

# WEEKLY CROP UPDATE



UNIVERSITY OF DELAWARE  
COOPERATIVE  
EXTENSION

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## Vegetable Crops

### Vegetable Crop Insect Scouting

David Owens, *Extension Entomologist*,  
[owensd@udel.edu](mailto:owensd@udel.edu)

#### **Cucurbits**

Continue scouting for striped cucumber beetle in young transplants. If a field has been treated with a neonicotinoid, you may see both dead and live beetles. Live beetles may have recently migrated into the field and have not fed on enough plant material to receive a fully toxic dose. It sometimes takes a day or two to kill beetles after an application. Other beetles will stop movement but stay on the plants, almost as if frozen in place.

#### **Snap Bean**

Scout for thrips and for leafhopper in young snap bean plants and take note of any bean leaf beetle damage observed (circular to rectangular holes in leaves). On seedling snaps, thrips thresholds are 5-6 per leaflet and 5 leafhopper per sweep; this rises as the plants get closer to flowering.

#### **Potatoes**

Scout now for Colorado potato beetle and for leafhopper. CPB thresholds are 50 adults per 50 stems or 200 small larvae per 50 stems. While looking at stems, look under leaves to see if you can spot leafhopper. The threshold for the small potato leafhopper is 1 per 10 sweeps. At-plant neonics should still have enough residual to work, but it is getting weak at this point.

#### **Sweet Corn**

Early season pests of sweet corn planted into

cover crop, particularly a small grain type cover, include stink bug and cutworm. Stink bugs can kill the growing point causing the plant to tiller excessively. Signs of stink bug feeding include jagged holes in rows or long slit like holes, and yellow edges around the hole. While thresholds specific to brown stink bugs in sweet corn have not been worked out, in grain corn it is 13 bugs per 100 plants. Cutworm thresholds in field corn are between 3 and 5% plants or 10% with early stage cutworm leaf feeding (circular holes in rows) and cutworm is still present. I imagine for sweet corn, somewhat lower thresholds are justifiable, particularly in fresh market non-processing fields.

### U-Pick Farm and Farm Stand Produce Safety Best Practices

Jennifer Jones and Kali Kniel, *Department of Animal and Food Sciences, University of Delaware*

Late spring and early summer harvest is upon us. Along with excitement and enthusiasm for delicious produce as well as great sales, Produce Safety is an important element on a U-Pick Farm and at a Farm Stand. Inviting the public to participate in the harvest is also exciting, but there are good ways to engage the public while educating on produce safety, as well as about how your fruits and vegetables are produced. You may recall this information from your past produce safety training. *You must make visitors aware of policies and procedures to protect covered produce and food contact surfaces from contamination by people and take all steps*

reasonably necessary to ensure that visitors comply with such policies and procedures.

Communicating to your customers on produce safety best practices is a great start. Use signs to communicate farm expectations and important information to visitors, including location of handwashing stations or restrooms. Signs should have large, neat print and be easy to see and read, not obstructed by equipment or plants.

Engaging your visitors with information about food production practices and produce food safety can enhance their visit to your farm.



Best Practices for Produce Safety	
DO's	DON'Ts
Have accessible restrooms and hand washing station for employees and customers	Use dirty and used containers for harvesting produce
Have signage of visitor policies & procedures specific to your farm	Allow employees to handle produce while ill
Update employee training prior to the start of harvest	Bring family pets to the farm*

\*Animals can pose a food safety risk to farm biosecurity and fresh produce, as well as a potential risk to employees, market customers, and farm visitors. Farmers need to consider these risks while maintaining food safety regulatory compliance and buyer requirements. The Americans with Disabilities Act (ADA) governs what actions are legally allowed regarding customers visiting your market or on your farm with service animals. Farmers can ask visitors questions about service animals, but not necessarily about the individuals' disability or need for the animal. Information on state service animal law can be found [here](#), as well as more information on [service animals on farms](#).

For questions or assistance on Produce Safety call Jennifer Jones 302-856-7303 or email at [bjones@udel.edu](mailto:bjones@udel.edu).

