

WEEKLY CROP UPDATE



UNIVERSITY OF DELAWARE
COOPERATIVE
EXTENSION

Volume 31, Issue 20

August 11, 2023

Vegetable Crops

Corn Earworm Alert - Vegetable Crop Insect Scouting

David Owens, Extension Entomologist,
owensd@udel.edu

The much-anticipated corn earworm flight has begun for 2023, albeit more than 2 weeks later than last year. Traps that were catching 1 - 12 moths last week at this time are now catching dozens per night, as the table below will show. Not to be outdone by our trap catches, traps at Virginia Tech's Eastern Shore AREC in Painter caught nearly 400 moths per night earlier this week. Crops to be scouting for over the next several weeks include snap bean, lima bean, tomato, and soybean and sorghum (more on that in the agronomic insect scouting report). Female moths are attracted to blooming crops to fuel up so they can lay eggs. They also prefer open canopies so that it is easier to get to the flowers. This is why double crop soybeans get earworm populations that full season beans, which have largely completed flowering, usually do not. These moths are very quickly going to be laying eggs, in our current warm conditions it will take those eggs two days to hatch. When reared under constant 77-degree F temperatures, it takes 3.7 days to complete the first instar and 2.8 days to complete the 2nd, giving us about 8-9 days before we reach the third instar. There is a high level of first and second instar mortality, but once they reach 3rd instar, mortality decreases and feeding picks up.

I reckon the earliest we may see third instar worms in other crops will be next Thursday.

Trap counts from Thursday are as follows:

Trap Location	BLT CEW	Pheromone CEW
3 nights total catch		
Dover	3	106
Harrington	2	89
Milford/Canterbury	6	54
Rising Sun	2	71
Wyoming	4	83
Bridgeville/Redden	2	82
Concord	4	251
Georgetown	5	63
Woodenhawk	-	86
Laurel	4	84
Lewes	-	112
Goldsboro, MD	-	256

Begin including worm materials in tomato sprays. Be sure to use a high volume and high pressure to get good canopy penetration. We have a lot of good options: spinosyns, Proclaim, Bt's, Rimon, Intrepid, Avaunt, and diamides. I found in a trial a couple of seasons ago that under low pressure, all of these products work equally well.

That is not the case for sweet corn. We have diamides (Vantacor), Intrepid Edge (and generics), Radiant and Blackhawk, pyrethroids, and Lannate. None of the modes of action by themselves perform well under high pressure. Our most powerful treatments are Besiege and Elevest. Besiege can be applied up to 31 fl oz and gives us 3-4 applications (no more than 4 per

label). We can only apply 2 applications of Elevest. There are active ingredient restrictions on these products, meaning if you apply Elevest, you cannot use much if any other bifenthrin product; if you apply the two applications of Elevest or the 31 fl oz of Besiege, you cannot apply the other or Vantacor - you would have exceeded the label restriction on amount of chlorantraniliprole active ingredient in those products. Elevest in recent spray trials does not significantly differ from Besiege but does tend to perform a couple of percent better, most likely due to the bifenthrin. Over the previous 4 seasons, we have tested many of the labeled pyrethroids alone for earworm management. Hero at its higher rate performs the best, followed by Baythroid XL, which sometimes is better than or is as good as bifenthrin, and those usually perform significantly better than Warrior II.

Some producers have asked about alternatives to Lannate as a pyrethroid tank mix partner. Radiant and Intrepid Edge when tank mixed with Warrior II and applied for all treatments will perform as well as a Besiege/Baythroid XL rotation applied every 3 days.

How often should sprays be made? If you do not have fall armyworm, make the first application at first silk, not prior. During the first 10 days or so of silking, pyrethroid applications should be followed 2 days later with a diamide product (ex-Besiege or Elevest). Those applications can be followed 3 days. If the temperatures go down into the low 80's, a 3-day spray schedule will suffice. This is conservative. If foul weather or other life or farm event prevents an application after 2 days, that does not mean you will experience higher crop injury. The downside to applying pyrethroids as frequently as this is that we risk flaring aphids, so be sure to scout for aphids about 10 days after silking. If a significant aphid population is growing and depositing honeydew, add Sivanto or Assail into the spray program. Neither product alone will get corn earworm.

