletter.

Enjoy reading this issue!

Managing Pests that Thrive in Hot and Dry Conditions

(Laura Ingwell, lingwell@purdue.edu, (765) 494-6167)

This season started out dry and hot. These are the ideal conditions for pests that we often associate with controlled environments: aphids and mites. There are a number of factors that contribute to their success in these conditions, including lack of rain which physically removes the insect from the plant and drought-stressed plants, which are a more suitable host. The pest populations increase rapidly under these conditions, so it is crucial to be scouting on a weekly basis at the least. Early detection and treatment are key. In protected environments, prevention and early intervention are especially important; In the field, heavy rains can help knock these pests back.

Twospotted spider mites (TSSM) are one of the most common mite pests in vegetables (Figure 1). TSSM occurs throughout the world. They are known to feed on over 300 plant species, including tomatoes, cucumbers, melons, grapes, apples, and a variety of common flower and weed species. They disperse by walking or flying on the wind currents. The adults are pale green

to yellowish in color or almost appear translucent, with two black spots on their backs. Eggs and nymphs are present and overlap with adults. The eggs are very small yellowish or translucent circles, and the nymphs are yellowish to green in color. Spots are not present until they are mature.

Figure 1. Twospotted spider mite adult and eggs (Photo by John Obermeyer).

Early infestations can be spotted by scouting the leaves for the characteristic stippling that occurs as a result of mite feeding, then turn over the leaf to look for the pest or feeding damage resulting from the pest scraping the contents from the plant cells (Figure 2). As infestations build you will be able to spot the characteristic webbing that these mites build, leading to their name. TSSM can be found on the underside of leaves with a 10X hand lens.

Figure 2. Stippling damage on the underside of a cucumber leaf, resulting from twospotted spider mite feeding (Photo by Laura L. Ingwell).

There are numerous species of aphids, but those that we encounter most often in vegetables include the green peach aphid, potato/tomato aphid and melon aphid. Don't let their names fool you. They can feed on hosts beyond what the name entails. When it comes to scouting and management, in *most* situations species identification is not crucial. What is important is to be looking at both the upper and lower surface of the leaves to monitor populations. Often times it is easier to spot the shed skin (or exuvia; Figure 3) from the aphids molting from one life stage to the next or the shiny secretions of honeydew on the leaves.

Figure 3. Exuvia or shed skin from aphids molting from one life stage to the next. The aphids are also seen in the photo (Photo by Laura L. Ingwell).

For both of these pests, there are a number of natural enemies that are present and contribute to their population control. Scouting is key so that you can spot populations early, mark them with a flag, and then monitor their spread to see if there is natural pest management occurring. For mites in particular, their natural enemies tend to be even smaller predatory mite species, so you can't necessarily see them. Some of the aphid predators you will be able to identify, and others not. The more obvious predatory insects include lady beetles (Figure 4), lacewings (Figure 5), and the minute pirate bug (Figure 6). The more conspicuous are the syrphid fly larvae (Figure 7), predatory mites (Figure 8), and parasitic wasps (look for aphid mummies; Figure 9).

Figure 4. Ladybeetle larva, a voracious predator (Photo by John Obermeyer).

Figure 5. The green lacewing larva (Photo by John Obermeyer).

Figure 6. The minute pirate bug, Orius insidiosus (Photo by John Obermeyer).

Figure 7. The larva of a syrphid fly preying upon twospotted spider mites. The larva is the pink worm-like maggot in the photo (Photo by Laura L. Ingwell).

Figure 8. The predatory mite species Neoseiulus fallacis, preying upon a spider mite (Photo by Samantha Willden).

Figure 9. The aphid mummies are the white or bronze bodies, some of which have a small hole in the back. This is the result of it being parasitized by a tiny wasp. The adult wasp emerges through the hole it chews in the aphid carcass (Photo by Laura L. Ingwell).

There are a variety of insecticides/miticides available to treat these pests, such as those containing abamectin (Agri-Mek®), bifenthrin (Brigade®), spriomesifen (Oberon®), acequinocyl (Kanemite®), fenpyroximate (Portal®). For aphids, I highly recommend flonicamid (Beleaf®). It may come with a higher price tag but is worth it. This product only impacts piercing-sucking plant pests. It is safe for natural enemies and pollinators. Furthermore, in high tunnel growing environments, we have achieved complete control with one application. The product ceases feeding of the pest, and therefore it takes some time to see the results, but the population will desiccate on the plant and die.

