

WEEKLY CROP UPDATE



UNIVERSITY OF DELAWARE
COOPERATIVE
EXTENSION

Volume 31, Issue 10

June 2, 2023

Vegetable Crops

Vegetable Crop Scouting Report- *David Owens, Extension Entomologist,*
owensd@udel.edu

Sweet Corn

The earliest sweet corn is now silking. As a general reminder, thresholds for silking sweet corn can be found on the Insect Trapping webpage:

<https://www.udel.edu/academics/colleges/canr/cooperative-extension/sustainable-production/pest-management/insect-trapping/>.

The last time I looked, the links for action thresholds for snap beans and sweet corn had been inadvertently switched. It is important to look at both black light and pheromone trap counts. There are occasions when the black light traps will indicate a more conservative spray schedule than pheromone traps.

Trap captures have climbed significantly in southern Sussex County and at some sites, a 3-day spray schedule is indicated but at most sites a 4-day spray schedule should be sufficient. With cool temperatures (and especially cool nighttime temperatures) and the usual pattern of higher moth susceptibility to pyrethroids, there is no need to go more conservative on spray intervals. Our most recent, earliest trials have been under low moth population environments in late June to early July and there is very little difference among pyrethroids or spray programs in terms of efficacy. The situation is very different late in the season. Many thanks to Dick Monaco for checking traps on Mondays and Thursdays. Thursday trap capture data is as follows:

Trap Location	BLT - CEW	Pheromone CEW
	3 nights total catch	
Dover	1	5
Harrington	1	9
Milford/Canterbury	1	44
Rising Sun	1	27
Wyoming	1	0
Bridgeville/Redden	0	1
Concord	1	38
Georgetown	0	12
Woodenhawk	0	8
Laurel	3	99
Lewes	---	

Cucurbits

Typically I see my first spider mites entering watermelon fields during the first two weeks of June. A report came in this week of spider mites

in low numbers around the edges of at least 1 field. Based on research conducted by UD entomology master's student Cody Stubbs, unless a field has infested transplants, mites almost always come in from around edges, particularly weedy ditch banks and wooded edges. Concentrate scouting efforts to these locations. In spray trials over the last several years, abamectin has been the most effective and consistent miticide, but it is hard on pollinators and has pollinator protection stipulations on labels of products containing the active ingredient. Another implication of Cody's research is that border applications of abamectin could effectively delay mite migration into fields while at the same time, minimizing effects on honeybees and other pollinators.

Snap Beans

Continue scouting for defoliators such as bean leaf beetle and potato leafhopper.

Tomato

Stink bugs are the most severe early tomato pest. Compared to last year, stink bug activity in our blacklight traps is right now much, much lower. Thresholds and sampling for live stink bugs on clusters of tomato can be a bit difficult. If you are in an area that has experienced severe stink bug damage previously, you might want to consider Hero, bifenthrin, or dinotefuran (Scorpion or Venom).

Cole Crops

Diamondback moths continue to be very active in plantings. Remember to use high water volume, higher pressure, and multiple nozzles per row to get as much coverage as possible. Early planted cabbage is cupping now which means lower thresholds should be used. At this point, Bt is less likely to be as effective given the greater amount of leaf area to be protected and the difficulty of getting as good of penetration into the developing head.

Potatoes

Low numbers of Colorado potato beetles were observed in potato fields again this week. Thresholds are 50 adults per 50 stems, 200 small larvae, or 75 large larvae. If a neonicotinoid was used at planting, use a different mode of action

Growing Brussels Sprouts -Gordon Johnson, *Extension Vegetable & Fruit Specialist*; gcjohn@udel.edu

Consumer trends show an increase in consumption of Brussels sprouts, offering potential market opportunities for Delaware growers. Brussels sprouts have been grown successfully on a commercial level in Delaware in past years. Most East Coast production currently is centered on Long Island in New York.

Brussels sprouts were developed in maritime Europe, hence the name, and are best adapted to coastal Delmarva areas due to the more moderate temperatures. Further inland, production can be more challenging because they are very stress susceptible.

Brussels sprouts are in the cole crop group (*Brassica oleracea* var. *gemmifer*) and are closely related to cabbage, cauliflower, broccoli, kohlrabi, collards, and kale. Brussels sprouts require a long growing season and are best grown as a summer planted and fall harvested crop in Delaware. Sprouts that are produced during hot periods will be bitter, therefore spring planting is not recommended.

Recommended varieties for our region include Dimitri (105 days) and Dagan (100 days). Varieties for trial include Silvia (103 days), Marte (103 days), and Capitola (Late)

Brussels sprouts can be grown as transplants in 72-128 cell flats or can be field seeded in transplant beds for bare root transplants. Transplants should be started in May or early June and then field transplanted from the third week in June to the second week in July. Long-season varieties should be planted by the end of June. Use shorter maturing varieties for later plantings. Brussels sprouts are transplanted in the field at a spacing of 36" between rows and 15-24" in the row. Double rows on white plastic mulch with drip irrigation are an option.

Brussels sprouts require 100-150 lbs/acre of nitrogen split with 50-75 lbs/acre at planting and the remainder as side-dressings or fertigations. Apply 25-40 lbs/acre of sulfur with nitrogen preplant applications and include 1.5-3.0 lbs/A

of boron per acre and 0.2 lbs/acre of molybdenum per acre as micronutrients.