What if you are growing a Bt variety? If it is an Attribute II or Attribute Plus variety, you do not need to treat for worms. If you are growing Attribute or Obsession, treat them as you would a non-Bt sweet corn variety.

Sweet Corn

Continue scouting for fall armyworm. If they are present, you may want to consider starting ear sprays a few days early. Thresholds are 15% infested plants during late whorl stage. We did an unreplicated trial this week for fall armyworm and got surprisingly low amount of mortality. Avaunt performed the best, followed by chlorantraniliprole. Warrior II only gave us about a 40% reduction in armyworm.

Cucurbits

Striped cucumber beetles and rindworms are the primary pests present at this time. Aphids seem to be quiet this year. Remember, pyrethroids have not given us control in bioassays this year for striped cucumber beetle. New in the rindworm complex is the potential for beet armyworm. They were spotted in pigweed this week in a melon field. Beet armyworms are resistant to pyrethroids.

Peppers

Be sure to scout for beet armyworm, their larvae are resistant to pyrethroids. You can tell from other species in that beet armyworm has a narrow black spot behind the head. Sometimes, fall armyworm is gray and at other times almost green. Beet armyworm produces webbing in which to feed in the early stars.

Soil Pests a Problem in Sweet Potatoes

Jerry Brust, IPM Vegetable Specialist, University of Maryland; jbrust@umd.edu

This season sweet potatoes have shown feeding damage from either wireworms or white grubs. Wireworms bore shallow holes into the surface of sweet potato roots. Multiple species of wireworm can attack sweet potato. Wireworms are the immatures of click beetles and are

cylindrical, yellowish orange with brown heads and tail. They are smooth and relatively hard. Final instar wireworms are generally 1/2 to 3/4 of an inch long. The adults, which do not feed on sweet potato are small to medium sized beetles that are flat and reddish-brown to dark brown. Wireworms produce small 1/8-inch circular holes in the roots (Fig. 1). Because the immature stage can last two or more years in the soil; if you have a wireworm problem now you will probably have it in the coming year in that field. To know whether you have wireworms in a new field, you can screen for them in the fall or early spring using bait stations (a mixture of corn and wheat) placed in the soil 3 to 4 inches deep and removed and inspected for larvae 10 to 14 days later.

White grubs are the immature stages of May and June beetles. White grubs bore large shallow holes into sweet potato roots that result in large feeding sites of half an inch or more in diameter (Fig. 2). Grubs are relatively large (up to 1 inch), dirty white, C-shaped larvae with brown head capsules and three pairs of true legs near the head and no prolegs. These pests overwinter in the soil. Adults are active primarily in May and June and lay eggs in the soil with a preference for grasses, pastures, or weedy fields. White grub larvae can be present in the soil prior to planting if you plant into fields that are high in organic matter or were weedy.

Of course, there is nothing to be done now about controlling the damage. Because these soil pests can be so long lived in the damaging stage, how extensive the feeding damage is in an area and how large of an area is damaged will need to be noted. Large damage areas or extensive feeding damage to small areas will mean not to go back into this field for a couple of years with sweet potatoes. If other fields are of concern the bait stations can be used to see if insecticides are needed in the field for the next sweet potato crop. Control of wireworms and white grubs that are present in a field that is going into sweet potato is through the use of soil-applied insecticides before or during planting. The 2022-2023 Mid-Atlantic Commercial Vegetable Production Recommendations guide has instructions on these treatments.

Fig. 1 Wireworm damage to sweet potato



Fig. 2 White grub feeding damage to sweet potato.



Managing Pepper Anthracnose

Andy Wyenandt, Extension Specialist in Vegetable Pathology, Rutgers University;
wyenandt@njaes.rutgers.edu

This article originally appeared in the [Rutgers Plant and Pest Advisory](#).

