

WEEKLY CROP UPDATE



UNIVERSITY OF DELAWARE
COOPERATIVE
EXTENSION

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Vegetable Crops

Vegetable Crop Insect Scouting - David Owens, *Extension Entomologist*,
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Cucurbits

Striped cucumber beetles remain active and should be scouted for. Treatment thresholds are 2 beetles per plant in watermelon. If honeybee hives are going to be placed soon, the best treatment options are foliar Assail or a foliar neonicotinoid. A local farmer raised an interesting question that I did not know the answer to regarding how neonicotinoids move in the plant after a foliar application. I sought clarification from industry and was advised that a foliar application of say thiamethoxam would not move systemically into flower buds and new flowers but that the chemical would stay localized to where the droplet hit the leaf. I want to do some more digging, but if that is indeed the case, it opens the playbook up a little bit for the period of time before pollinators are placed on fields. As always, read the labels and follow the bee cautions. Assail is much less toxic to bees than the other neonicotinoids. There is also now a liquid formulation of Assail available.

We collected beetles from two different locations this past week and conducted a pyrethroid efficacy bioassay with Besiege, Mustang, and Brigade at their high label rates. Only Brigade resulted in moderate levels of mortality (~ 40%) and apparent repellency from

the treated leaf. At this point, I do not recommend using a pyrethroid for targeting high numbers of cucumber beetles, especially because Assail works extremely well. Now, keep in mind Assail will not affect the rindworm complex, so when we have fruit present, it becomes very important to differentiate rind feeding damage caused by leps vs beetles. Generally speaking, beetles won't cause rind feeding damage until the 2nd week of July (based on when the first generation emerges out of the soil). Cucumber beetle feeding will have a dirty appearance whereas worm feeding is going to be a smooth, flat, single color, and even scar. The diamide Harvanta, is an excellent worm product and does kill a moderate number of beetles outright. Cyantraniliprole (Exirel and Minecto Pro) kill fewer beetles, but both cyantraniliprole and cyclaniliprole will stop beetle feeding on treated plant tissue.

Sweet Corn

Scout for cutworm and for stink bug damage, especially in no-till fields in which a late grass cover crop was used. Thresholds for brown stink bugs in field corn are 13 or more bugs per 100 plants; this threshold is probably equally valid for processing sweet corn. Threshold and sampling advice can be found here: <https://corn.ces.ncsu.edu/corn-insect-management/scouting-and-thresholds/stink-bug-management-in-corn/>. While cutworms are susceptible to pyrethroids, only bifenthrin has significant brown stink bug activity.

Snap Beans

Seedcorn maggot, potato leafhopper, and bean leaf beetle are all active in the area right now. A neonicotinoid seed treatment can effectively suppress all three pests for 3 weeks after planting. Potato leafhopper causes hopper burn - a yellow to necrotic lesion on the leaf edge. Thresholds are 5 adults or nymphs per sweep.

Cole Crops

Continue scouting for worm pests. Diamondback moth is active right now and should be considered when selecting a worm material. Do not rely on broad spectrum pyrethroids, OPs or carbamates as they will seriously damage the natural enemy complex which can, given the right circumstances, take out nearly all diamondback moth larvae (but only after they have reached their final instar). Thresholds at this point are around 20% infested plants.

Potato

Colorado potato beetle began moving around towards the end of last week before cool weather set in again. Thresholds are 50 adults per 50 stems or up to 200 small larvae per 50 stems. Potato leafhoppers are present now on Delmarva and should be scouted for. We are approaching 45-60 days after planting in many locations, and it is likely any in-furrow neonicotinoid treatment may be wearing off. Thresholds for potato leafhopper are 1 per sweep or 1 nymph per 10 leaves. Leafhoppers are susceptible to a wide range of insecticides, including Torac, which has potato beetle efficacy.

Flea Beetle Feeding and Tomato Early Blight - Jerry Brust, IPM Vegetable Specialist, University of Maryland; jbrust@umd.edu

I visited a few tomato fields this week and found 2-4-week-old tomato plants with some early blight (*Alternaria solani*) and in some cases bad early blight lesions. This is very early in the season to be seeing this level of early blight.