Irrigation is required, with particular attention needed in summer months to achieve the equivalent of 2 inches of water per week during July and August. The goal with Brussels sprouts is to promote rapid early growth, limiting stress in the summer, and then to reduce nutrients and irrigation in September to promote sprout development.

Herbicides for weed control in Brussels sprouts are limited compared to other cole crops. Broadleaf weed control will be limited and cultivation or hand hoeing may be necessary. Brussels sprouts may be planted on white plastic mulch with drip irrigation for weed management. Do not use black plastic mulch because it is too hot.

Insect pests are similar to other cole crops and include caterpillars (imported cabbage worm, diamondback moth, cabbage looper, armyworm), aphids, thrips, and harlequin bug. Diseases include black rot, Alternaria leaf spot, and downy mildew.

The sprouts that are harvested are buds that grow to resemble miniature cabbage heads. They are produced in leaf axils along the main stem, which can grow up to 4 feet in height. Remove leaves on the lower part of the stem as the sprouts enlarge. Some growers' top plants to promote sprout maturation but we have found that not to be necessary.



Figure 1. Brussels sprouts in late December.

Sprouts for local sales can be harvested at a diameter of $\frac{3}{4}$ inch, whereas sprouts for wholesale markets should be allowed to get about $1\frac{1}{2}$ inch in diameter before harvesting. Sprouts are cut or snapped off of the stem and are often directly harvested into pint or quart containers or bags. Potential harvest period for our region is the end of September through November or a heavy freeze. Sales into December are possible, especially with supplemental row covers. Brussels sprouts are very cold tolerant (hardy down to 20° F) and flavor will improve (they will be less bitter) in the colder part of the harvest season. Yields will be 2-3 lbs/plant.

An alternative method of harvest is to cut entire stems once the majority of sprouts have sized, remove the leaves, and sell as sprouts on the stalk. This is a popular method for roadside stands and other direct markets and requires much less labor.

Brussels sprouts can be room cooled, forced air cooled, hydrocooled, vacuum cooled, or top iced. They should be brought to a temperature of 32-34° F and kept at high humidity (90-95%) for storage or transportation and benefit from top icing. Brussels sprouts have a relatively long shelf of 3-5 weeks if properly stored.

Spinach Crops Found with Cucumber Mosaic Virus - *Jerry Brust, IPM Vegetable Specialist, University of Maryland; jbrust@umd.edu; Karen Rane, University of Maryland Diagnostic Lab*

Spinach crops this season have had a hard time, with red legged winter mites, spinach crown mites, leaf miner issues and now plants in high tunnels and in fields with cucumber mosaic virus, (CMV).

The first symptom of cucumber mosaic virus on spinach is a mild yellowing of younger leaves and a strapping or "puckered" appearance with margins of infected leaves rolling downwards (Figure 1). As the disease progresses the foliage will show a yellow/green mottle (Figure 2) with stunted and severely damaged crown leaves, and even death of the growing point. The earlier a

plant becomes infected with the virus the more severe the symptoms and damage will be.

Cucumber mosaic virus is only one of more than 10 virus diseases of spinach, but it is one of the most common and economically important viruses of this crop. The virus is vectored by 75 different aphid species in a nonpersistent manner (meaning that the aphid acquires the virus within a minute of feeding on an infected plant but does not remain infective for very long). The virus can also be spread by cucumber beetles and by cultivating and handling plants. CMV can overwinter in many weed species and can survive the winter in the roots of a weed and move to the aerial parts in the spring, where it can then be transmitted by aphids to other plants. Some of the more important weed hosts include bur- and wild-cucumber, catnip, chickweeds, clovers, curly dock, dandelions, fleabane, flowering spurge, groundcherries, horsetail, jimsonweed, milkweed, pigweed, pokeweeds, nightshades and white cockle. These infected weeds often show no virus symptoms. Vegetable hosts include carrot, celery, cucurbits, legumes, lettuce, onion, pepper, spinach, and tomato.

The worst-case scenario would be to have heavy weed pressure in the field or a high tunnel along with a high aphid population (Figure 3). Winter annual weeds like chickweed need to be eliminated from the HT or the field before planting and this weed management needs to be maintained throughout production of the crop. Organic growers can use row covers to protect spinach plants from aphids and virus transmission. Growers need to scout for aphids and manage this pest early, so that populations do not build to high levels. There are several aphicides that can be used to control aphids on spinach that can be found in the 2022-2023 Mid-Atlantic Commercial Vegetable Production Recommendations guide. Finally, there are several commercial spinach varieties that are resistant to CMV that should be considered for use: Avon, Renegade, Winter Bloomsdale, Melody F1, Menorca, Butterflay, Virginia Savoy,

Bloomsdale Savoy, Early Hybrid #7, Marabu RZ, and Unipak 151.



A. Leslie, University of Maryland

Figure 1. Yellowing and puckering of spinach leaves infected with CMV.



A. Leslie, University of Maryland

Figure 2. Older CMV infected spinach with a greater mottled appearance and puckering.



A. Leslie, University of Maryland

Figure 3. A heavy population of chickweed alongside CMV infected spinach crop.