Unlike in tomato, where symptoms are only present in mature (red) fruit, pepper anthracnose can infect pepper fruit at any growth stage. Currently, there are no commercially available bell or non-bell peppers with known resistance to anthracnose. The pathogen overwinters, albeit, not very well, on infected pepper fruit left in the field or on infected plant material at the end of the production season. Because pepper anthracnose does not overwinter very well, it always starts out as a 'hot spot' in the field and then fans out directionally with the prevailing direction of the wind and driving rain. Hot weather, along isolated afternoon and evening showers are ideal conditions for anthracnose development.

On farms with a history of pepper anthracnose, precautions should be taken each year. The first, if possible, is to rotate away from those areas of the farm with anthracnose for as long as possible. Remember, it can survive (although not very well) in the soil for many years. Importantly, the same pathogens that cause tomato anthracnose and strawberry anthracnose are the same species that infect pepper, so rotating away from fields heavily used in tomato and/or strawberry production is extremely important. Fields need to be scouted as soon as fruit start to develop to locate 'hot spots'. If 'hot spots' are found, all fruit from the immediate and surrounding area need to be strip-picked (or entire plants can also be removed). Growers who have adopted this practice have had success in reducing their losses by reducing the inoculum pressure before the pathogen begins to fan out across the field. Overhead irrigation should not be used in fields with anthracnose problems.

Reducing the amount of inoculum in the field is critical for managing pepper anthracnose. Infected fruit left in the field during and after the production season have the potential to act as a source of inoculum. Therefore, it is

critically important to take the appropriate steps to help reduce that chance. During the season, all infected fruit need to be removed from the field. After harvesting, all fields should immediately be mowed or hit with gramoxone. All plant debris should be thoroughly worked back into the soil so it can start to break down as quickly as possible. Abandoned fields with plants still standing going into the fall/winter only act as an increased source for inoculum. It's a misnomer to think that the cold winter weather will help breakdown and reduce inoculum found on infected plant material left on the soil surface. It's much better if infected plant material is worked back into the soil where other soil microorganisms can help with the process.

Fungicide programs do work for controlling pepper anthracnose. Fungicide programs should begin as soon as plants start to flower. The key to controlling anthracnose is to get the fungicide to where it is needed the most, on the developing fruit. Planting peppers in a single or double-row fashion may greatly affect your ability to control the disease. Your fertility program may also affect your ability to control the disease. Fertility programs high in N that promote tall, lush, dense canopies will greatly impact how much fungicide gets to where it needs to be. Growers should apply high rates of chlorothalonil or manzate in a weekly rotation; or tank mix either with azoxystrobin (11); Cabrio (pyraclostrobin, 11); Priaxor (fluxapyroxad + pyraclostrobin, 7 + 11); Quadris Top (3 + 11); Aprovia Top (3 + 7); or Topguard (flutriafol + azoxystrobin, 3 + 11) with a high volume of water (50 gal/A +) to ensure adequate coverage. Organic growers need to be extremely diligent with proper crop rotations, regular scouting to detect 'hot spots' early and make sure to remove all potential sources of inoculum. Weekly OMRI-approved copper applications may help suppress anthracnose. Other organic products have shown little or no efficacy against pepper anthracnose.



A Wyenandt, Rutgers University

Anthrachnose symptoms on pepper fruit.

For more information please see the [2022/2023 Mid-Atlantic Commercial Vegetable Production Recommendations Guide](#).

Fertilizer Recommendations for Broccoli, Cabbage, and Cauliflower

Emmalea Ernest, Extension Fruit & Vegetable Specialist; emmalea@udel.edu

Fall cole crops are being transplanted into the field and within this group, broccoli, cabbage, and cauliflower have high nutrient requirements. Following recommended fertility practices can help to avoid some physiological disorders, such as hollow stem and buttoning. The [Mid-Atlantic Commercial Vegetable Recommendations](#) include our regional nutrient recommendations for broccoli, cabbage and cauliflower. However, some of those recommendations are in footnotes in very small print, so I am reviewing them here:

Broccoli

Nitrogen 150-200 lb/acre split between three applications (planting, 2-3-week sidedress, 4-6 week sidedress).

