VEGETABLE CROPS HOTLINE

A newsletter for commercial vegetable growers prepared by the Purdue University Cooperative Extension Service

Issue: 687
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In This Issue

Vegetable Samples for the SW Purdue Ag Center

(Dan Egel, egel@purdue.edu, (812) 886-0198) & *(Wenjing Guan, guan40@purdue.edu, (812) 886-0198)*

Last year at about this time, we announced that the Southwest Purdue Ag Center (SWPAC) would be closed to visitors due to concerns about the pandemic. At this time, SWPAC is still closed to visitors.

We have devised an alternative method of dropping off samples that will avoid face-to-face contact. Follow these instructions to drop off samples.

1. Contact Dan Egel or Wenjing Guan before stopping by or attempting any drop off (see contact info above)!
2. There will be a sign on the front door with instructions about how and where to drop off a sample. Do not try to enter the front door.
3. When leaving the sample, include as much info as you can about the sample. You will be contacted as soon as possible about the sample by phone or email.
4. Leave only Indiana samples!

If you have a sample to send, you are encouraged to send it instead to the **Plant Pest and Diagnostic Laboratory** (PPDL). The PPDL can also accept out-of-state samples. We are in close contact with the PPDL about vegetable samples.

Plant and Soils Building (LSPS) Room 116
915 West State Street
West Lafayette, IN 47907
(765) 494-7071

New Strawberry Disease

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

A new strawberry disease has been found in Indiana and researchers are looking for samples to determine the extent of the problem. The disease, caused by a species of the fungus Neopestaltiopsis, has been reported in several southeastern states and other countries where it causes leafspots, fruit spots and a plant decline. In Indiana, the disease has been reported to cause a leafspot (Figure 1) and a plant decline.

Researchers are asking commercial growers who believe that they may have observed the disease to contact the Purdue University Plant and Pest Diagnostic Clinic. The PPDL will waive sample handling fees for these samples until the researchers obtain the desired number of samples for the survey. Updates will be posted to the Hotline and to the PPDL website. Samples from multiple strawberry varieties and different types of production fields (matted row, plasticulture, high tunnel) are encouraged.

Information required for each sample:

1. Strawberry variety
2. Growing method: Matted row or plasticulture
3. Location (state and county) where grown
4. Approximate date of planting or year of matted row culture.
5. Symptoms observed: Leaf spot, fruit rot, crown rot, or a combination of these.

This research will attempt to determine where the disease exists in Indiana and how the disease may be controlled.

Results of these studies will be reported here when completed. The North American Strawberry Growers Association is sponsoring this research.

Figure 1. A leaf spot caused by Neopestaliopsis sp., a new strawberry disease to Indiana.

Early Season Scouting

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

The time has arrived to start implementing our scouting programs for monitoring and early detection, an integral part of your integrated pest management plan. In high tunnels or other protected environments there are a variety of insect pests that are capable of overwintering and can move into an of the early-season crops that you are growing. Two of the common and most troublesome pests that I am referring to are aphids and mites. In our strawberry high tunnel systems we have been monitoring insect populations throughout the winter, and much like last year aphids and mites are the biggest problem. Aphids have been lingering around the perimeter of the crop, hanging onto the weed population, but we have not seen them move into the berries. The mites are more widespread, occurring on the strawberry plants themselves in addition to the weeds, in particular volunteer cowpea emerging from the previous cover crop that was in the tunnel.

Utilizing sticky cards as a tool to help with monitoring or scouting the crop/weeds directly will help you make informed decisions about when to intervene. For a review of implementing sticky cards see this article. Mites create a stippling symptom on the leaves. Familiarizing yourself and your employees to recognize this early symptom can help with timely interventions. Depending on the crop, these symptoms can be more or less apparent. In our high tunnels, scouting the weeds is easier for detection than the crop itself. Cowpea is a great indicator plant. Figure 1 shows mite damage on cowpea, Figure 2 is that same pest damage on young strawberry leaves.

Figure 1. Mite symptoms on cowpea.

Figure 2. Mite symptoms on strawberry.

Mites typcially cause a stippling symptom on the upper leaf surface, small yellow spot resulting from the mite feeding on the underside, where they are sucking out the photosynthates from individual plant cells. Figure 3 is a view of the underside of the cowpea leaf, and Figure 4 is a close-up of that stippling damage on strawberry.