Fruit Crops

Fruit Crop Scouting Report- David Owens, Extension Entomologist, owensd@udel.edu

San Jose Scale

San Jose Scale crawlers are now active. We intercepted adult males between April 13 and April 20 from orchard sites in Dagsboro, Denton, and Port Penn. Effective insecticides include pyriproxyfen (Esteem), buprofezin (Centaur), neonics, organophosphates, and spirotetramat (Movento) and a premix Senstar. Of those, OP's may have some codling moth efficacy and the OP's and the neonic acetamiprid have some curative activity on plum curculio. Time your spray for 600-700-degree days (base 51 F) from about April 16 to hit peak crawler activity. If fruit damage was observed last year, this is the last time before winter dormancy that San Jose can be effectively managed.

Grapes

Potato leafhopper is active in some vineyards. Thresholds are near 1 leafhopper per leaf. Leafhopper nymphs are small and a yellowish white (early instars; similar in size to thrips) to a lime green (later instars) and tend to move sideways when disturbed. Check the underside of leaves. Control options include pyrethroids and neonicotinoids such as (but not limited to) acetamiprid.

Disorders in Watermelon- Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

Hollow Heart

Hollow heart is an internal crack in the flesh of the melon. Hollow heart is generally more severe in seedless varieties and in crown-set fruit. Research at the University of Delaware has shown that inadequate pollination is the causal factor for hollow heart. Cold weather during fruit set, poor fruit set, and low fruit load, inadequate bees or poor-quality hives, and other factors affecting bee flights have been reported to impact the severity of hollow heart.

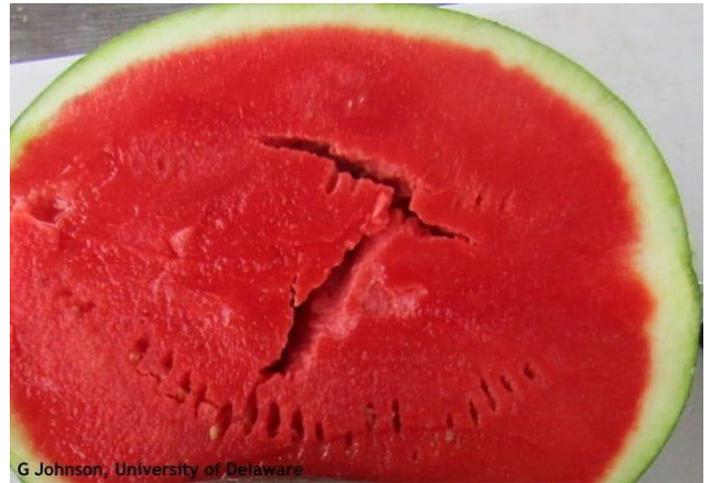


Figure 1. Hollow heart

Internal Rind Necrosis

Internal rind necrosis is indicated by the presence of a corky, red-brown layer of tissue on the inside of the rind of affected fruit without extending into the fruit flesh. The disease occurs sporadically and is thought to be caused by bacteria that are naturally present in fruit. Drought stress has been implicated in this disorder.

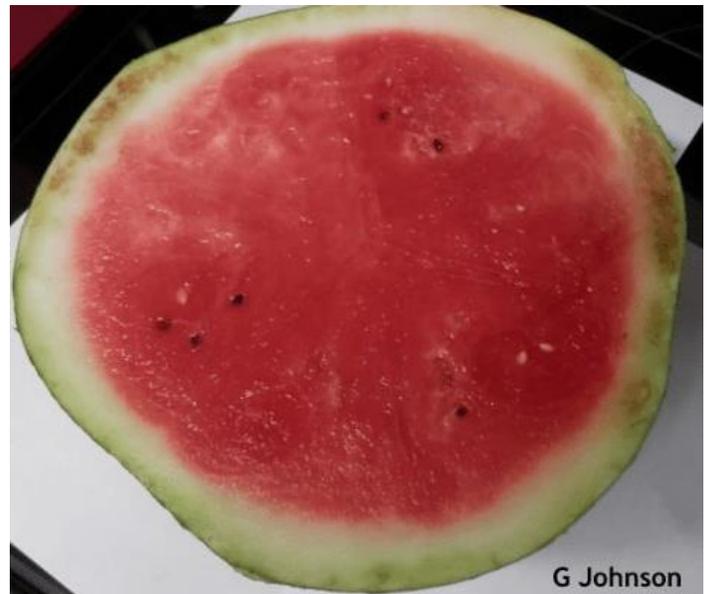


Figure 2. Internal rind necrosis

Irregular Ripening

Irregular ripening can be a problem in some years and varieties. Watermelons are classified as non-climacteric since they do not ripen significantly after harvest. However, research

has shown that watermelon fruit produce a burst of ethylene at the white fruit stage and factors that reduce ethylene at this stage will slow ripening. Watermelon fruit development and ripening also depend on the accumulation of sugars. Loss of foliage or stem tissue due to diseases such as gummy stem blight or insect or mite feeding can reduce the amount of sugars available to the fruit. Potassium deficiencies, irregular irrigation (such as from drip tape problems) or variability in vine vigor will lead to variability in fruit ripening.

Misshapen Fruits

Poor pollination due to low bee activity may result in “bottlenecks”, or constricted growth at the stem end of the fruit, especially in seeded/elongated watermelons. Research has shown that the distribution of a minimum of 1,000 pollen over the three lobes of the flower stigma are required to produce a uniformly shaped fruit. In seedless watermelons, poor pollination may lead to undesirable “triangular” fruit.