When making any pesticide applications this time of year, it is important to consider the impacts of the application on non-target organisms, such as predatory insects and pollinators. Some of the chemistries available have less impact on these beneficial insects. Choosing a chemistry that has fewer non-target impacts according to the labels, such as Portal. Also, make applications as late in the day as possible, when the flowers have closed and pollinators are less active. For more information on protecting pollinators in your fruit and vegetable crops, read this publication on production practices and this one for commercial applicators.

Buggy Whipping in Sweet Corn

(Stephen Meyers, slmeyers@purdue.edu, (765) 496-6540) & *(Dan Quinn, djquinn@purdue.edu)*

What is buggy whipping?

"Buggy whipping" is the term for when leaves in the corn whorl become crinkled and fail to unfurl (Figure 1) properly. It can also be referred to as "twisted whorl syndrome" or "rapid growth syndrome". Often these crinkled leaves bend toward the ground, resulting in an appearance some liken to a buggy whip. Sweet

corn plants with buggy whipping symptoms will usually appear stunted compared to unaffected plants in the same field. The crinkled, compressed leaves temporarily prevent new leaves from emerging from the whorl. Crinkled and contorted leaves are also less efficient at intercepting sunlight needed for photosynthesis, which can delay crop development. Symptoms are typically not uniform across a field, with symptomatic plants growing alongside unaffected plants.

Figure 1. Buggy whipping injury on sweet corn following treatment with metolachlor, a Group 15 herbicide (Photo by Stephen L. Meyers).

What causes “buggy whipping”?

Buggy whipping can occur after applying a Group 15 herbicide, such as products containing metolachlor, acetochlor, or pyroxasulfone. However, the symptoms can also be linked to periods of rapid growth- especially following stressful growing conditions. Some examples include drought followed by irrigation/rainfall or cold soil or air temperatures followed by a warm-up. Others report that cultivar selection plays a role, with some varieties more prone to buggy whipping than others.

What are the impacts?

Although seeing sweet corn with this symptom can be unsettling, it is typically not a cause for concern. The observed symptoms are not uncommon in corn entering the rapid growth stage around the V5 to V6 leaf stage. Within a week’s time, most symptomatic plants will unfurl. The affected leaves will continue to grow and expand, but they may still remain somewhat crinkled. Shortly after unfurling, new growth may appear yellow (Figure 2). This is just a result of insufficient sunlight reaching the newest leaves while they are trapped in the whorl. They will green up soon. Affected plants may be slightly delayed and have a crinkled appearance, but yield is usually not decreased in multi-harvest or “two-pass” sweet corn. However, for once-over harvested sweet corn, ears from these plants may not be at the perfect eating stage at the same time as the rest of the field and could represent a decrease in yield or quality.

Figure 2. Leaves emerging from buggy-whipped corn often appear yellow at first due to lack of exposure to sunlight (Photo by Dan Quinn).

Clearspring Produce Auction Price Update

(Jeff Burbrink, jburbrink@purdue.edu) & *(Petrus Langenhoven, plangenh@purdue.edu, (765) 496-7955)*

The Clearspring Produce Auction is located just 2 miles south of US 20 in Clearspring Township in the Heart of the LaGrange-Elkhart Amish Settlement. It is within easy driving distance of the towns of Shipshewana, Topeka, Emma, and LaGrange.

Produce is sold 3 days a week throughout most of the growing season (Tuesday, Thursday, Friday), with a hay sale on Saturdays. Office hours are Monday and Wednesday, 1 to 4 pm, and Tuesday, Thursday, and Friday, 8 am to 4 pm. An auction report can be heard by calling (260) 463-4131. Besides the produce and hay auctions, Clearspring has an equipment and supply business operating onsite for growers.

Are you curious about vegetable pricing?

In an effort to communicate more market information, we are publishing Clearspring Produce Auction volumes and prices for the past two weeks. You will be able to view volumes and pricing below:

June 30, 2023

July 4, 2023

July 6 prices

July 7, 2023

Improving Watermelon Cultural Practices, Are We on the Right Track?

(Wenjing Guan, guan40@purdue.edu, (812) 886-0198)

It is not unusual for watermelon wilt to occur in the late season in

our region. The plants are loaded with fruit and are sensitive to many stresses. In some cases, it is clear pathogens cause the problem, such as late-season fusarium wilt. While in other cases, it is hard to associate the symptom with a particular pathogen. In these cases, we generally call the symptom late-season watermelon vine decline. The fact that the symptoms often appear after heavy rainfall and first appear in low, poorly drained areas indicates waterlogging stress is involved.