Many of the plants had a few flea beetle adults on the plant and in the areas where the early blight was found also had moderate to high flea beetle feeding (fig. 1). Normally the amount of flea beetle feeding I saw would not have been of much concern, but flea beetles can cause increased infections of *Alternaria* leaf blight in tomatoes and potatoes and possibly other early blight susceptible crops. I found that there was a strong relationship between the amount of flea beetle feeding and the amount of early blight on tomato plants in different fields on a few farms. If you have moderate flea beetle feeding damage to your Solanaceae plants and you see any early blight starting, you will need to control both the beetle and the disease. Pyrethroids should work well in controlling flea beetles. There is not much organically that will control flea beetles once they are causing economic damage. However, using spinosad (Entrust) before beetles feed heavily on plants is one organic possibility.

Flea beetle adults are generally small and range in size from 0.05 to 0.15 inch. They overwinter as adults on weed hosts surrounding the field, on residues of a previous tomato crop, or in the soil if the previous crop was a flea beetle host. Some flea beetles (*Systema blanda* - the pale striped flea beetle being one) can feed on amaranths or pigweeds (fig. 2) and will readily move from them over to your crops. Other flea beetles are more host specific (the eggplant, potato, and tobacco flea beetles feed on Solanaceous plants while others prefer broccoli, cabbage, and other Cole crops). However, all adult flea beetles have similar damage patterns, they chew small round holes in leaves, which make them look as if they have been damaged by fine buckshot, called "shot-holing". The white larvae feed on underground parts of the plant, but this damage is usually not economically significant. There is normally a second generation during the summer and at times even a third depending on species. Normally foliar damage to larger plants is not considered to be economically important but feeding damage to small plants or seedlings can reduce stand or vigor of the plant. The other exception about flea beetles not being economic pests is when *Alternaria* is associated with their feeding on smaller tomato plants.

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Fig. 1. Tomato leaf with old flea beetle feeding and early blight.



Fig. 2. Pale striped flea beetle feeding on Amaranthus weed.

Bolting in Spring Planted Vegetables-Gordon Johnson, *Extension Vegetable & Fruit Specialist*; gcjohn@udel.edu



Bolted spinach plant. This variety is not well adapted to spring planting.

Bolting is the term used for flower stalk formation in vegetables. Bolting response may be related to temperature, daylength, or a combination.

Bolting in spinach, lettuce, and some radishes (oriental types) will occur naturally as days get longer (daylength effect). High temperatures will accelerate bolting in spinach and lettuce. Lettuce may also be induced to bolt just by high temperature stress.

Seedlings exposed to low temperatures early in the season may also be induced to bolt. This is called vernalization. Many mustard family plants need a cold period (vernalization of seedlings) along with lengthening days to flower. The amount of cold needed depends on the species

and variety. Mustards are very prone to cold initiated spring bolting; turnips, Chinese cabbage, and salad radishes require a greater amount of cold to initiate the bolting response.

Overwintered Brassica crops such as mustards, turnips, kale, and collards will be fully vernalized and will bolt in the spring. They should be harvested before bolting occurs.

In the cole crop group, cabbage planted very early in cold springs may bolt. Premature flowering in broccoli, cauliflower, kale, and collards also occurs when planted too early, or if the spring is abnormally cold. However, cole crop transplants must be of a certain physiological age to be susceptible to this cold-initiated bolting.

Other biennial vegetables such as beets, carrots, and onions also can be induced to bolt but only once plants have reached a certain size (they are past the juvenile growth stage). This is uncommon in our region.

Controlling bolting starts with planting during the recommended planting window. Early planting will contribute to bolting in some crops (such as cabbage), late planting in others (such as lettuce).

Use of transplants can also reduce bolting in Brassica crops. Transplants are produced from non-vernalized seed in greenhouse conditions and are less susceptible to bolting.

Select varieties that are adapted to the spring planting season (an example would be Savannah mustard). Choose slow bolting varieties of spinach and lettuce. Choose spring adapted varieties of oriental radishes and Chinese cabbage.

One issue that complicates this, is the use of high tunnels for early production. High tunnels allow for earlier planting but cold snaps still may drop temperatures enough to cause the cold induced flowering response in many of these crops.