Figure 3. Mites on underside of cowpea.

Figure 4. Stippling damage from mites.

To prevent crop loss, be sure that you are scouting early and often, and you have a plan in place to intervene when the pest is detected. In our high tunnels, we are continuing to monitor the aphids. At this point, they continue to pop up in the weeds around the crop but are not colonzing the strawberries themselves. In this situation, we continue to work to remove the weeds and monitor on a weekly basis. The mites are treated differently. We have not seen any natural enemies and the population continues to grow and spread throughout the tunnel. For this pest, we have decided to intervene and are evaluating a variety of biopesticides for control (stay tuned). For the most recent pesticide recommendations, see the *Midwest Vegetable Production* or *Fruit Spray* guides.

Periodical Cicadas are Coming, but Your Vegetables are Safe!

(Elizabeth Long, eylong@purdue.edu, (765) 796-1918)

A natural wonder will occur in 15 states this year: the emergence of the Brood X, 17-year periodical cicadas! Also known as “17-year or 13-year locusts” the last mass emergence of these insects occurred in 2004. Now, 17 years later, the immature cicadas will emerge from the ground, molt one last time to gain wings, and “sing” loudly to find mates and lay eggs in trees and woody shrubs. The good news for vegetable growers is these insects only attack deciduous woody plants, so your veggies are safe! However, if you have young ornamental, landscape, or fruit trees, these may require protection. If you want to learn more about protecting young trees from cicadas, please read this article https://fff.hort.purdue.edu/article/plan-ahead-to-protect-young-fruit-trees-from-17-year-periodical-cicadas-emerging-in-may/

CFAP 2 Application Open

USDA is implementing updates to the Coronavirus Food Assistance Program (CFAP) for producers of agricultural commodities marketed in 2020 who faced market disruptions due to COVID-19. This is part of a larger effort to reach a greater share of farming operations and improve USDA pandemic assistance. The CFAP 2 signup period has reopened as part of USDA’s new Pandemic Assistance for Producers initiative. Note: Participation in CFAP 1 is NOT required for assistance through CFAP 2. To learn more, visit farmers.gov/CFAP, contact our call center at 877-508-8364, or contact your local FSA office.

Organic Transplant Production Project – Feedback Requested for Report to Funding Agency

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

Did you read an article or hear one of the presentations from Purdue about organic transplant production in the last couple of years? Let us know if they were helpful by responding to a quick survey at https://purdue.ca1.qualtrics.com/jfe/form/SV_6FiNlVsHAmKuqR7 . Thank you!

Share Your Experience about the Freeze Event

(Wenjing Guan, guan40@purdue.edu, (812) 886-0198) & *(Liz Maynard, emaynard@purdue.edu, (219) 548-3674)*

Vegetable growers, we would like to hear your story about the freeze event on Apr. 20 and 21. What crops are you growing? Did you take protective actions? Did it cause damage on the crops? Hearing your stories would help us

better design our extension programs. If you allow, we would like to share your experience on newsletters that may help other growers learn from the event. If you are willing to share your stories, please contact Wenjing Guan at guan40@purdue.edu Ph: (352) 870-4696 (cell); or Liz Maynard at emaynard@purdue.edu Ph: (219) 548-3674 (office). (219) 508-1429 (cell)

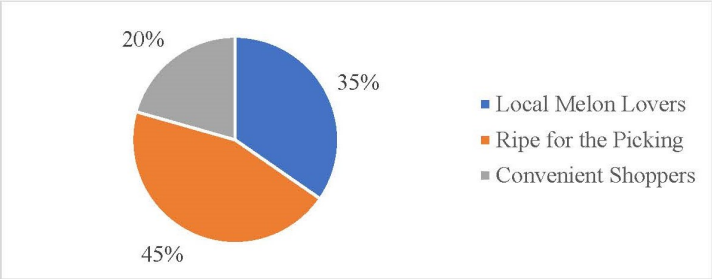

Figure 1. Ripe-For-The-Picking composes the largest segment of melon consumers.

The Three Types of Melon Consumers

(Ariana Torres, torres2@purdue.edu), (Bridget Behe, behe@msu.edu) & (Petrus Langenhoven, plangenh@purdue.edu, (765) 496-7955)

The average American eats almost 9 pounds of cantaloupe and 2 pounds of honeydew each year (Agricultural Marketing Resource Center, 2018). An increased melon consumption is mainly explained by consumer awareness of melon health benefits, year-round availability, creative marketing strategies, and improved cultivars. To address these economic opportunities, retailers, growers, and other industry stakeholders should have a clear understanding of the different market segments of melon consumers, and how individuals in these segments value diverse attributes of melons. This information can help industry stakeholders introduce new cultivars, increase melon sales and consumption, and convey key attributes and benefits to consumers.