Phosphorus should be applied at planting based on soil test results. Rates are as follows in lb/acre of P_2O_5 : Low - 200, Medium - 100, High/Optimal - 50, Very High - 0.

Potassium should be applied at planting based on soil test results. Rates are as follows in lb/acre of K_2O : Low - 200, Medium - 100, High/Optimal - 50, Very High - 0.

Boron should be applied at planting at rate of 1.5-3 lb/acre.

Sulfur should be applied as a part of the fertilizer program at a rate of 20-45 lb/acre.

Cabbage and Cauliflower

Nitrogen 100-150 lb/acre split between two applications (planting, 2-3 week sidedress).

Phosphorus should be applied at planting based on soil test results. Rates are as follows in lb/acre of P_2O_5 : Low - 200, Medium - 100, High/Optimal - 50, Very High - 0.

Potassium should be applied at planting based on soil test results. Rates are as follows in lb/acre of K_2O : Low - 200, Medium - 100, High/Optimal - 50, Very High - 0.

Boron should be applied at planting, 1.5-3 lb/acre.

Molybdenum should be applied at planting with broadcast fertilizer. Rate is 0.5 lb/acre of sodium molybdate.

Sulfur should be applied as a part of the fertilizer program at a rate of 20-45 lb/acre.

Agronomic Crops

Agronomic Crop Scouting Report

David Owens, Extension Entomologist, owensd@udel.edu

Soybeans

Scout double crop soybean for corn earworm beginning next week. Our flight has just begun, and earworms are liable to show up in double crop soybean anytime in the next 3 weeks. Corn earworm prefers drought stressed plants, open canopies, and flowers. We do not have drought stress right now, and recent rains may help increase pathogen loads and blunt some of the potential population, but do not count on it. The best treatment is Besiege or Elevest applied at their low rates. Last year when populations spiked to near 1 earworm per sweep, Besiege at 6.5 fl oz zeroed them out. Earworm thresholds

are generally around 2-3 worms per 15 sweeps. You can find NCSU's earworm threshold calculator here: <https://www.ces.ncsu.edu/wp-content/uploads/2017/08/CEW-calculator-v0.006.html>.

If green stink bugs are in a field above threshold of 5 bugs per 15 sweeps or 2.5 bugs per 15 sweeps and 1 earworm per 15 sweeps (half threshold of both species), a treatment is justified. Remember, green stink bugs are susceptible to pyrethroids whereas brown stink bugs are much less sensitive to pyrethroids. Of the pyrethroids, bifenthrin does the best job.

Sorghum

We captured our first sugarcane aphid last week in a field near Lewes, DE. Scout late sorghum regularly until it is in the soft dough stage to make sure large populations are not building up (20-30% infested plants with isolated areas of honeydew present).

Late sorghum that has not headed or is in early pollen shed is at risk for damaging earworm populations and fall armyworm. Thresholds for whorl stage fall armyworm is high and most likely will not be reached. However, fall armyworm and earworm should be treated the same when in heads. Texas A&M has an excellent threshold calculator and guidance here: <https://extensionentomology.tamu.edu/sorghum-headworm-calculator/>.