Ozone Injury

Ozone is a common air pollutant. When present in high concentrations, ozone will cause chlorosis and upper surface bronzing and scorching in older leaves, which leads to defoliation. Damage is more prevalent when fruits are maturing or when plants are under stress. Injury is seen on crown leaves first and then progresses outward. Seedless watermelon varieties tend to be more resistant to air pollution injury than seeded varieties, so injury often shows up on the pollinizer plants first. “Ice box” types are the most susceptible.



Figure 3. Ozone damage

Sunscald

Sunscald occurs when fruit are exposed to direct sunlight, especially on extremely hot days. Under these conditions, rind surfaces can reach temperatures exceeding 120°F (60°C), killing cells and resulting in sunburn spots. Fruit with little or no foliar cover are at most risk. Sunscald or sunburn first appears as a gray or white area on the exposed upper surface of the fruit. Fruit with dark rinds are more susceptible to sunscald than those with light colored rinds. Sunscald severity is related directly to fertility regime and foliage cover. Proper fertility and soil management promotes adequate vine growth and coverage of fruit. Sunscald severity is also associated with diseases that reduce foliage cover. Storm damage that exposes fruit also can lead to more sunscald.

Water Soaking

Water soaking (water belly) occurs where excess water accumulates at the bottom of the fruit resulting in a water-soaked appearance of internal flesh. Water accumulates during cloudy weather when transpiration from vines is low. Water soaking sometimes appears in fruits where foliage has deteriorated since excess water cannot be transpired.

Splitting

Splitting during handling occurs in fruit under excessive water pressure because of excess irrigation or rainfall

Strawberry Flowering, Runner Formation and Temperature-Gordon Johnson, *Extension Vegetable & Fruit Specialist*; gcjohn@udel.edu

So far, in 2023, the weather has been ideal for strawberry production. Strawberries produce best when daytime temperatures are in the 70's and nighttime temperatures are in the 50's. The cooler nighttime temperature promotes continued flower initiation, and the warm daytime temperature promotes fruit ripening.

In our region, commercial strawberries are grouped into two classes based on their flowering habit; those that flower and fruit mostly once in the spring and those that continue to flower and fruit as long as temperatures are moderate. Strawberries thrive in cooler weather and production is affected when temperatures are hot.

Short day or June-bearing has been used to describe plants which start to bloom in late winter and produce one fruit crop per spring. Day-neutral, long day, or repeat blooming have all been used to describe plants which flower multiple times and produce multiple crops over the course of the spring, cooler parts of the summer and fall.

Most of our commercial strawberries planted on Delmarva are June-bearing types. They start initiating flower buds after planting in the fall and begin flowering in late winter and spring as temperatures warm up. Flowering will continue until critical high temperatures are reached. This critical temperature at which flowering slows or ceases varies with the cultivar, but ranges are 80 to 86 °F daytime and 75 to 78 °F nighttime. At these temperatures runners form instead of flower-bearing branch crowns. So far, we have not reached these temperatures in 2023.

Day-neutral varieties (such as Albion, Seascape, San Andreas, and others) are being planted more frequently now on Delmarva. These varieties will continue to flower profusely under these mild temperatures but will stop flowering once temperatures hit the 90's. They will then start flowering naturally again later in the summer when temperatures drop down below the critical values noted above. Day-neutral varieties are

also induced to produce flowers as days get longer.

Runner formation in day-neutral varieties is controlled by genetics so that certain varieties produce more runners than others. In addition, stress will promote runner formation (nutrient stress, water stress, high temperatures). To keep day-neutral varieties producing in the summer, remove all runners, fertilize weekly with nitrogen, and keep them well watered. Irrigating in the morning will help to keep beds cooler longer through the day and white plastic mulch will also keep temperatures lower.



Figure 1. Runner formation in day-neutral strawberries as seen in these Albion plants is largely variety dependent but can be induced by stress such as high temperatures.



G. Johnson, University of Delaware

Figure 2. Current temperatures have been ideal for flowering and fruiting in strawberries.



G. Johnson, University of Delaware

Figure 3. June-bearing strawberries starting to produce runners which is promoted by high temperatures and long days.

Agronomic Crops

Agronomic Crop Scouting Report- David Owens, Extension Entomologist, owensd@udel.edu

Corn

Continue scouting for cutworm activity. A report came in this week of cutworm injury to vegetables, so they are still active. Thresholds are 5% cut plants with larvae present. Dig around the base of cut plants. If an insecticide was used in furrow, larvae may be affected as they move into the treated zone. Such larvae will appear quite lethargic.

Soybean

Continue scouting for stand loss and for bean leaf beetle and other defoliator worms. Remember, thresholds are very conservatively set about 30-40% defoliation. The last several years we have evaluated herbicide pyrethroid tank mixes for efficacy and have found no significant differences in terms of yield between insecticide + herbicide vs herbicide only strips.

Small Grains

Mustang has a 14-day PHI; keep in mind as we approach harvest. Reports of armyworm activity came in this week, but it is not clear if the field was near threshold.

Alfalfa

Continue scouting for potato leafhopper! By the time hopper burn is observed, yield potential has already been lost. Leafhopper adults and nymphs have been spotted previously. A dynamic threshold table is included in our guide for alfalfa:

[https://www.udel.edu/content/dam/udelImage/canr/pdfs/extension/sustainable-agriculture/pest-management/Insect Control in Alfalfa - 2023.pdf](https://www.udel.edu/content/dam/udelImage/canr/pdfs/extension/sustainable-agriculture/pest-management/Insect%20Control%20in%20Alfalfa%202023.pdf).