When is Black Plastic Mulch Too Hot for Vegetables

Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu and Emmalea Ernest, Scientist - Vegetable & Fruit Crops; emmalea@udel.edu

High temperatures (90° F or higher) coupled with clear skies can lead to heat buildup on the surface of black plastic mulched soils. We have found temperatures of over 140° F at the surface of black plastic mulch. This can cause losses with transplants because stems near the mulch are damaged by the high heat. In crops seeded through the black mulch, germination is often reduced, and if plants do emerge, they can be killed by the excess heat. Another problem is high soil temperatures under black mulch which can lead to fruit quality issues in tomatoes and peppers. In onions, black mulch can cause damage to bulbs due to excess heat.

Late spring planted peppers are very susceptible to stem heat necrosis on black plastic mulch (Fig. 1). This is where the high temperatures at the mulch surface causes damage to the stem, often causing plants to collapse. When daytime temperatures are in the high 90s, the surface of black plastic mulch can be as high as 140° F, which will kill plant cells.



Figure 1. Pepper transplant with stem girdling from heat necrosis

There are several strategies that can be used to reduce stem heat necrosis. Larger transplants with thicker stem diameters are less susceptible

to damage. Make a larger hole when transplanting and make sure the plastic mulch does not touch the stem of the transplant. White particle films (clay or lime based) sprayed at the base of plants over the mulch can also reduce plant losses to heat necrosis. Putting a small mound of clean sand around the plant stem will also eliminate this problem.

Shade cloth is another potential strategy for reducing stem necrosis. In a 2022 trial conducted by the UD Extension Vegetable Program, 30% black shade cloth was very effective in preventing pepper transplant loss. The shade cloth was applied on June 1, the same day as transplanting. In the shaded plots there was 97% stand 49 days after transplanting; however, in unshaded plots only 64% of the transplants survived. The shaded treatment also had larger plants (Fig. 2) which eventually produced significantly higher marketable yields.



Figure 2. Pepper plants that were shaded immediately after transplanting (top) had higher stand establishment and greater plant vigor than unshaded plants (bottom).

Switching to white plastic mulch for later spring plantings can reduce losses significantly (white plastic will be 10-20 °F cooler than black plastic mulch). White mulches can lower bed temperature by up to 20°F. Use of white mulch increases transplant survival and increases germination and survival of seeded crops. The cooler soil can also increase root function and reduce fruit disorders such as white tissue, blotchy ripening and yellow shoulders in tomatoes and blossom end rot in tomatoes and peppers.

In onions, cutting the black mulch in mid-June as bulbs are increasing size has been shown reduce to reduce bulb damage.

In the past, a rule of thumb has been to switch to white mulch in the middle of June when days are longer and air temperatures are higher for longer periods of time. White mulch should also be used for crops planted in July and the first half of August.

The most common mulch used is white on black. The black side reduces weed germination, and the white top reflects solar radiation thus cooling the surface and the soil beneath.

Is there an advantage to switching earlier? Up to the middle of May, black plastic (or other soil heating colors) should be the preferred mulch to get warm season vegetable plants off to a good start when soil temperatures can be variable and bed heating improves crop performance. The second half of May can see some very hot weather as can the beginning of June, but this varies from season to season. Past research has shown no benefits to using white mulch in this period and often reduced crop performance in warm season crops such as watermelons. If long range forecasts are for warmer than normal temperatures, laying white or reflective plastic earlier in June may be advised for sensitive crops.

White mulches have also shown benefits in spring and summer planted cool season crops such as broccoli, lettuce, onions, and day

Fruit Crops

Tree Fruit Insect Scouting *David Owens,*
Extension Entomologist, owensd@udel.edu

Plum curculio and stink bugs are active right now in apples and peaches. Michigan State has a good article on effective insecticide options here: https://www.canr.msu.edu/news/plum_curculio_management_in_stone_and_pome_fruits. Please note, of the neonicotinoids, only Venom or Scorpion (dinotefuran) have significant stink bug activity. Pyrethroids do a good job on green stink bugs. Use caution with organophosphates as they can flare up aphid and mite problems. Voliam Xpress and Voliam flexi will provide both curculio and worm control.

Alternate Bearing and Hand Thinning in Fruits-
Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu



Fruits such as apples are prone to alternate bearing. A heavy crop as seen above may lead to a light crop the next year.

Biennial or alternate bearing refers to the tendency of perennial fruits to put on a heavy crop one year and then little or no fruit the second year. This is most common in tree fruits such as apples.

Next year's flowers are initiated this year. If there are too many fruits on the plant in the current season, most of the energy goes to fruit development and less to flower initiation for next year. As a result, a fruit tree often produces a small number of flowers and fruits the year after a heavy crop.