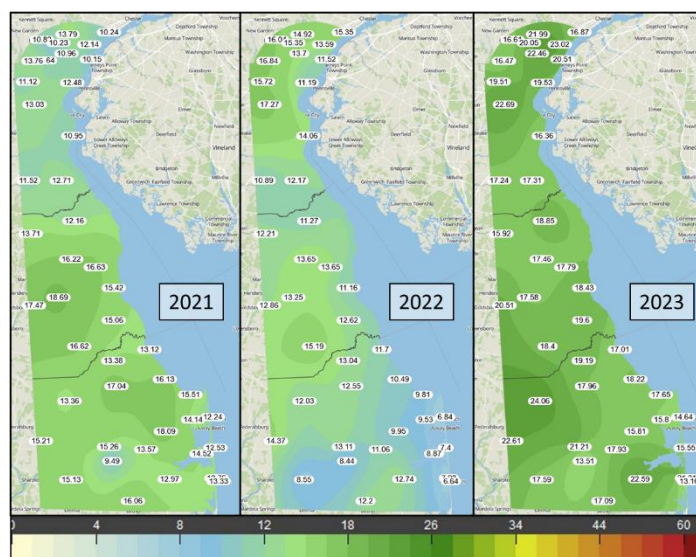
Accumulated Rainfall Since April

Jarrod O. Miller, Extension Agronomist,
jarrod@udel.edu

While we had a drier start to the season, summer rainfall has made up with heavy rainfall events across the state. Depending on the intensity of the storm, total rainfall may not represent what your soil could have stored for crop production, as runoff could certainly have occurred.

This has been a wetter year statewide, particularly around Seaford, Dagsboro, and Middletown. This rainfall could have caused

delays in growth as well as general losses of nitrogen and other leachable nutrients. In the figure below you can observe rainfall totals between April 24th and August 9th in 2021, 2022, and 2023 across the state.



Grain Marketing Plan Tips

Nate Bruce, Farm Business Management
Specialist, nsbruce@udel.edu

Developing a grain marketing plan can be difficult, especially when grain market prices are constantly changing and go through periods of extreme volatility like what we've seen in the past two years. Here is a list of back to basic tips on how to make or improve your grain marketing plan to meet your operations marketing objectives.

1. **Take the total amount you have to market and break it down into smaller sales units.** Determine your estimated production for the year and break it down into smaller sales units. An easy method to determine your expected production is to use your Actual Production History (APH) which will be discussed in more detail. Some of the most common sales unit's producers use are in 1,000-5,000-bushel increments or the quantity they know is one tractor trailer load. If pre-harvest marketing, never sell more than you have insured. You do not have to sell any bushels prior to harvest, but

often, higher price opportunities will occur prior. To calculate how many bushels you have insured, multiply the APH by the quantity of acres of the commodity you plan to plant in each field. This value is your expected production. Next, simply multiply the expected production by the insurance rate. So, for example, you have a 300-acre corn field with an APH of 220 bushels per acre and a 75% insurance rate. The expected production is 66,000 bushels (300 acres x 220 bushels / acre). The insured amount of bushels from this field is 49,500 (66,000 bushels x 0.75 insurance rate). If you were to break down your insured bushels into sales units of 5,000 bushels, you'd have roughly 10 sales units (49,500 insured bushels / 5,000-bushel sales units). In this example, you would have 10 sales units to pre-harvest market. If post-harvest marketing, you only can sell grain that is unpriced in storage.

2. Set Price Points

It is important to determine the average price at which you want to sell your grain. At the very minimum, price targets (both pre-harvest and post-harvest) need to exceed your established cash flow price. Setting realistic expectations in determining your price targets is extremely important. Setting price targets that are either too low or too high can have a negative impact on your marketing plan. Let's say for example you determine the average corn price you want to obtain is \$5.50 per bushel. You would have to sell five equal quantities of \$5.30, \$5.40, \$5.50, \$5.60, and \$5.70 to achieve your price target. When you set an average commodity price target, making changes year over year to your marketing plan is easier because you can see how you sold grain in the past and improve your marketing plan moving forward. For pre-harvest price targets, you must ensure the grain price is greater than your cost of production. For post-harvest price targets, you must set them above the price you could have obtained at harvest, plus any additional storage expenses such as bin rental, interest expenses, or insurance on storages.

3. Set Sales Deadlines

Grain prices are constantly changing and may become lower or higher than your price target. Some commodity prices have seasonal patterns such as corn prices being highest in the spring (March-June) and soybean prices highest in the summer (June-July). Setting deadlines to make sales and be proactive is essential to ensure you achieve your price target.