Cool Weather and Sulfur Deficiencies -

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



Figure 1. Interveinal Chlorosis in Sussex County Fields

As our corn fields have advanced from the V3 to V4 stage, strong visual patterns of chlorosis (yellowing) and interveinal stripes have appeared (Figure 1). This can be associated with sulfur availability and cooler May weather.

Much of our S will be available in finer textured (higher clay) layers and in soil with higher organic matter. Organic matter breakdown is driven by soil biology, and our cooler May weather may be limiting S release. This may be worse in soils with lower organic matter, which can be incredibly variable across our coastal soils (Figure 2)

Additions of S at side-dress (ammonium sulfate, N-Sul) or using gypsum may alleviate the issue, as well as warmer weather. Past early season S deficiencies have not necessarily led to yield reductions

(<https://sites.udel.edu/weeklycropupdate/?p=9161>)



Figure 2. Soil Patterns with Variable Organic Matter Content

Spring Planting Weather for 2023 - Jarrod O. Miller, Extension Agronomist, jarrod@udel.edu

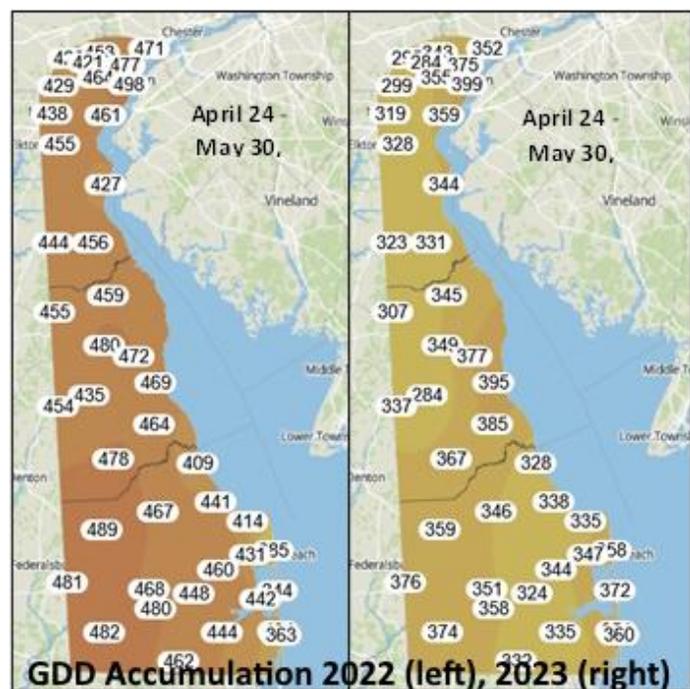


Figure 1. GDD late spring 2022 and 2023 comparison

Across Delaware we are about 100 to 150 growing degree days (GDD) behind where we were in 2022 (Figure 1). May has been much cooler than normal and has resulted in slower corn growth, with most fields about one leaf stage behind where we would normally be. If you start side-dressing at V4, which may be warranted with potential sulfur issues being observed, we are at that stage in Sussex County, and should hit V6 by next week

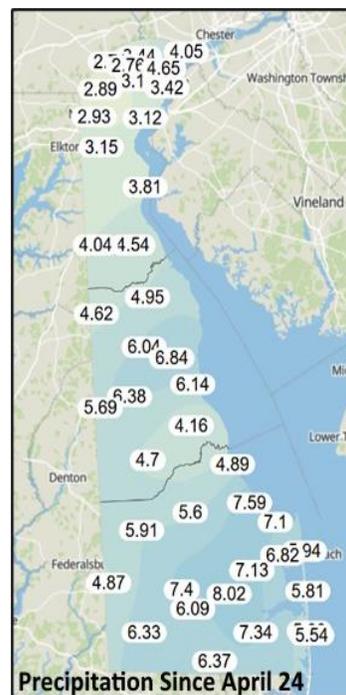


Figure 2. Accumulated Precipitation Since April 24th

In most years I have seen more rainfall occur across central DE, but this year southeastern DE has seen more steady accumulation. This has also resulted in cooler weather and cloudy conditions that have slowed growth, and in some cases ideal conditions to put equipment on the field. The driest parts of the state remain in New Castle County, with only 3 inches of rain since April 24th.

Use DEOS (<http://www.deos.udel.edu/>) to keep track of the most recent conditions in your area.

General

Grain Options and Marketing Club - Nate Bruce, *Farm Business Management Specialist*, nsbruce@udel.edu

Grain markets have been difficult to navigate over the course of the year with extreme price volatility. There has been renewed interest in using options to mitigate risk. Iowa State University's Ag Decision Maker has a plethora of publications on trading options. For those looking to learn more about grain marketing using option tools, check out the following website:

<https://www.extension.iastate.edu/agdm/crops/html/a2-66.html>

Delaware Cooperative Extension is starting a grain marketing club. The inaugural meeting will be this August. Options and other marketing topics will be discussed. More information is to come in the following weeks.