## Fruit Crops

**Fruit Crop Insect Scouting**  
*David Owens, Extension Entomologist,*  
[owensd@udel.edu](mailto:owensd@udel.edu)

### Tree Fruit

Continue scouting for and treating for plum curculio in peaches, apples, plum, and cherry. Now is also the time to begin monitoring for white peach scale. Crawlers can be intercepted on black electrical tape wrapped around a branch to expose the sticky side up. Crawlers are the most susceptible life stage to insecticides.

### Strawberries

With cooler, cloudy, and wet weather, complaints of slug activity have come in on various crops including strawberry. The only two recommended products are Sluggo (OMRI) and Deadline. Check berries for slime trails and holes. Slugs are more of a potential issue in matted row systems. Also continue scouting late strawberries for tarnished plant bug adults and nymphs feeding on flowers. If planting vegetable crops adjacent to strawberries, be sure to scout them for spider mite activity. Spider mites often build up early in strawberries and then spill over to the other vegetables.

# Agronomic Crops

## Agronomic Crop Insect Scouting

David Owens, *Extension Entomologist*,  
[owensd@udel.edu](mailto:owensd@udel.edu)

### Early Season Moth Activity

Many thanks to Joanne Whalen and David Armentrout at UMD for assistance with monitoring pheromone traps. Moth activity continues to remain low; I do not anticipate major issues with armyworm in small grain or early pasture at this time.

Location	# of Nights	Total Catch	
		TAW	BCW
Salisbury, MD	7	0	6
Seaford, DE	5	0	8
Sudlersville, MD	7	0	13
Harrington, DE	5	-	-
Smyrna, DE	7	1	0
Middletown, DE	14	0	0

### Corn and Soybean

Any soybean that has gone in the ground in the last week is at higher risk for slugs and a moderate risk for seedcorn maggot due to cooler, cloudy conditions and recent rainfall. Be sure to scout beans carefully and often as they are expected to emerge so that if a slug rescue treatment is deemed necessary, it is done timely. That can be a challenge with soybean. Make sure seed slots are closed. If open, look at the condition of the seed and cotyledon, they may be fed upon before they emerge. For corn, the risk of injury is greatest when the plants have 3 leaves or less, there is active feeding on the whorl leaf that has not fully unfurled, and the plants appear to be ‘going backwards’. They may do that this week in problem fields given several bouts of rain in the forecast and overcast, cool days.

As a caveat, for both corn and soybean, the relationship between slug feeding and yield is murkier. If whorl leaves are not being fed upon and the weather conditions are warm and dry, corn can recover. Soybeans can compensate for considerable stand loss provided the stand is more or less even. A stand of 70 thousand plants

per acre, especially with irrigation, can yield up to 95% of original stand target, or if there are heavily damaged areas, fill-in replanting may be necessary as opposed to the entire field.

Rescue treatments are limited to granular baits: metaldehyde such as Deadline or iron phosphate such as FerroX AQ. There are others on the market and this is not meant to be an endorsement. Check labels and your state’s department of agriculture for state registration availability. Applying them can be a challenge, it can be applied by plane or by spreader. In small pot trials I use a little hand spreader which is obviously not feasible on more than a half acre or so.

If scouting a just planted field, sift through ground residue. A field with 2 or more slugs per square foot should be monitored carefully.

Opposite of slugs are seedcorn maggot, which is attracted to tilled fields with organic matter incorporation, whether that be manure, crop residue or cover crop. There are no rescue treatments for SCM, but it can be preventatively managed with an insecticide seed treatment. If an insecticide seed treatment was not used, and the field worked, scout plants about a week after emergence for signs of seedcorn maggot damage to plants and seed. On the cotyledon it will appear as black etching. Seedlings will wilt in place and the stems will be hollowed.

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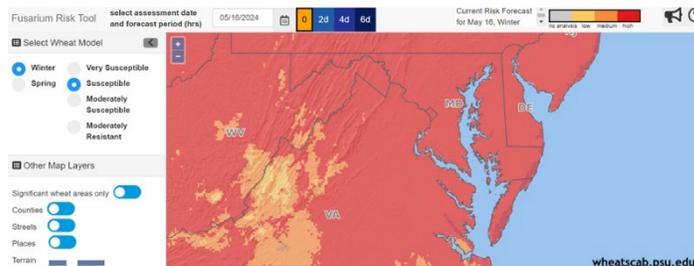
## Scouting Fields for Fusarium Head Blight