When waterlogging occurs, it displaces oxygen from soil pores and promotes oxygen depletion by roots and microorganisms. The anaerobic condition increases the concentration of toxic chemicals in the soil, which results in root injuries and slow growth. The damage reduces the roots' capability to take up water and nutrients. Above the ground, plants close stomata to avoid water loss, leading to a subsequent reduction in photosynthesis. The typical plant symptoms include wilting, yellowing leaves, and leaf senescence.

Waterlogging stress will likely contribute to plant wilting symptoms in watermelon fields this time of year. These symptoms do not show in all fields that receive the same rain. More importantly, the symptom does not always associate with soil type. We have seen the symptoms in areas with well-drained soil.

Under the same natural conditions, plants vary in their tolerance to waterlogging stress. Certain cultural management practices may also make plants more susceptible to stress. It is reasonable to believe that plants with more intensive, deep, and widely spread root systems exploring larger soil profiles are more likely to tolerate stress conditions better.

Cultural Practices Known to Affect Root Growth

A single cultural practice is not likely to mess up root development. Still, it is possible that multiple practices combined create a condition that limits the plants' capability to develop a robust root system. Transplanting instead of direct seeding is known to affect tap root growth. Using black plastic mulch combined with constant water application through drip tapes is sometimes found to reduce tap root growth. Although we realize the limitation of transplants and plastic mulch and drip irrigation, they are used in watermelon production because of their apparent benefits.

In most cases, we saw benefits of using these practices rather than negative effects. The watermelon industry is not likely to abandon these practices. Thus exploring other cultural practices that may affect root growth is becoming increasingly needed.

Watermelon Roots Distribution and Comparing with Other Crops

Cucurbits generally have strong, rather shallow taproots and numerous strong, horizontally spreading laterals in shallow soil. Documented in *Root Development of Vegetable Crops* (Weaver and Bruner, 1927): when the watermelon plants are just beginning to vine, the tap roots may be at a depth of 12 inches, but horizontal branches may reach 2 to 3 feet in length, and secondary branches are abundant in shallow soil. When vines grow 4 to 8 feet long, the tap root only grows slightly deeper, while the lateral roots may spread to 5 feet. When maturing plants develop vines 15 to 18 feet long, a few laterals could extend outward 18 to 21 feet from the base of the plant.

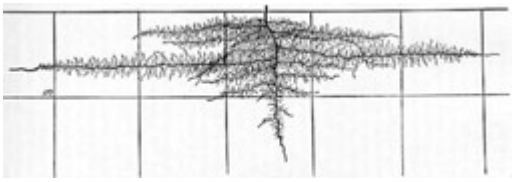


Figure 1. Root structure of a mid-season muskmelon plant. The author noted that watermelon roots had a similar structure to muskmelon roots but a more significant surface root network (Weaver and Bruner, 1927).

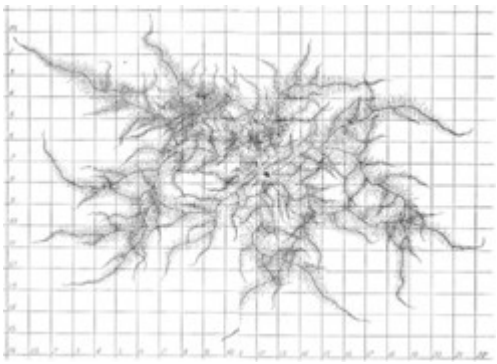


Figure 2. Surface view of the root system of a mature muskmelon plant. The author noted that watermelon roots had a similar structure to muskmelon roots but a more significant surface root network (Weaver and Bruner, 1927).

To compare with watermelon roots, tomato and strawberry root drawings are included in the article (Figures 3 and 4). A noticeable difference in tomato roots is that laterals may extend outward up to 2 feet, but instead of spreading, they turn downward and reach depths up to 3.5 feet. Strawberry roots also do not spread. The dense network of fibrous roots is concentrated in the top 10 to 12 inches of soil under the plants.