Herbicide Injury Mark VanGessel, *Extension Weed Specialist*; mjv@udel.edu

There has been a lot of herbicide injury observed this spring, more than most years. There are several reasons for this, with Mother Nature at the top of the list. There is a selectivity with herbicides, some plants being susceptible (injured), and others are tolerant. There are a number of ways that crops are able to escape herbicide injury, but this can be a complex interaction between the crop, herbicide, and environment (climate and soil).

One of the most important factors in crop safety is plant metabolism, the biochemical processes at the cellular level that changes the herbicides to an inactive form. Selectivity between crops and weeds is often the rate at which metabolism occurs. Plants are dependent on temperature and sunshine for metabolism to occur and both have been lacking this spring. As a result, crops

are not metabolizing herbicides as quickly as they normally do.

Herbicide rate is another critical factor. The application rate of many soil-applied herbicides differs by soil type and organic matter since these factors can "tie up" the herbicide and effect how much reaches the crop seedlings. Heavy rainfall can move more of the herbicide into the soil, making more available for the seedling to take up the herbicide.

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 the 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 tank mixes you use to avoid injury. Remember if the crop is more sensitive to the herbicides during these conditions, chances are, so are the weeds.

Reminder of the "Last Check Chart for Problem Weeds in Corn and Soybeans"
Mark VanGessel, *Extension Weed Specialist*; mjv@udel.edu

The regional weed scientists have put together a quick reference chart for herbicide options to control the "BIG 3" herbicide-resistant weeds in

the region, horseweed or maretail, Palmer amaranth and common ragweed. Use these charts in combination with other resources, such as the Mid-Atlantic Weed Management Guide. These charts will provide a final, “Last Check” to be sure you have the right herbicides in the tank.

There is one for corn and one for soybeans.

Soybeans: [LastCheckSoybean](#)

Corn: [LastCheckCorn](#)

Print them out and post one near your workspace and one in the mixing shed.

Cloudy Weather and Glufosinate (Liberty) Herbicide Mark VanGessel, *Extension Weed Specialist*; mjv@udel.edu

Several folks have shifted to using glufosinate to help manage herbicide resistant weeds. This is a herbicide that is very dependent on sunlight for optimum performance. The following is directly from the Liberty label:

- Warm temperatures, high humidity, and bright sunlight improve the performance of glufosinate.
- To avoid the possibility of reduced control, applications should be made between dawn and 2 hours before sunlight.

In my opinion, you are better off waiting for proper conditions than trying to make it work under poor conditions.

There are a number of brands of glufosinate, and these precautions pertain to all of them (glufosinate is a Group 10 herbicide). Other brand names include Cheetah, Interline, Fever, or Surmise.

Guess The Pest! May 26 Answer: Bagworm- David Owens, *Extension Entomologist*, owensd@udel.edu



Figure 1. Guess the Pest (Bagworms)

Congratulations to Dr. Emmalea Ernest for correctly identifying last week’s WCU as bagworm or Dunces-Cap.! This is the time of year eggs are hatching and larvae are very small. They can defoliate significant chunks of evergreens by August. I often get phone calls about them well after the ideal time to control them is past. At this stage, they are very sensitive to insecticides, and a number can be used. Bt, pyrethroids, and diamides are all very effective.

Guess The Pest! June 2- David Owens,
Extension Entomologist, owensd@udel.edu

As we are conducting tissue tests getting ready to give corn that crucial shot of nitrogen and perhaps sulfur or potassium, I noticed silvering on the leaves. What caused this and is it a problem? Click on the link <http://www.udel.edu/008255> or the Guess The Pest Logo to log your answer!



Announcements

Pest & Beneficial Insect & Plant Disease Walks

Sussex Pest Walk: June 6, 4:00-6:00 pm

Kent Pest Walk: June 13, 4:00-6:00 pm

NCC Pest Walk: June 22, 4:00-6:00 pm

Diagnostics hands-on workshop: July 11

Save the Dates! Featuring Experts Jill Pollok, Brian Kunkel & John Emerson.

More information to follow.

A Day in the Garden Open House

Saturday, June 24, 2023 10:00 a.m.-2:00 p.m.
Carvel Research & Education Center
16483 County Seat Hwy, Georgetown, DE

Join Sussex County Master Gardeners for a tour of their demonstration garden! Attend workshops and tours, enjoy the Peter Rabbit puppet show, go on a scavenger hunt, and shop the Plant and Book Sale!

[Register online](#) or call 302-856-7303

Mini Workshops

10:30 a.m. - New to Delaware with MG Susan Trone and MG Maggie McLaughlin

11:00 a.m. - Propagating Hydrangeas with MG Michele Walfred

11:30 a.m. - Making Salsa with MG Ana Dittel

12:00 p.m. - Growing Groundcovers with MG Gainor Urian

12:30 p.m. - Log and Succulent Centerpiece with MG Mary Noel - space limited to 20

1:00 p.m. - Small Fruits Tour with Emmalea Ernest, UD Fruit & Vegetable Scientist

Displays

Plant Sale - lots of natives!

Beekeepers - MG Chris Dominic, Jim Hopkins

Ask an Expert with Brian Kunkel, Megan Pleasanton, and Tracy Wootten - Bring your sick plants and gardening questions!

Invasives - Crape Myrtle Bark Scale, Invasive Plant Law, Ban Information

Bugs - Dennis Barto

And more!