Alternate year bearing is often variety related, so choose varieties that do not have alternate bearing habits when possible.

The main tool that we use to prevent alternate bearing is fruit thinning. Apples are commonly chemically thinned during bloom. If the chemical thinning was incomplete, hand thinning may be required if fruit loads are too high. In peaches, fruit thinning starts with dormant pruning to remove fruiting wood in vigorous varieties. This is followed by mechanical blossom thinning and the hand thinning to reach the optimal fruit load.

Most years, peaches and nectarines will set many more fruit than the tree can carry, and they will need to be thinned. Thinning is done to prevent limb breakage, increase fruit size, and improve fruit quality. Thinning techniques are used before, during and after bloom to reduce peach crop load.

In the past, chemical thinners were extremely variable in stone fruits, unlike apples. However, a new thinner for peaches is now available from Valent BioSciences. Accede is the first PGR based on a naturally occurring compound developed specifically for thinning of stone fruit, including peaches and nectarines. This will reduce or eliminate the need for blossom thinning. However, with the late spring freezes we have been having, many growers will limit early thinning until a final fruit load is determined.

This will require thinning when green fruits are the size of a nickel to a quarter. The target fruit load is 400-600 fruit per mature tree. A general rule of thumb is to leave an average of 6 to 8 inches between fruit (the larger spacing for earlier or hard-to-size varieties). Two or three peaches can be left clustered if there is enough additional limb space to support their growth. Keep the largest fruit on a limb, even if they are clustered.

Hand thinning can start before various striking and shaking methods, which require fruit large enough to be dislodged by the vibration. If the fruit thinning has not been completed earlier, rubber-tipped poles, padded bats and plastic “wiffle” bats can be used to strike limbs to remove excess peaches and is faster than hand thinning. Both striking and shaking strategies generally require follow-up hand thinning. Hand thinning provides greater control and causes less limb damage than limb shaking and striking.

Early ripening varieties and varieties with less potential for large fruit should be thinned first to provide the best opportunity for size enhancement.

Hand thinning of apples should be done within six weeks of full bloom. Leave the largest apple in a cluster unless it is damaged. After thinning, apples should be spaced about 8 to 10 inches apart on the branches.

Agronomic Crops

Agronomic Crop Insect Scouting *David Owens, Extension Entomologist,*
owensd@udel.edu

Alfalfa

Potato leafhopper is active, any alfalfa fields that have been cut and are re-growing should be scouted. The cutting process destroys nymphs and forces adults to leave the field. A dynamic potato leafhopper threshold can be found here: <https://www.udel.edu/content/dam/udelImage/s/canr/pdfs/extension/sustainable-agriculture/pest->

[management/Insect_Control_in_Alfalfa_2023.pdf](#). Remember, by the time the yellowing symptoms of hopper burn are visible, yield has already been compromised.

Soybean

Scout emerging soybean plants like a hawk for signs of slug damage. If a field is worked as a general management practice or as a slug management practice, the seed should have an insecticide seed treatment on it to avoid potential seedcorn maggot damage. Close your seed slots!!! As the soil surface dries, slugs will seek out dark, moist areas under residue or in open seed slots. If a seed slot is open, it concentrates slugs right on top of a germinating seedling. Waiting until plants are out of the ground to make a bait application decision is too long. Conservation tillage can be helpful to reduce slug activity in fields with high residue.

Bean leaf beetle are also beginning to become active. The threshold for bean leaf beetle defoliation is 40% with 1-2 beetles present per plant.

Field Corn

A question came in this week as to what the best way to treat for white grubs might be in field corn. White grubs will soon be cycling out of fields, so this post might be a bit on the late side for this season. Dr. Dominic Reisig has performed quite a few wireworm and white grub efficacy trials in North Carolina and found that the high rate of Poncho (1250) or a 6.4 fl oz rate of Capture LFR in the furrow provided equally good white grub control. Low rates of Poncho and Cruiser provided only marginal to fair control. Interestingly, in between, there's quite a bit of variation. In his trials, 2 tests with the high Poncho rate plus Counter did not perform as well as the high Poncho rate alone. I think this is an artifact of just how variable insect pressure and presence in a field can be. His results were fairly similar for wireworm, with the exception that the Poncho and Cruiser 500 rates performed as well as the high rate. Capture in furrow only provided marginal to fair control and did not seem to improve on the low rate of Poncho.