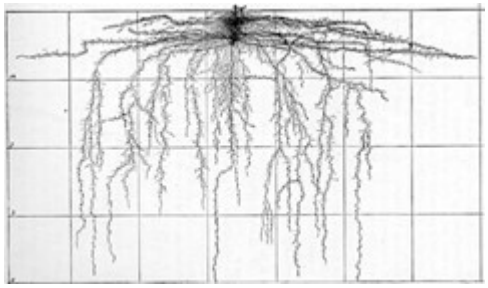


Figure 3. A mature tomato root system (Weaver and Bruner, 1927).

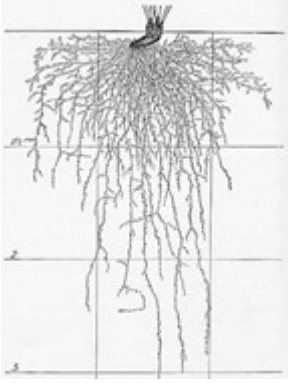


Figure 4. A mature strawberry root system (Weaver and Bruner, 1927).

Although current cultivars and production systems may change the extent of root expansion in the above crops, the general

trends still apply.

Cultural Practices May Affect Watermelon Root Growth

As the root patterns vary greatly among different crops, some popular practices could apply differently to the other crops—for example, bed height. Plasticulture strawberries are well known to be best grown when beds are at least 8 inches tall. The tall beds prevented waterlogging from happening in most of the root zones. Tomatoes and peppers are also better grown in relatively tall beds. It avoids waterlogging and soil splashing to the lower leaf canopies and prevents disease spreading. In contrast, a taller bed may not be the best option for cucurbit crops considering relatively fewer roots are grown inside the beds. As the primary roots tend to spread out, it is possible that tall, raised beds could negatively affect root growth by blocking root expansion ways.

Row middle cover cropping might be another example. The system greatly prevents soil erosion and provides windbreaks to protect young seedlings, as well as many other benefits. However, when growing watermelons, the green living mulch in row middles might compete with crops for moisture stored in soil profiles and discourage roots from expanding to row middles.

Heavy irrigation under plastic mulch and through drip tapes will also likely deter root expansion to the row middle to explore additional water sources. In a typical year, watermelon growth and yield may benefit from these intensive management practices. But under extreme weather conditions, especially excessive rainfalls, the most intensively managed plants tend to be the least resilient to extreme conditions.

Grafted Watermelons

In our evaluations, we have not noticed seedless watermelon varietal differences toward the stress condition. However, observed by farmers and supported by some research findings, grafted watermelons with a vigorous rootstock are less likely to wilt in the late season. One possibility is the disease resistance provided by the rootstocks. The more extensive root systems will also likely improve the plants' tolerance to waterlogging stresses.

Chemicals

A previous study found an herbicide called Alanap (*N*-1-Naphthylphthalamic acid), which functioned as an auxin efflux inhibitor and was widely used in watermelon production in the 1990s and early 2000s exaggerated late-season vine decline when combined use with the other cultural factors. Although Alanap is no longer used in watermelon production, other similar mechanism herbicides may be used on agronomic crops. It is warranted to further explore the carry-over effects of herbicides on watermelon root growth.

Plant Parasitic Nematodes Survey in Indiana

(Wenjing Guan, guan40@purdue.edu, (812) 886-0198) & *(Lei Zhang, leizhang@purdue.edu)*

Root-knot nematodes cause severe damage in vegetable production. Its infection results in root swellings called galls that interrupt plant water and nutrient uptake (Figure 1). Aboveground, plants show symptoms that include stunted growth, wilting, and leaf yellowing. In addition to root-knot nematodes, several other plant parasitic nematodes can cause damage to vegetable roots. Damage to the roots may affect plant growth directly or make plants more susceptible to other soilborne pathogens.

Figure 1. A root-knot nematode infected watermelon root.

A field survey for plant parasitic nematode is currently going on in Indiana. Root-knot nematodes (RKN) have been found across Indiana, where it causes damage to watermelons and cantaloupes, both open-field and high tunnel-grown tomatoes, and on carrots grown in high tunnels.

We have identified both southern (*Meloidogyne incognita*) and northern RKN (*M. hapla*). There is no clear geographic division of the two RKN species in Indiana. Southern RKN can be found in northern Indiana in high tunnels, while northern RKN was found on carrots grown in southern Indiana. The survey also found an *M. incognita* virulent strain on a grafted tomato that can increase *Mi*-gene resistance.

In addition to RKN, we frequently found spiral, stunt, and lesion nematodes in the soil samples.