Children's Activities

CD Painting

Butterfly Scavenger Hunt

Peter Rabbit Puppet Show

Grower Survey to Understand Implementation of Produce Safety Practices, Costs, and Barriers

The Produce Safety Alliance (PSA) Team and personnel from the Northeast Center to Advance Food Safety (NECAFS) at the University of Vermont would like to understand the costs and the barriers of beginning or expanding food safety practices on farms and in packinghouses to make educational materials more relevant to fruit and vegetable growers and packers. To do so, we are asking personnel from fruit and vegetable operations to share their experiences of produce safety practice implementation and the costs they have incurred meeting produce safety standards and market expectations.

Use the link below to learn more and participate in the survey:

https://qualtrics.uvm.edu/jfe/form/SV_agW9o6VWOU/CivCC

The survey is also available in Spanish:

https://qualtrics.uvm.edu/jfe/form/SV_agW9o6VWOU/CivCC?Q_Language=ES

Seeking Soils with Acidic pH (<5.8) for soil pH and Lime Requirement Research-

The University of Delaware Soil Testing Program and the Penn State Agricultural Analytical Services Laboratory are seeking soil samples for a research project related to improving soil pH measurements and lime recommendations. Specifically, we need approximately 30 low pH soils collected from across Pennsylvania and the Delmarva to represent a variety of soil types and cropping systems.

What do we need?

A 5-gallon bucket of topsoil collected from the top 6-inches of the soil from agricultural fields, with documented soil pH of 6.0. or lower that has not received lime in at least two years (>3 years preferred).

The sample can be collected from a single location in the field (no need to take a random sample).

Please remove plant residues from the sample.

Please collect the soil when it is relatively dry.

Please provide the latitude and longitude from the sample location (or a precise address) so that we can obtain soil series information. Exact locations of the samples collected will not be shared beyond the project team.

When do we need it?

Preferably by late July 2023.

We need to receive soils early enough that we can dry and homogenize them prior to starting the research in Fall 2023.

Where do we bring the soil samples?

You can drop off the samples at any UD Extension office or the UD Soil Testing Lab. When dropping off a sample, please label the bucket with the following: "UD Soil pH Study c/o Amy Shober", your name, where the sample was collected, and a contact number (or email).

For individuals located farther from a UD Extension Office or Newark main campus, we

will arrange a sample pick up or have the samples shipped to Newark at no cost to you.

Who do I contact to arrange sample pick up or if I have additional questions?

Delmarva - Amy Shober (ashober@udel.edu)

Pennsylvania - John Spargo (jts29@psu.edu)

Survey for UD Cooperative Stakeholders to Provide Input-

The Search committee for the Dean of the College of Ag and Natural Resources at UD would like to have the input of stakeholders to help frame the qualifications for the next Dean. In the next week, you will be receiving a Qualtrics survey that will have Qualtrics in the sender address. This will be a brief survey in which you can provide valuable insight. Please look for this survey in your mail in the coming week and complete as soon as possible.

Survey of Italian Ryegrass in Delaware and Maryland- Mark VanGessel, *Extension Weed Specialist*; mjv@udel.edu, Kurt Vollmer, *University of Maryland, Extension Weed Management Specialist*; kvollmer@umd.edu

The number of questions about Italian ryegrass increase every year and it seems as if Italian ryegrass is in many more fields this year than in the past. Therefore, we are interested in investigating what is going on, by gathering seeds from as many fields as possible for some greenhouse testing to see if populations are responding differently to herbicides. We are looking for some help in collecting seeds.



Figure 1. Italian Ryegrass Seedhead. If seedheads are smaller than shown-here, then increase the number collected.

How can you help?

1. Collect 50 ryegrass seedheads from the field (only seedheads are needed).
2. You do not need to wait for the seedheads to dry down.
3. Put in paper bag or paper envelope (do not use plastic bags).
4. Write the nearest crossroads on bag or envelope.
5. Write the crop on the bag/envelope.
6. Note if any of the following herbicides were sprayed since last fall:
 - glyphosate (Roundup)
 - Axial
 - PowerFlex
 - Osprey
 - Select
 - Assure II
7. Store in dry area.
8. Deliver to nearest county extension office
OR

Contact Mark VanGessel or Kurt Vollmer for collection or pickup.

Mark VanGessel 302-542-8160
Kurt Vollmer 443-446-4260

Specific farms or individuals will not be identified in any reports or summary.

Delmarva Weed Management Tours *Mark VanGessel, Extension Weed Specialist;*
mjv@udel.edu

A series of field days will be held on June 27th and 28th for farmers, ag industry, and others interested in seeing the latest results from university weed management trials. These events are free and open to the public.

First stop

June 27 at the Virginia Tech Eastern Shore AREC, 33446 Research Drive, Painter, VA from 8:00 AM to 11:00 AM. Event will include:

- tours of corn and soybean herbicide research and demonstration plots,
- herbicide tolerance and weed management studies for edamame (vegetable soybean), and
- results from drone applications of PRE and POST herbicides.