Based on his data, and some personal observations over the last several seasons, the 500 rates of Poncho and Cruiser should perform well enough, but if you have heavy pressure, a bifenthrin treatment may improve upon efficacy, if only slightly.

Scout for cutworm damage, black cutworms were observed cutting V3 plants this week in Georgetown. Thresholds are 10% of leaves with feeding injury and 3% cut plants or, as plants age, 5% cut plants. Also, fields late planted into a standing small grain cover crop may have stink bugs present. See the above note on sweet corn for cutworm and stink bug management.

Grasshoppers are hatching out. While Mid-Western thresholds are high, it is worth knowing where they are concentrated in case you feel that a targeted application is recommended.

Early Season Moth Flight

Many thanks to Haley Sater with UMD Cooperative Extension and Joanne Whalen, extension entomologist emeritus extraordinaire for assistance with checking traps.

Location	# of Nights	Total Catch	
		TAW	BCW
Willards, MD	14	3	7
Salisbury, MD	7	0	4
Seaford, DE	6	4	0
Sudlersville, MD	7	0	2
Harrington, DE	6	38	5
Smyrna, DE	7	239	42
Middletown, DE	7	12	46

Small Grains Disease Updates - Alyssa Koehler, Extension Field Crops Pathologist; akoehler@udel.edu

Symptoms of Fusarium Head Blight (FHB) have started to show up in barley and will soon become visible in wheat (Fig.1). So far, I have observed very low levels of symptoms in barley. The season started at low risk and remained low through most of the window for barley flowering. The rains set in at the start of wheat flowering and moved us to medium-high risk for 2-3 weeks, but we are returning to lower risk in the model (Fig. 2). Tips for scouting for FHB were shared [last week](#). Over the next week to 10 days, wheat symptoms should be at peak visibility to walk fields and assess the level of FHB present.



Figure 1: Barley head with symptoms of FHB (Top). Wheat head with bleaching and orange sporulation due to Fusarium Head Blight (Bottom)

Weed Emergence Timing in Delaware- Mark VanGessel, *Extension Weed Specialist*; mjv@udel.edu

Many environmental factors influence when weeds start and stop germination, and these environmental cues occur on the micro-scale. As a result, it requires large data sets to accurately predicted emergence. Our data was collected in the same field at the Carvel Center in Georgetown, DE and may not accurately predict all sites, but does provide a general understanding of weed emergence. We have been monitoring the emergence of twelve common summer annual weeds since 2018. We have tilled half the plots in mid-April and the others are not tilled. The plots were counted every 10 to 14 days from early April until the first of September to calculate cumulative emergence. The table below is the average date that 50% and 75% emergence has been achieved. Those species that germinate later in the summer or have a longer germination period often require a postemergence herbicide application that includes a residual herbicide. In our list, this includes annual morning glory, common cocklebur, Palmer amaranth, and Jimsonweed. In general, tillage had little impact on when germination begins. However, there was a longer period of germination in no-till compared to conventional tillage.

Annual morning glory in our area is difficult to control and a big reason is the germination pattern. It emerges later than most species and has one of the longest germination periods.

Better understanding of weed germination can help improve overall weed control, particularly knowing which species may emerge later. However, the take home lesson is not to wait to control these late emerging species, rather knowing that longer-season crops that do not shade the ground may need additional

Species	Tillage	50%	75%	days btw 25 and 75%
Common ragweed	No-till	10-May	4-Jun	45
Common ragweed	Conv	30-Apr	10-May	20
Giant Foxtail	No-till	30-Apr	25-May	35
Giant Foxtail	Conv	30-Apr	25-May	35
Common lambsquarter	No-till	15-May	4-Jun	35
Common lambsquarter	Conv	10-May	30-May	40
Fall panicum	No-till	15-May	14-Jun	45
Fall panicum	Conv	25-May	30-May	30
Velvetleaf	No-till	25-May	14-Jun	40
Velvetleaf	Conv	15-May	4-Jun	30
Common cocklebur	No-till	29-Jun	3-Aug	55
Common cocklebur	Conv	30-May	19-Jun	40
Large crabgrass	No-till	15-May	9-Jun	30
Large crabgrass	Conv	25-May	4-Jun	25
Jimsonweed	No-till	14-Jun	14-Jul	65
Jimsonweed	Conv	20-May	4-Jun	25
E. B. nightshade	No-till	4-Jun	24-Jun	40
E. B. nightshade	Conv	14-Jun	19-Jun	20
Palmer amaranth	No-till	14-Jun	9-Jul	55
Palmer amaranth	Conv	9-Jun	24-Jun	25
Smooth pigweed	No-till	9-Jun	19-Jun	20
Smooth pigweed	Conv	30-May	19-Jun	25
Morning glory	No-till	24-Jun	29-Jul	50
Morning glory	Conv	14-Jun	29-Jul	55