We are continuing this survey in Indiana. If you are interested in participating, please contact Wenjing Guan at guan40@purdue.edu or (352) 870-4696 (text).

We also have a web survey to understand your preference for controlling RKN. The survey takes no more than five minutes. Thank you very much for participating in the study.

Survey link:
https://purdue.ca1.qualtrics.com/jfe/form/SV_73bKsHblfzLZQdU

The project is funded by the United States Department of Agriculture National Institute of Food and Agriculture, grant no. 2021-51181-35904.

Drought Conditions Continue to Improve. Will this Continue?

(Austin Pearson, pearsona@purdue.edu, (765) 675-1177)

Timely rains have returned over the past few weeks and have helped crop conditions across the state. Now that we are entering critical corn and soybean growth stages, cooler temperatures and rain are certainly welcome. Although rains have returned, they continue to be inconsistent. Vigo, Sullivan, and Lawrence counties had locations receiving more than 8 inches of rain over the last 30 days (June 11-July 10), which was 3-4 inches above the 1991-2020 climatological average (Figure 1). Northeastern and west-central Indiana ran 1-3 inches below normal in spots, leading to sustained drought over the past several weeks (Figure 2).

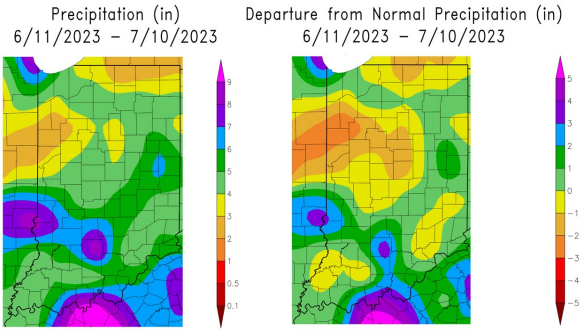
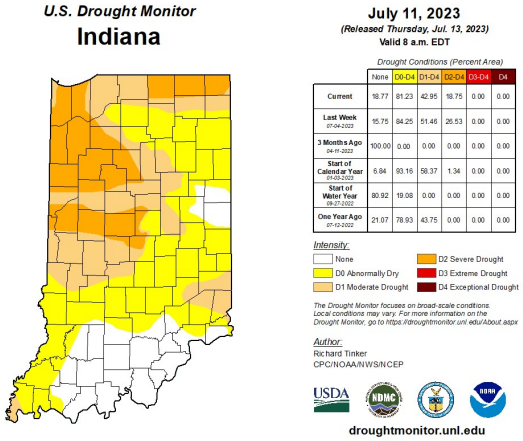


Figure 1. Accumulated precipitation for June 11- July 10, 2023 (left) and accumulated precipitation as a departure from the 1991-2020 climatological normal (right). These maps were obtained from the High Plains Regional Climate Center.



	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	18.77	81.23	42.95	18.75	0.00	0.00
Last Week 07-04-2023	15.75	84.25	51.46	26.53	0.00	0.00
3 Months Ago 04-11-2023	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 01-03-2023	6.84	93.16	58.37	1.34	0.00	0.00
Start of Water Year 09-27-2022	80.92	19.08	0.00	0.00	0.00	0.00
One Year Ago 07-12-2022	21.07	78.93	43.75	0.00	0.00	0.00

Figure 2. July 11, 2023, US Drought Monitor. The US Drought Monitor is released every Thursday morning by 8:30 AM.

Since June 27th, drought conditions have improved for some, especially in eastern and southern Indiana. The July 11 US Drought Monitor had 43% of Indiana in drought status, which was 8.5% less than last week. Portions of northwest, central, and northeast Indiana continued in severe drought (D2) status. Vegetation conditions have improved, but long-term drought indices still indicate lingering drought stress and impacts in these areas. Continued rains will certainly help conditions improve across the state.

Temperatures have been 1-3°F below normal over the past 30 days (June 11-July 10) (Figure 3). Locations in Lake, Porter, Randolph, and Wayne Counties were between 4-5°F below normal. Since April 1, Modified Growing Degree Days (MGDD) have accumulated between 1300 to 1900 units, which is near normal to 150 units below normal (Figure 4). The MGDD departure is not all that unusual, so there is little concern about delayed progress at this point.