4. Know Your Marketing Tools

Several different types of contracts exist for you to sell grain. Make sure to understand all these contract options by consulting with either your local elevator or broker. The most common marketing contracts offered by most elevators are cash sales, forward cash contracts, and hedge-to-arrive contracts. You can also utilize options such as puts, calls, and hedges by working with a broker. It is imperative to understand all the marketing tools that are available to you and determine the ideal mix that fits within your marketing plan the best.

5. Share Your Plan with Someone Else

After writing your marketing plan and determining your course of action, share your plan with someone else, whether that be a spouse, lender, purchaser, or local farmer group. Sharing your plan will keep you accountable to your marketing objectives.

Conclusion

Grain marketing is complex because prices are always a moving target. Having a marketing plan in place can help create realistic goals to navigate market volatility. At the beginning of every crop cycle is one of the best times to create or review your marketing plan and adjust. These tips can help you create your marketing plan or modify your current one.

General

Guess The Pest! August 4 Answer: Southern Root Knot Nematode

David Owens, Extension Entomologist,
owensd@udel.edu

Congratulations to Michael Crossley for correctly identifying southern root knot nematode as the afflicting agent in last week's pest challenge. This one was tricky, there are several reasons why soybeans are going to be stunted. The last 3-4 weeks have seen some areas inundated with excessive rainfall. Drown out spots are going to look similar - root growth is impacted. A few folks entered sudden death. There is a correlation between SDS and soybean cyst nematode. Root knot is one of our most important soybean pests in the area and has a very broad host range. Pulling up plants to look at the base of the stem for signs of fungal growth and looking at the roots for galling is a good idea for areas that are stunted.



Guess The Pest! August 11

David Owens, Extension Entomologist,
owensd@udel.edu

This week, we are jumping into sorghum to scout for earworm and aphids. We came across one field that has a lot of red lesions on the upper canopy leaves. What is this?

Click on the link to log your answer!

<https://forms.gle/AjQxxk9QzhegzCw48>



Announcements

Hydroponic Produce Food Safety Webinar Thursday, August 17, 2023 12:00 - 1:00 p.m.

Rutgers University is hosting a free webinar on produce food safety in hydroponic systems.

Here is the link for additional information.
<https://plant-pest-advisory.rutgers.edu/webinar-managing-food-safety-risks-in-hydroponic-operations/>

Farmland Preservation Program Tuesday, August 22nd, 2023

6:00-8:00 p.m.

Delaware Department of Agriculture Building at
the State Fairgrounds
18500 S Dupont Hwy, Harrington, DE 19952

Delaware's Farmland Preservation Program received \$20 million for farm preservation this past year, the highest state funding in the program's history. This program will explain how the Delaware Department of Agriculture's Farmland Preservation program works and discuss the tax implications of preserving farmland. Light dinner will be provided to registrants. Space is limited.

To register, please contact Karen Adams.

E: adams@udel.edu

P: 302-831-3328

Please contact Nate Bruce nsbruce@udel.edu with any questions.

Farmland Preservation Program Thursday, August 24th, 2023

6:00-8:00 p.m.

University of Delaware
Paradee Center
69 Transportation Circle, Dover, DE

Delaware's Farmland Preservation Program received \$20 million for farm preservation this

past year, the highest state funding in the program's history. This program will explain how the Delaware Department of Agriculture's Farmland Preservation program works and discuss the tax implications of preserving farmland. Light dinner will be provided to registrants. Space is limited.

To register, please contact Karen Adams.

E: adams@udel.edu

P: 302-831-3328

Please contact Nate Bruce nsbruce@udel.edu with any questions.

Small Grain Grower Meeting
September 5th
Carvel from 6:30-8:30 pm.

Weed, disease, insect management, fertility, and crop budgets. Also, there will be malted barley updates by Proximity Malt.