Alyssa K. Betts, *Extension Field Crops Pathologist*; [akoehler@udel.edu](mailto:akoehler@udel.edu)

Most wheat flowering has wrapped up. If you have fields that are still finishing flowering, we are currently tracking at high risk for susceptible varieties (Figure 1). In barley, we are reaching the point where symptoms of FHB may be visible (Figure 2). For wheat, FHB symptoms are usually visible 18-24 days after the start of flowering. Heads with FHB will have bleached florets or bleached sections of the head and may have pink growth on spikelets. Glume blotch may also be present, but typically has more of a grey appearance. Before heads begin to dry down, it can be informative to walk the field and get a

sense of how much FHB you are seeing to plan accordingly for harvest. You can follow these steps to assess the severity of FHB present in your field.

1. For every 10 acres of field, randomly select one spot to survey.
2. Keeping your line of sight forward above the wheat heads, walk 40-50 yards and randomly pick 10-20 heads to look at. You can keep them on the plant or detach and place into a bag. (Try not to look down until you have a handful of heads, looking down may bias the heads you select).
3. Once you have randomly collected the heads, rate the percent of each head with symptoms of FHB (bleaching or pink growth on spikelets). You can use the scale included to help calibrate your eye.
4. After you have recorded values for each head, determine the average percent FHB severity by dividing the sum of disease severities by the total number of heads collected.  
(Ex. You rate 10 heads with severity values: 0%, 10%, 30%, 0%, 0%, 20%, 10%, 0%, 0%, 0%. These add up to 70. 70/10 heads = 7% overall FHB severity)  
Higher levels of FHB are typically associated with elevated levels of the mycotoxin deoxynivalenol (DON) and potential issues with yield and test weight. It is possible to have delayed or lower levels of symptoms and still have DON.
5. Repeat this assessment as needed to get an overall rating for the field. Fields with greater than 10% FHB severity are at higher risk for yield losses or elevated DON. Fields with elevated DON should be harvested as early as possible. You can increase combine fan speeds and shutter openings to blow out the smaller, shriveled kernels. These kernels usually have the highest mycotoxin contamination, and their removal can help reduce DON levels.



**Figure 1.** FHB Risk Model for very susceptible varieties May 16, 2024



**Figure 2.** Symptoms of FHB visible on malting barley



0%      7%      14%      21%      33%      50%



50%      66%      79%      90%      100%

Adapted from the Visual Scale to Estimate Severity of Fusarium Head Blight in Wheat by NDSU Extension Service.

To access the full document, scan the QR code



## **Herbicide Injury on Corn**

Mark VanGessel, *Extension Weed Specialist*;  
[mjv@udel.edu](mailto:mjv@udel.edu)

I have seen a lot of corn that is pale after a postemergence herbicide. A lot of fields were sprayed last week after days of cloudy overcast weather but were sprayed during those days with full sunshine. The corn plants have not had a chance to build up cuticle layers and they were very susceptible to herbicide injury.

The amount of postemergence herbicide(s) that the plant absorbs is impacted by the waxy cuticle on leaf surfaces. Cool, overcast weather results in thinner cuticle layers that can allow more herbicide to enter the plant. Herbicide formulations, spray adjuvants, and fertilizers play a role in herbicide absorption and being cautious with what goes into the spray tank can reduce the risk of injury. If spraying during cool, overcast periods, switch to “softer” additives if the label allows it; for instance, methylated seed oils (MSO) increases the risk of injury over crop oil concentrates (COC); and non-ionic surfactants (NIS or 80-20's) reduces the risk further. Consider using the lower allowed rate of surfactant or nitrogen. Be sure to read the label and see what is allowed by the manufacturer.

We do not want to see herbicide injury, and some is more apparent than others, but crops often outgrow early-season injury with little to no impact on yield. Under these cool, cloudy conditions be cautious about the adjuvants and tankmixes you use to avoid injury. Remember, if the crop is more sensitive to the herbicides during these conditions, chances are, so are the weeds.