Days between 25 and 75% emergence is calculated to evaluate how long germination occurs for the species.

Guess The Pest! May 12 Answer: Pigweed and Ragweed

David Owens, Extension Entomologist,
owensd@udel.edu

Last week's Guess The Pest challenge was pigweed (likely palmer) and ragweed. There are a lot of great weed identification resources listed at the GROWIWM.org website:

<https://growiwm.org/weed-identification/>.

Also, on their site you can find tons of great information on weed management contributed by numerous institutions and specialists including our own Drs. Mark VanGessel and Claudio Rubio.



Fig. 1. Pigweed



Fig.2. Ragweed

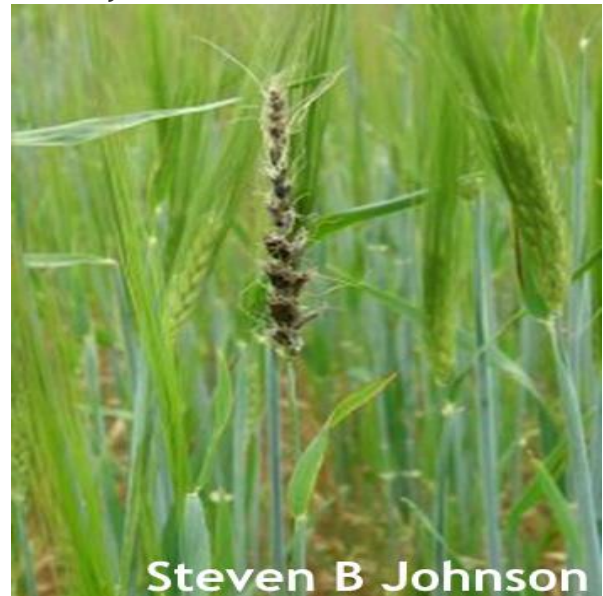
Guess The Pest! May 19

David Owens, Extension Entomologist,
owensd@udel.edu

This week, we jumped into barley fields to look at the impact of yellow dwarf in fields. While walking we found several funny looking heads. What is going on here?

This year, Guess the Pest participants will be entered into an end of season sweep net drawing (as well as other potential items). To enter a guess, click on the Guess The Pest Logo or by visiting: <http://www.udel.edu/008255>

Let's take a pause from the bug photos and hop into plants for a DAILY DOUBLE! This time of the year I look into my wildflower garden eager to see what new plant will take root and I get excited when I see this marigold/cosmos looking thing only to be disappointed later. Or this other exciting looking seedling with a penchant for growing fast but not giving a nice flower. What are they?



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 15, 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_agW9o6VWOUCivCC

The survey is also available in Spanish:

https://qualtrics.uvm.edu/jfe/form/SV_agW9o6VWOUCivCC?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.

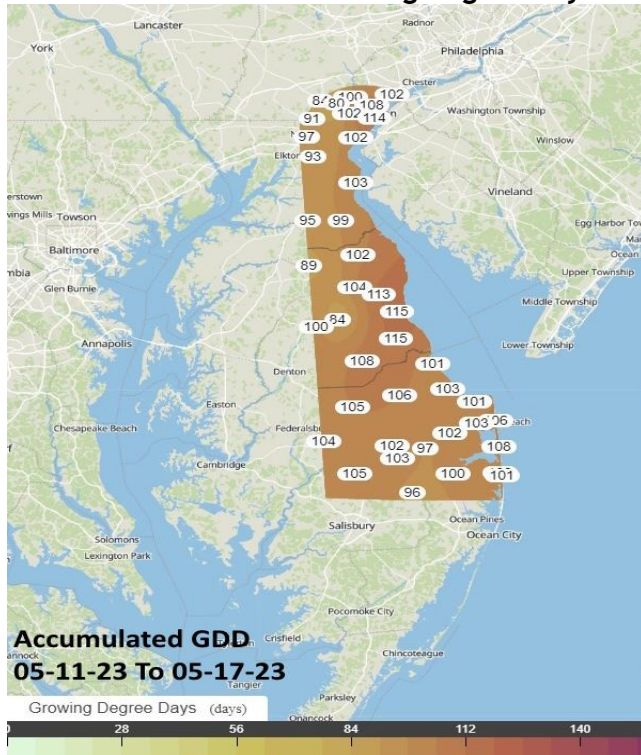
Who do I contact to arrange sample pick up or if I have additional questions?