This publication uses data from a study published by researchers from Purdue University and Michigan State University titled *Characterizing the U.S. Melon Market* (Torres et al., 2020). For more information, you can access the article cited below. Using a cluster analysis, the study reported on 3 melon consumer segments and profiled those groups to help academics, farmers, and retailers better serve consumers.

The 3 segments of melon consumers

Americans can be comprised in 3 clusters (market segments) of melon consumers. Cluster 1 ("**Local Melon Lovers**") comprised 34.6% of the sample (N=595), while Cluster 2 ("**Ripe-For-The-Picking**") included 44.7% of the sample (N=354), and Cluster 3 ("**Convenient shoppers**") composed 20.6% of the sample (N=769). Figure 1 illustrates the distribution of the clusters based on their consumer profile. As seen in Figure 1, the largest cluster corresponds to the "Ripe-For-The-Picking" type of consumer, followed by "Local Melon Lovers", and lastly by "Convenient shoppers".

Local Melon Lovers would be the best target for new melon cultivars because of their high level of consumption and positive attitudes towards melons in their diet. Consumers in this segment tend to be younger and have more children than in the other two segments. Local Melon Lovers were paying more for melons, preferred purchases in local markets (e.g. farmers markets) and tend to have a vast knowledge of melons. Marketing campaigns targeting this group should focus on the health and experience attributes of melons.

Ripe-For-The-Picking consumers placed halfway between Local Melon Lovers and Convenient Shoppers Clusters indicate the importance to generate marketing messages and labels to appeal to this segment. Given their demographic and consumption characteristics, **Ripe-For-The-Picking** consumers seem to be the target of marketing and advertising campaigns aiming to increase the market share of melons. For example, generating social media campaigns that target white/Caucasian consumers located in the Midwest can improve the reach of melon retailers to convert **Ripe-For-The-Picking** into Local Melon Lovers. Marketing efforts should highlight the importance of buying local and information regarding the health and nutrition of melons.

Literature cited

Torres, A., Langenhoven, P., & Behe, B. K. (2020). Characterizing the US Melon Market. HortScience, (556), 795-803.

This article was also published at https://www.purdue.edu/hla/sites/hortbusiness/publications/extensionpublications/

Direct Farm Marketing Series

Does Snow in April Mean Global Warming is not Happening?

(Beth Hall, hall556@purdue.edu)

This week, much of Indiana got to see some snow falling as we were hoping that winter weather was behind us. It is not unusual for some to ask when this sort of event happens how "global warming" could be real when things are feeling so cold. The start of my answer is pointing out the word "global". While Indiana was experiencing below-normal temperatures this past week, many other places around the earth were experiencing above (if not much above) normal temperatures. When averaged across the planet, that global temperature is still showing increasing trends. The other part of the answer is about variability. Every year, there are going to be days that are cooler than normal and days that are warmer than normal. When averaged over a month, season, or year, temperatures have been increasing. Finally, our daytime high temperatures may not be showing a noticeably strong trend (though, there is even a slight warming trend that has been occurring), but nighttime low temperatures have been warming at a greater rate. Therefore, if our average daily temperature is an average of the daily maximum and minimum temperature, if just one of those is increasing, then the average will increase.

Will these cooler temperatures and risk for snow continue this spring? Climate outlooks at this point are favoring above-normal temperatures (Figure 1) and forecasts for the next 10 days suggest a strong warming with high temperatures in the upper 70s and lower 80s as early as next week. Perhaps our last snow date of the season is behind us. Even precipitation should stay near-to-above normal over the next several weeks (Figure 2) – offering the potential for abnormally dry conditions in our northern counties to not worsen.