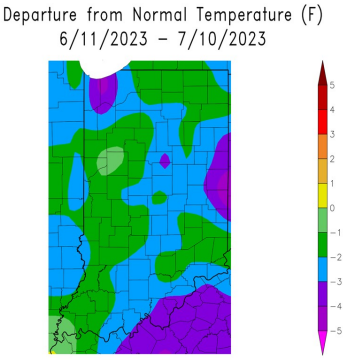


Figure 3. Average temperature for June 11 – July 10, 2023, represented as the departure from the 1991-2020 climatological normal. This map was obtained from the High Plains Regional Climate Center.

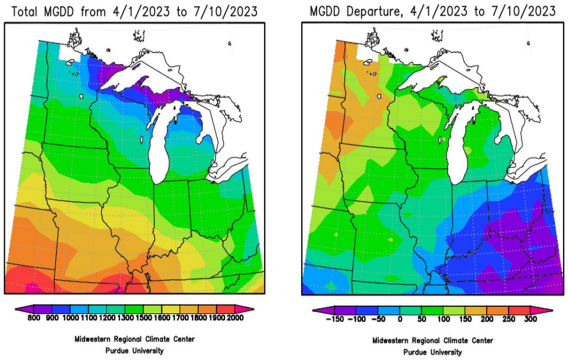


Figure 4. Total Accumulated Indiana Modified Growing Degree Days (MGDDs) April 1-July 10, 2023 (left) and Total Accumulated MGDDs represented as the departure from the 1991-2020 climatological normal (right).

Switching to the outlook, forecasted rain totals through July 19 continue to look variable across the state (Figure 5). South of Indianapolis could see 1.5 to 2 inches. North of Indianapolis could see 1-1.25 inches of rain, which is what we should be getting every week. Northwestern Indiana could also see over 1.5 inches of rain this next week, which should help provide some drought relief. The 6-to-10-day Climate Prediction Center (CPC) outlook (July 17-21) calls for elevated chances of above-normal precipitation statewide. Temperatures are expected to be near normal to slightly below normal at the Indiana-Michigan border (Figure 6). Higher chances for above-normal temperatures creep back in for the 8-to-14-day outlook (July 19-25), accompanied by near-normal precipitation for most of the state (Figure 7). Northern Indiana has slightly elevated chances for below-normal precipitation. The seasonal outlooks have high confidence in above-normal temperatures and low confidence in the precipitation outlook (Figure 8). Some good news, though, is that the US Seasonal Drought Outlook expects some drought removal and improvement across the state (Figure 9).

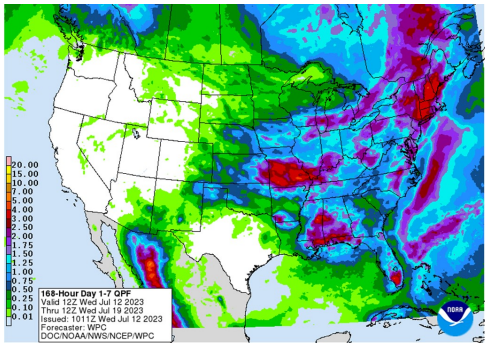


Figure 5. NWS Weather Prediction Center 7-day quantitative precipitation forecast for the continental United States, valid July 12-19, 2023.

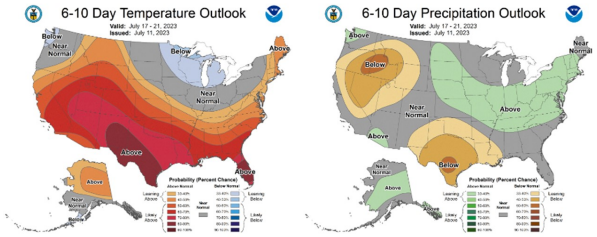


Figure 6. CPC 6-10 day temperature and precipitation outlooks for the United States, valid July 17-21, 2023.

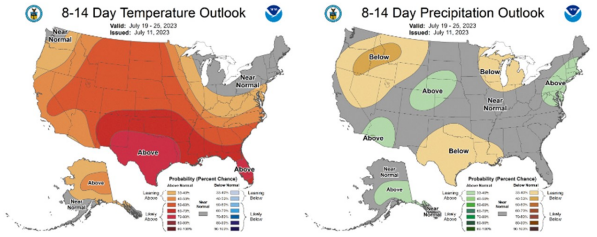


Figure 7. CPC 8-14 day temperature and precipitation outlooks for the United States, valid July 19-25, 2023.