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## **Cool Season Hay Forage Budgets**

Nate Bruce, *Farm Business Management Specialist*, [nsbruce@udel.edu](mailto:nsbruce@udel.edu)

University of Delaware has developed cool season hay forage budgets. The budgets may be accessed the associated [Excel file](#). Cool season forages covered in the budgets include alfalfa, orchardgrass, timothy, fescue, orchardgrass / fescue mix, and orchardgrass / alfalfa mix. All budgets are given with a tab that shows

estimated expenses and an actual expenses tab for producers to enter their own information. To streamline use of the budgets, expenses are given for both establishment and production on the same tab. If the forage is already established, remove the expenses with number one footnote from your own budget. Revenue in each budget is based on square bale production and prices. Budgets will be updated for round bale production in the weeks to come and be published on Weekly Crop Update.

## **General**

### **GPS Satellite Outage Alert**

#### *WAAS Satellite GPS Corrections*

If your operation relies on Wide Area Augmentation System (WAAS) signal, be prepared for planned satellite outages during spring seeding season. The current WAAS - PRN 133 satellite will be out of service from May 13<sup>th</sup> to June 7<sup>th</sup>, 2024.

During that time, WAAS satellite 135 will be operational so that producers can still use WAAS signals.

We highly recommend updating your connectivity setting to prevent potential downtime and ensure seamless operation. To ensure continuous connectivity this operation must be performed by April 30<sup>th</sup>, 2024.

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### **Jimsonweed Seems to Be Increasing**

Mark VanGessel, *Extension Weed Specialist*;  
[mjv@udel.edu](mailto:mjv@udel.edu)

Jimsonweed, *Datura stramonium*, also known as thornapple, is one of those species that is quite recognizable because of its showy white flowers, thorny seed capsules and distinctive odor when the leaves or stems are crushed. It contains various alkaloids, chemicals which have effects on humans if ingested. I am not aware of any issues associated with skin contact. In particular, those growing vegetables need to be scouting for jimsonweed and keeping it under control.

Jimsonweed is a summer annual. I have seen more often in the past couple of years and have gotten a few questions about it. I do not have a good explanation for why it is becoming more common, but talking with colleagues in other states they are noticing it more frequently as well. There is only one report of herbicide resistance for this weed, so that does not seem to explain why we are seeing more.

Jimsonweed is susceptible to many common herbicides including atrazine, Command, Callisto, Basagran, dicamba, 2,4-D, Liberty (glufosinate). Metribuzin, Valor, and Reflex are fair to good on it. The Group 15s (metolachlor/Dual, acetochlor/Harness, pyroxasulfone/Zidua) and pendimethalin/Prowl provide little to no control.

In a five-year emergence study, jimsonweed emerged much earlier in conventional tillage than no-till. Under no-till conditions, 85% emergence did not occur until mid-July (one of the latest emerging species). So maybe we are seeing more of it because of its later emergence and while use of postemergence sprays often includes a residual herbicide, the residual herbicides commonly used in soybeans are not effective for jimsonweed.



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### **Guess the Pest! May 17, 2024**

*David Owens, Extension Entomologist,*  
[owensd@udel.edu](mailto:owensd@udel.edu)

Because I failed to update the google sheet last week, I am keeping the word application safety acronym puzzle up. What do these acronyms stand for? Click the Guess the Pest logo to submit your answers.

- a. PPE
- b. REI
- c. PHI
- d. PSNT
- e. MSDS or SDS

In the meantime, I was surveying my cantaloupe transplants that will be going in the ground very soon. They have been waiting outside for about a week and a half now, and I'm starting to see wilting plants. What's doing this?

## Herbicide Resistant Weeds in the Region

Mark VanGessel, Extension Weed Specialist; [mjv@udel.edu](mailto:mjv@udel.edu)

Poor weed control can be attributed to many factors, but herbicide resistance is a major consideration. Once a resistant weed population develops in a field, that herbicide is no longer effective; in fact, most other herbicides within that group are also ineffective. We have confirmed resistance in the following summer annual weed species in Delaware:

Weed Species	Herbicide Group	Representative Herbicide
Horseweed/marestail	Groups 2, 9	2: Classic/FirstRate 9: glyphosate
Common lambsquarters	Group 5	Atrazine
Redroot pigweed/smooth pigweed	Group 2 Group 5	Classic/Pursuit atrazine
Palmer amaranth	Groups 2, 9	2: Classic/FirstRate 9: glyphosate
Common ragweed	Multiple Groups 2, 14, 9	2: Classic/FirstRate 14: Valor/Reflex 9: glyphosate

Weeds are constantly evolving resistance to herbicides and seeds from resistant populations are readily moved by machinery and wildlife. Knowing what other resistant biotypes are in the region can be helpful for early detection and managing new infestations. I talked to weed scientists from some of the other states in the region (MD, VA, and NC) and here are other confirmed instances of herbicide resistance.