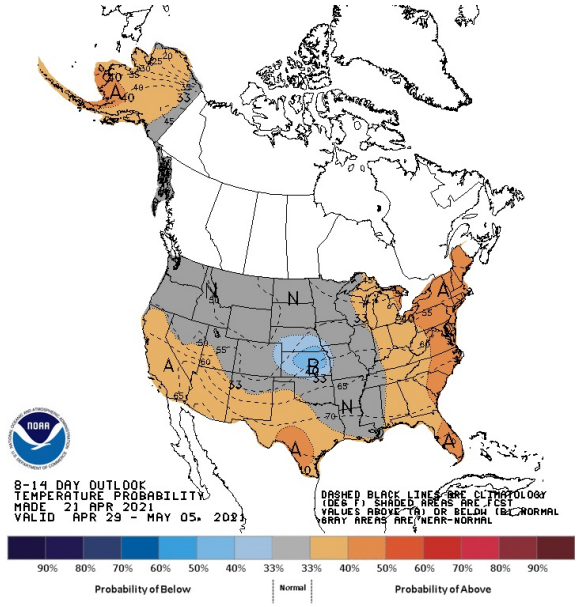

Figure 1. The 8-14-day climate outlook showing probabilities slightly favoring above-normal temperatures for April 29 through May 5, 2021. Source: NOAA Climate Prediction Center

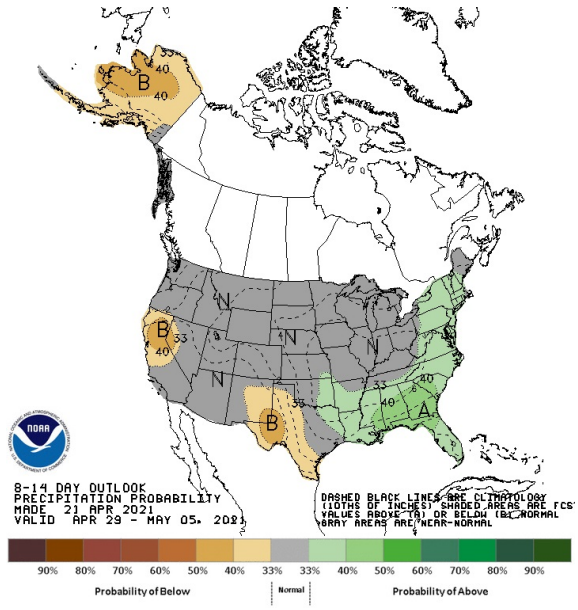

Figure 2. The 8-14-day climate outlook showing probabilities favoring near-normal precipitation amounts for April 29 through May 5, 2021. Source: NOAA Climate Prediction Center

With the recent cold spell, growing degree-day accumulations have slowed down this past week, but total accumulations are still ahead of where things were last year (Figures 3 and 4).

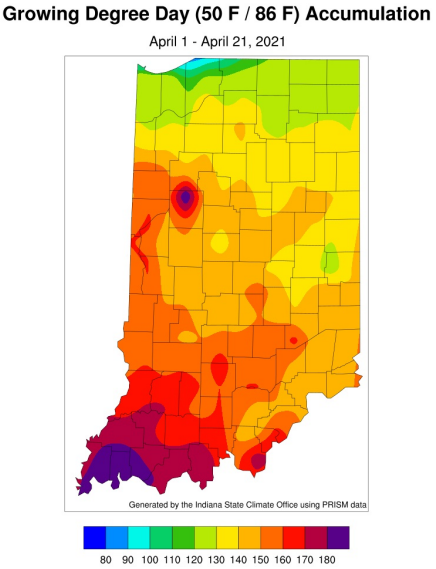

Figure 3. Modified growing degree day accumulation from April 1-21,2021.

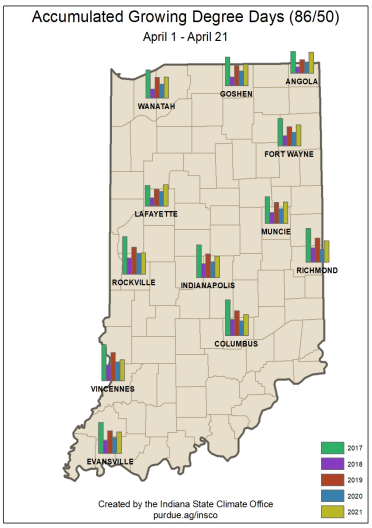

Figure 4. Comparison of 2021 modified growing degree day accumulations from average for April 1-21 to the past four years.

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Editor: Wenjing Guan | Department of Horticulture and Landscape Architecture, 625 Agriculture Mall Dr., West Lafayette, IN 47907 | (812) 886-0198