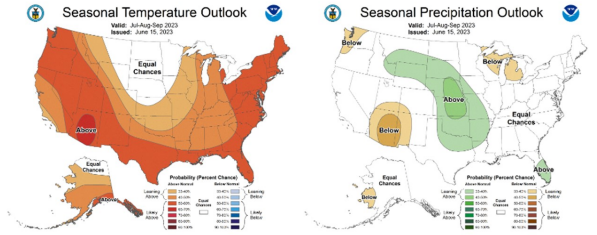


Figure 8. CPC seasonal temperature and precipitation outlooks for the United States, valid July-August-September, 2023.

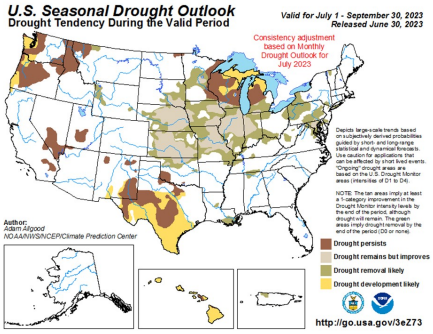


Figure 9. US Seasonal Drought Outlook valid for July 1-September 30, 2023, which is available via the Climate Prediction Center.

Bacterial Spot of Pepper

(Dan Egel, egel@purdue.edu, (812) 886-0198)

The first symptom of bacterial spot of pepper that is usually noticed is the lesions on the leaves. These lesions are irregular to round in shape and brown and are associated with chlorosis. Lesions are usually water-soaked (Figure 1). In severe cases, the fruit may be affected. The lesions on fruit are often raised (Figure 2). Additional photos of bacterial spot of pepper can be found here https://vegcropshotline.org/bacterial-spot-of-pepper/.

Figure 1. Bacterial spot of pepper causes irregular to round lesions on leaves (Photo by Petrus Langenhoven).

Figure 2. Lesions of bacterial spot of pepper fruit are often raised. (Photo by Petrus Langenhoven)

Bacterial spot of pepper is favored by temperatures 75 to 86°F with plenty of rain or overhead irrigation. High relative humidity also favors disease development. The pathogen is spread by wind-driven rain, which splashes the bacteria and forces them into adjacent leaves.

The pathogen that causes bacterial spot of pepper may be seed-borne. For this reason, transplants should be inspected for symptoms carefully when grown or when received.

Management of bacterial spot is best accomplished through host resistance. Choose pepper varieties that are listed as resistant to several different races of bacterial spot. However, host resistance may be limited in specialty peppers.

Copper products are the primary management product for bacterial spot control of pepper. While strains of bacterial spot of tomato are largely resistant to copper, it is not clear if strains that cause bacterial spot of pepper are also resistant to copper. Strains that cause bacterial spot on these two hosts do not cause disease on the opposite host.

Other products that can be used to manage bacterial spot of pepper include Actigard®. Actigard® is labeled at 0.3-.75 oz per acre. Begin the applications at the lower rate and increase the rate as the canopy increases in size. Actigard works by turning on host defense reactions. For this reason, do not use the product when the peppers are under stress, for example by drought.

I have had some success using the product Lifegard® for bacterial spot of tomato. It is a microbial product and works similarly to Actigard® to turn on plant defense reactions. It may be listed in some organic certification plans. (it is listed by omri.org). Take care not to use Lifegard® with copper or hydrogen peroxide products because these products may kill the beneficial bacteria in the product. Read the label carefully for other details. Other products that are labeled for bacterial spot of pepper include Regalia®, Serenade Opti®, and Tanos®. Streptomycin products may be used in the greenhouse only.

More details are listed in the *Midwest Vegetable Production Guide* (mwveguide.org). And always read the labels carefully.

Last Chance to Register for the Meigs Field Day

(Petrus Langenhoven, plangenh@purdue.edu, (765) 496-7955)

Are you still thinking of attending the Purdue Fruit and Vegetable Field Day on July 20, 2023? Well, you are in luck. Friday, July 14, is the last day to register for the field day. Register now at https://cvent.me/5zevYD

The field day has an exciting lineup of demonstrations.