Weed Species	Herbicide Group	Representative Herbicide	Observed in DE
Redroot pigweed	9	Glyphosate/Roundup	No
Redroot pigweed	Multiple Groups 2, 14, 27	2: Classic/Pursuit 14: Reflex/Cobra 27: Callisto	Group 2 only
Palmer amaranth	Group 10	Glufosinate/Liberty	No
Palmer amaranth	Group 5	atrazine	No
Waterhemp	Multiple Groups 2, 9, 27, 14, 5	2: Classic/Pursuit 5: atrazine 9: glyphosate 14: Reflex/Cobra 27: Callisto	Group 2, 9 only
Velvetleaf	Group 5	Atrazine	No
Barnyardgrass	Group 5	Atrazine	No
Giant foxtail	Group 5	Atrazine	No
Common cocklebur	Group 5	Classic/Pursuit	No

# Announcements

## UD Weed Science Field Day

### Note Corrected Date

Wednesday, June 26, 2024 9:00-11:00 a.m.

University of Delaware

Carvel Research and Education Center

16483 County Seat Highway, Georgetown, DE

Event will include:

- herbicide evaluations in corn, soybeans, and vegetables
- integrated weed management trials, focusing on cereal rye for weed suppression
- crop safety evaluation from herbicide treatments

*There is no fee for this event and it is open to all. If you have questions, please contact Mark VanGessel ([mjv@udel.edu](mailto:mjv@udel.edu))*

## Paraquat Training Webinars

Training is required for anyone who applies, mixes, or handles paraquat. Training certificates need to be updated every three years and since this rule went into effect four years ago, those who participated in training the initial year, need to take it again.

Syngenta is offering webinars for Paraquat Handling certification or re-certification. These sessions are free and are scheduled at 2:00-3:00 p.m. EST on the following dates:

May 20, 2024

May 21, 2024

May 28, 2024

May 30, 2024

*Register online using the link below. Registration requires the following: first and last name, email address, state, and certification license #. This will allow a report to be sent to EPA and to your state for certification credits (if applicable).*

[Paraquat Training Webinar Registration](#)

## Salinity Affected Lands in Transition (SALT) Conference

June 11 & 12, 2024 8:30 AM - 4:30 PM

Hyatt Regency, Cambridge, MD

Join us for a two day conference discussing the effects of saltwater intrusion on agricultural fields and forests in the Mid-Atlantic. Sessions will include Field and Crop Responses, Landscape Evolution, Water Management, Soils in Transition, Ghost Forests, and Socio-Economic Issues.

**Register online at:**

<https://www.agroecologylab.com/salt-conference-2024>. Registration closes on June 3.

## Pre-Exam Training for DE Pesticide Applicators Category 03

Wednesday, June 5, 2024 8:00 AM - 3:00 PM

Delaware State Fairgrounds, DDA Building, Harrington, DE

This event is for anyone wanting to obtain a Category 03 (Ornamentals & Turf) Delaware pesticide applicators license who would like some training prior to taking the exam

**Register online at <https://udel.edu/0012032> Contact John Emerson [jremer@udel.edu](mailto:jremer@udel.edu) if you have questions.**

## Are you a Corn Farmer? We Want to Pay You to Earn 1 DE Nutrient Management Credit!

Farmers in DE who grow corn and are interested in learning more about in-season nitrogen modeling tools can participate in a 30-minute, farmer-friendly computer simulation. All participants are paid for participation (up to \$150 in a gift card) and earn 1 DE Nutrient Management Credit (1 MD credit also available) for using N model outputs to make management decisions on a virtual farm. Responses are anonymous and personal information will not be shared outside the project team. If you are interested, please fill out this [form](#) and you will be sent instructions by email to participate.

## Chance to Win \$50 Amazon Gift Card by Filling Out a Survey about Mental Well-being

Farmers and ranchers, farm workers, foresters, aquaculture and marine producers and others who live in Delaware Communities and those who work in agriculture related industries are invited to participate in a short survey about mental health and stressors. Your chance of winning the gift card is 1 in 100!