Fresh Market Vegetable Research Field Day Thursday, August 17, 2023, 5:30-7:30 p.m. University of Delaware Carvel Research and Education Center 16483 County Seat Highway, Georgetown, DE

University of Delaware Extension Specialists will showcase research projects related to fresh market vegetable production. A box dinner will be served at the start of the meeting.

Presenters:

Emmalea Ernest, Extension Vegetable & Fruit Specialist

Mark VanGessel, Extension Weed Scientist

David Owens, Extension Entomologist

Alyssa Koehler, Extension Plant Pathologist

Crops to be covered include sweet corn, peppers, lettuce, pole lima beans, snap beans, cucumbers and watermelon.

Topics include shade cloth use, variety evaluations, insect management, small scale robotic weeder demo, drip applied mustard

biofumigant, and biological disease control products.

Pre-registration is required. Please call 302-831-3328 or email adams@udel.edu to RSVP by Friday, August 11.

Marl Pit Farm Tailgate Session

**Thursday August 31, 2023, 5:00 -7:00 p.m.
UD Cooperative Extension Research
Demonstration Area
617 Marl Pit Road, Middletown DE 19709**

Join your fellow producers and the UD Extension team for an in-person discussion of this year's current production issues. Other topics will include nutrient management, pest management and weed management. This session will inform producers of timely topics observed and occurring in 2023.

Pesticide and Nutrient Management Credits will be available.

The meeting is free, and everyone interested in attending is welcome.

To request more information, please call Nick Adams at (302) 476-1136.

Soybean Planting Population Survey

Jarrold O. Miller, Extension Agronomist,
jarrod@udel.edu

Please answer this 5-question survey on soybean population decisions:

https://delaware.ca1.qualtrics.com/jfe/form/SV_4SkJW0kiDzcpQ02



Farmland Rental Rate Study

*Nate Bruce, Farm Business Management
Specialist, nsbruce@udel.edu*

University of Delaware Cooperative Extension is conducting a farmland rental rate survey. The purpose of this project is to evaluate various farmland rental rates and how they impact a farming operations ability to cash flow. You must fill out the survey for each farm that is rented. Land that is owned, does not need to be included in the survey. Your local county agent can assist you in filling out the survey. Your response to the survey is greatly appreciated. Each individual response to this survey will not be shared to anyone in the public and kept private. If you have any questions about this project or survey, feel free to contact Nate Bruce at nsbruce@gmail.com. Below is a URL link and QR code to the survey.

Survey URL:

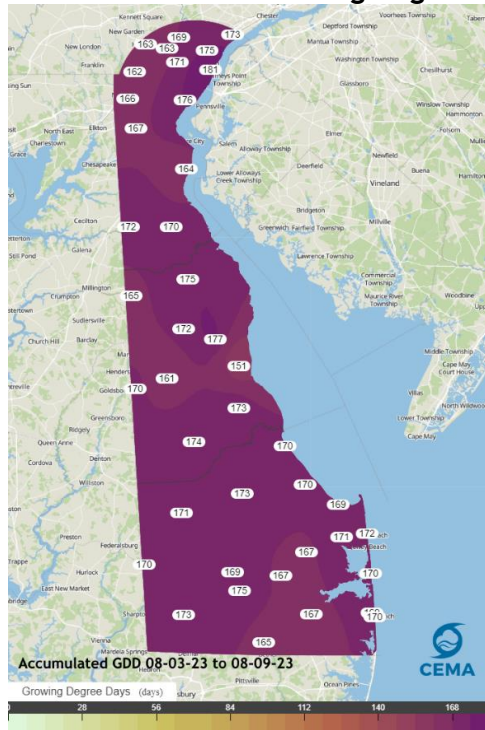
<https://survey123.arcgis.com/share/c5fa508a182044359393b2a5e5251c47>

Survey QR Code:

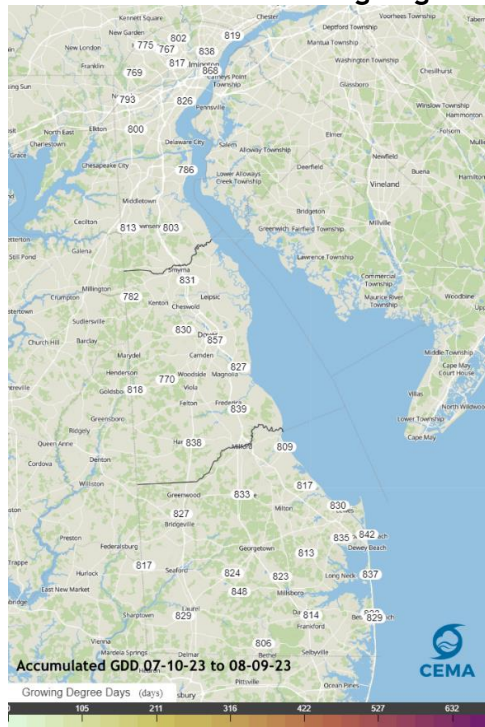


Weather Summary

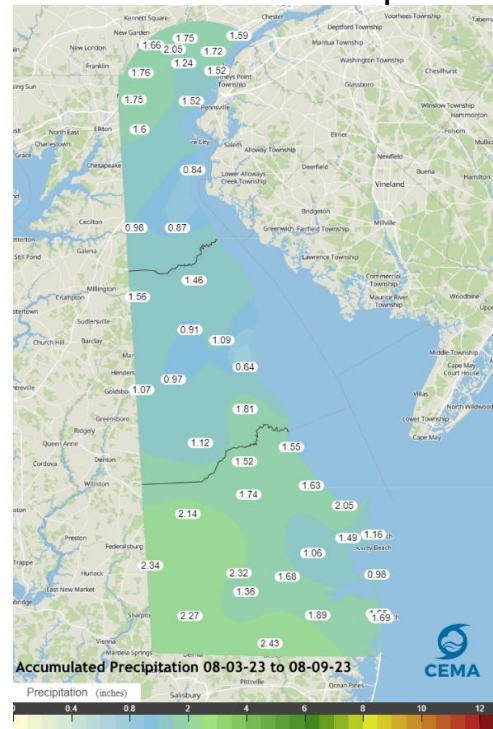
1 Week Accumulated Growing Degree Days



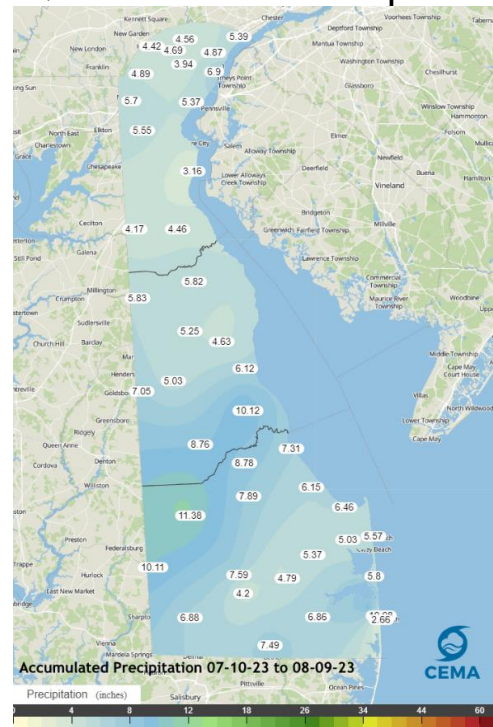
1 Month Accumulated Growing Degree Days



1 Week Accumulated Precipitation



1 Month Accumulated Precipitation



These weather maps are generated from DEOS weather station data and are part of a new Ag Weather website that is under development: <http://deos.udel.edu/almanac/> Your feedback is welcome!

***Weekly Crop Update is compiled and edited
by Emmalea Ernest, Scientist - Vegetable
Crops and Drew Harris - Kent Co. Ag Agent***

University of Delaware Cooperative Extension in accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Reference to commercial products or trade names does not imply endorsement by University of Delaware Cooperative Extension or bias against those not mentioned.