- Sweet Corn Pest Management Updates – Laura Ingwell
- Silage Tarps for Weed Management in Potatoes – Josue Cerritos and Steve Meyers
- Watermelon Weed Management – Emmanuel Cooper and Steve Meyers
- Summer 2023 Collard Insect Management Trial – Elizabeth Long
- Black Soldier Fly Composting and Specialty Crop Production – Milena Agila, Allison Zablah and Laura Ingwell
- Two-year Plasticulture Strawberry Research Update – Jeanine Arana and Steve Meyers
- High Tunnel Diversification and Biological Control – Leslie Aviles, Sam Willden, and Laura Ingwell
- Does Increasing Soil Health Improve Pepper Yield? – Petrus Langenhoven, Nathan Shoaf and Dennis Gustavo Toc Mo
- Unmanned Aerial Vehicle Demonstration – Ashley Adair, Chloe Richard and Adam Shanks

For more information visit https://vegcropshotline.org/purdue-fruit-and-vegetable-field-day/

If you have any questions, do not hesitate to contact Lori Jolly-Brown at (765) 494-1296 or email her at ljollybr@purdue.edu or reach out to Petrus Langenhoven plangenh@purdue.edu

See you at the field day!

Southwest Purdue Ag Center Melon Variety Evaluation Open House on July 26

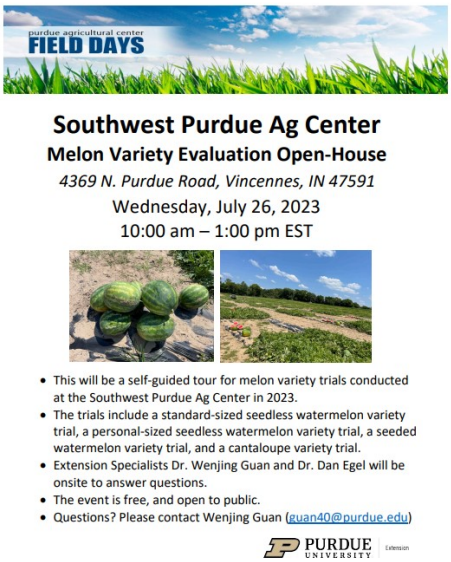
(Wenjing Guan, guan40@purdue.edu, (812) 886-0198)

Dear Melon Growers and Industry Friends,

You are invited to tour melon variety trials conducted at Southwest Purdue Ag Center, in Vincennes, IN, on July 26, 10:00 am-1:00 pm EST. The variety trials include:

- A standard-sized seedless watermelon trial
- A person-sized seedless watermelon trial
- A seeded watermelon trial
- A cantaloupe trial

This is a self-guided tour. Extension specialists Dr. Wenjing Guan and Dr. Dan Egel will be onsite to answer questions. The event is free and open to the public. If you have any questions, please get in touch with Wenjing Guan (guan40@purdue.edu). Thank you.



Small Farm Education Field Day – Register Now!

(Petrus Langenhoven, plangenh@purdue.edu, (765) 496-7955)

The Purdue Small Farm Education Field Day is presented on July 27, 2023, at the Purdue Student Farm in West Lafayette, IN.

You can still register for the field day. To reserve your spot, visit https://cvent.me/ewWN3b.

Registration closes on July 21, 2023.

Students register for free! Please contact Lori Jolly-Brown to receive the discount code for student registration.

Visit the Purdue Student Farm webpage https://www.purdue.edu/hla/sites/studentfarm/events/ for more information.

Contact Lori Jolly-Brown at ljollybr@purdue.edu or Petrus Langenhoven at plangenh@purdue.edu if you have any questions.

Vegetable Twilight Meeting at Pinney Purdue Ag Center on August 24th

(Liz Maynard, emaynard@purdue.edu, (219) 548-3674)

(Photo by Liz Maynard)

Pumpkins, peppers, sweet corn, compost, tomatoes, and more will be discussed at the August 24th Vegetable Twilight Meeting at Pinney Purdue Ag Center, 5 to 8 p.m. Central Time. Vegetable farmers, market gardeners, urban farmers, and home gardeners are invited to tour trials and hear from researchers and educators about weed management in pumpkins; key tips for pepper production; no-till sweet corn; compost and its interaction with soil micro-organisms, plant disease, and plant nutrition; managing insects in high tunnels/hoophouses; and managing diseases of pumpkins and tomatoes. There will be sweet corn tasting after the program. Pinney Purdue Ag Center is located at 11402 S. County Line Rd., Wanatah, Indiana.

To register or if you have other questions, please get in touch with Nikky Witkowski at (219) 365-3555 or nikky@purdue.edu. Please register by Monday, August 21, 2023.

(Photo by Liz Maynard)

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