For more information and to participate please visit the anonymous link below. A survey in either English or Spanish is open now through the end of May 2024. <https://bit.ly/Cultivemos>

Participation in this project is anonymous and is entirely voluntary. You may skip any question that you do not wish to answer, and you may discontinue at any time. Please consider participating in this important Northeast region study. Survey results will help extension educators learn more about these barriers to getting help and what ideas can be shared for reducing the stress farmers, ranchers and growers face.

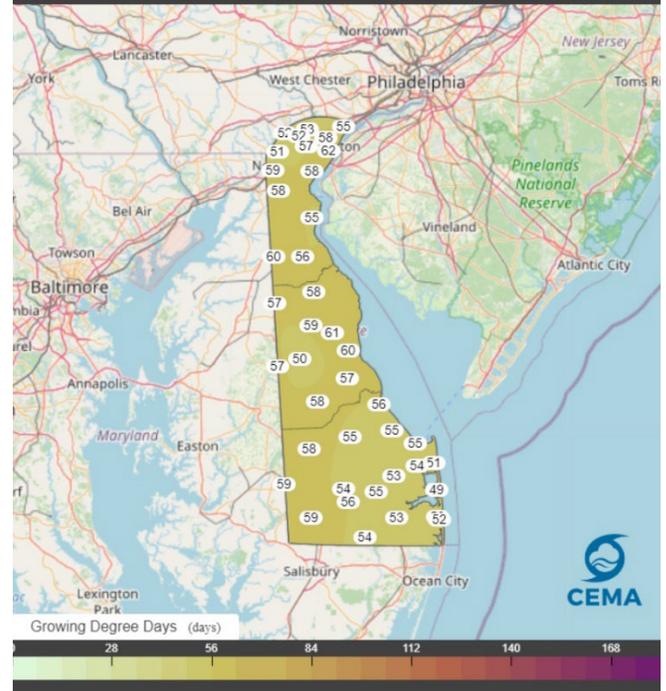
Participants who complete the survey are eligible to be entered in a drawing for a \$50 Amazon gift card. One person will be selected randomly from each state. *If you have questions about this survey, feel free to contact [Maria Pippidis](#)*

# Weather Summary

## 1 Week Accumulated Growing Degree Days

Total Growing Degree Days

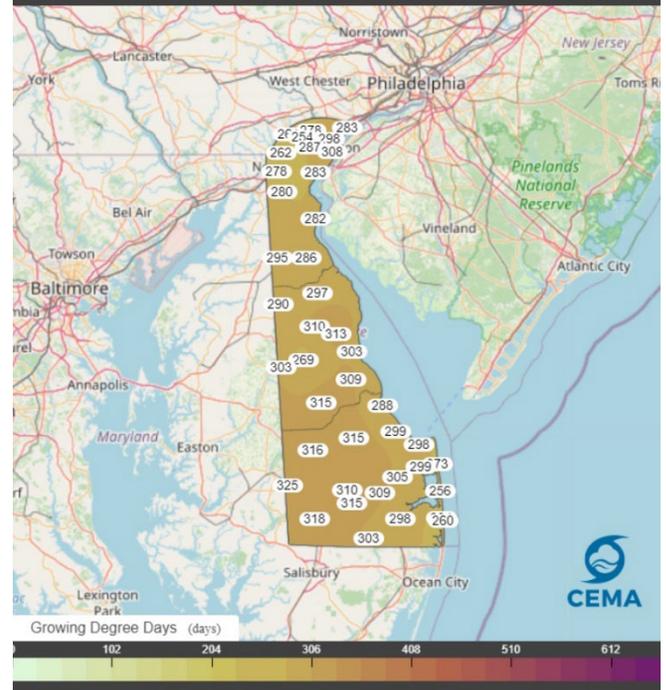
May 10, 2024 - May 16, 2024



## 1 Month Accumulated Growing Degree Days

Total Growing Degree Days

Apr 17, 2024 - May 16, 2024



## 1 Week Accumulated Precipitation



*Weekly Crop Update is compiled and edited by Emmalea Ernest, Extension Fruit & Vegetable Specialist and Drew Harris - Kent Co. Ag Agent*

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## 1 Month Accumulated Precipitation