If you have questions, please contact Vijay Singh (vijaysingh@vt.edu)

Second stop

June 28 at the University of Delaware Carvel Research and Education Center, 16483 County Seat Highway, Georgetown, DE from 9:00 AM to 11:00 AM. 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

If you have questions, please contact Mark VanGessel (mjv@udel.edu)

Final stop

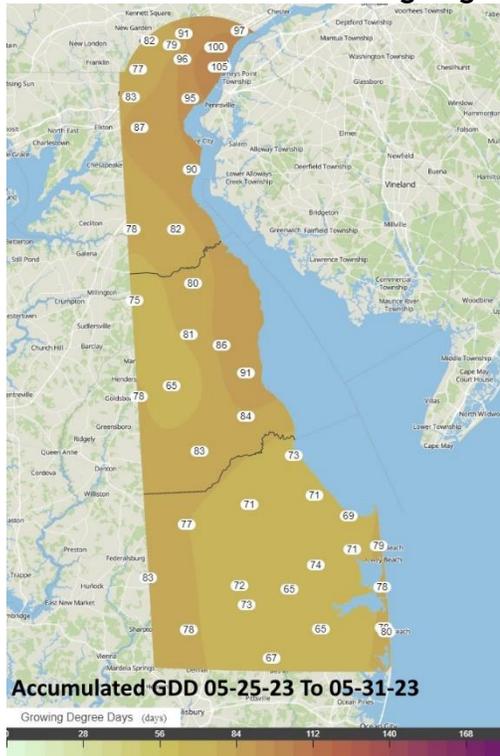
June 28 at the University of Maryland Wye Research and Education Center, 211 Farm Lane, Queenstown, MD from 4:00 PM to 6:00 PM. Event will include:

- tours of corn and soybean herbicide research and demonstration plots,
- tours of demonstration plots for organic weed management in corn and soybean, and
- integrated weed management trials for watermelon and hemp production.

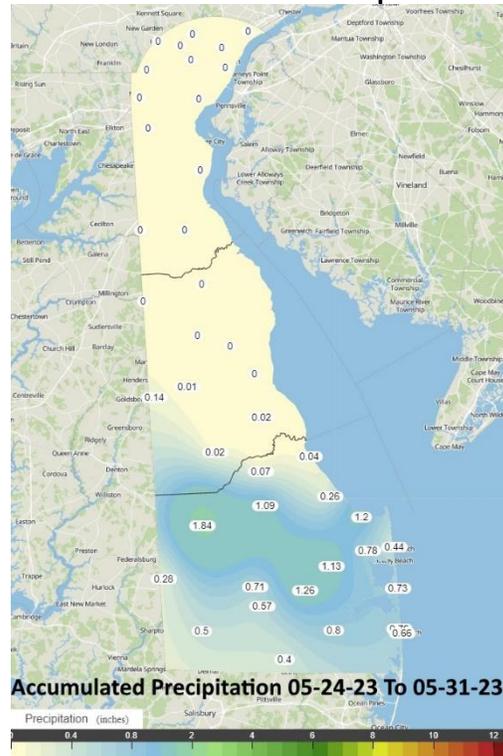
If you have questions, please contact Kurt Vollmer (kvollmer@umd.edu)

Weather Summary

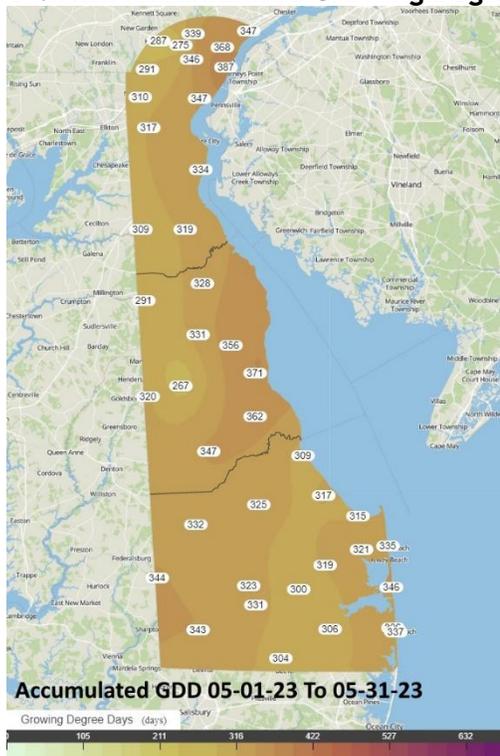
1 Week Accumulated Growing Degree Days



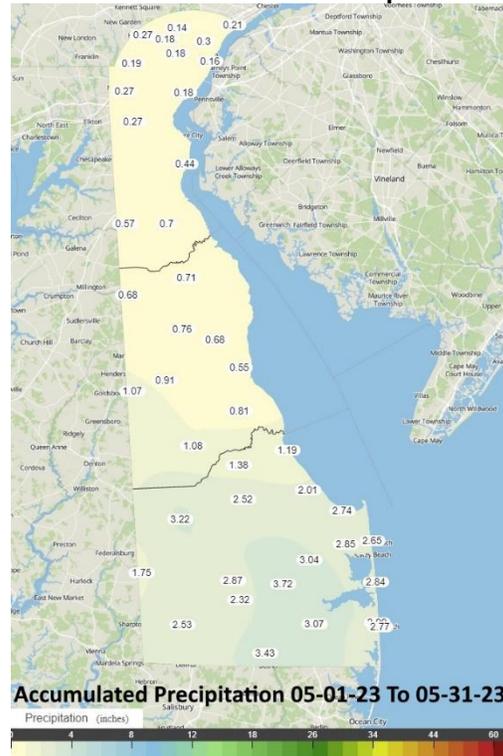
1 Week Accumulated Precipitation



1 Month Accumulated Growing Degree Days



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. 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.