Delmarva - Amy Shober (ashober@udel.edu)

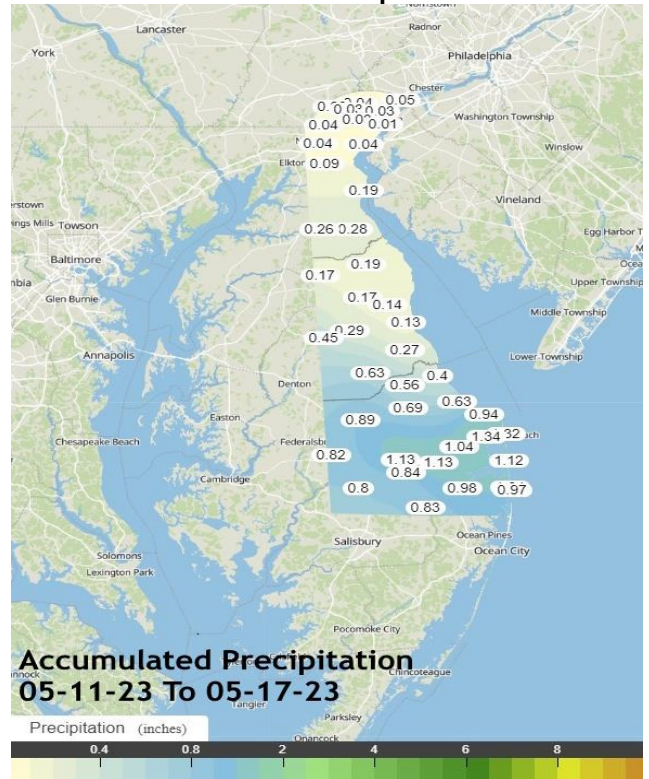
Pennsylvania - John Spargo (jts29@psu.edu)

Weather Summary

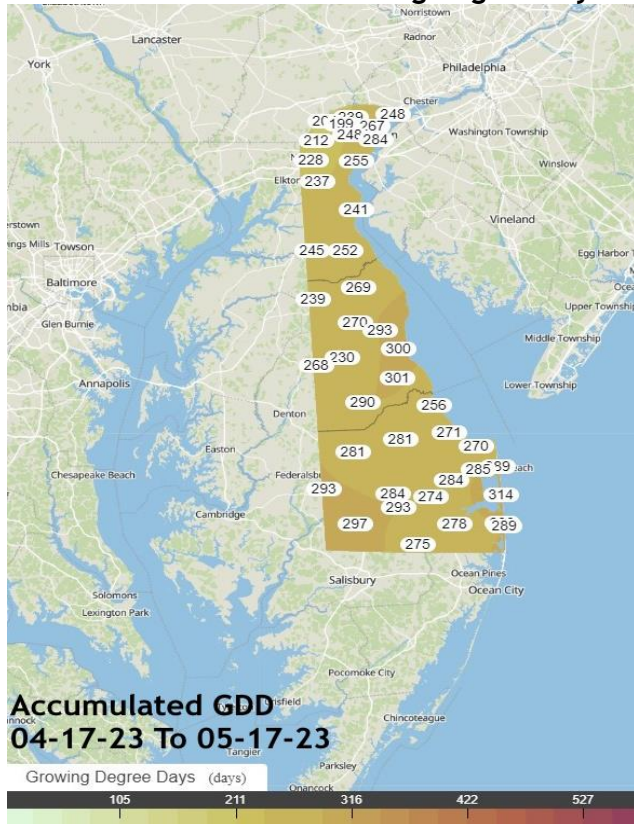
1 Week Accumulated Growing Degree Days



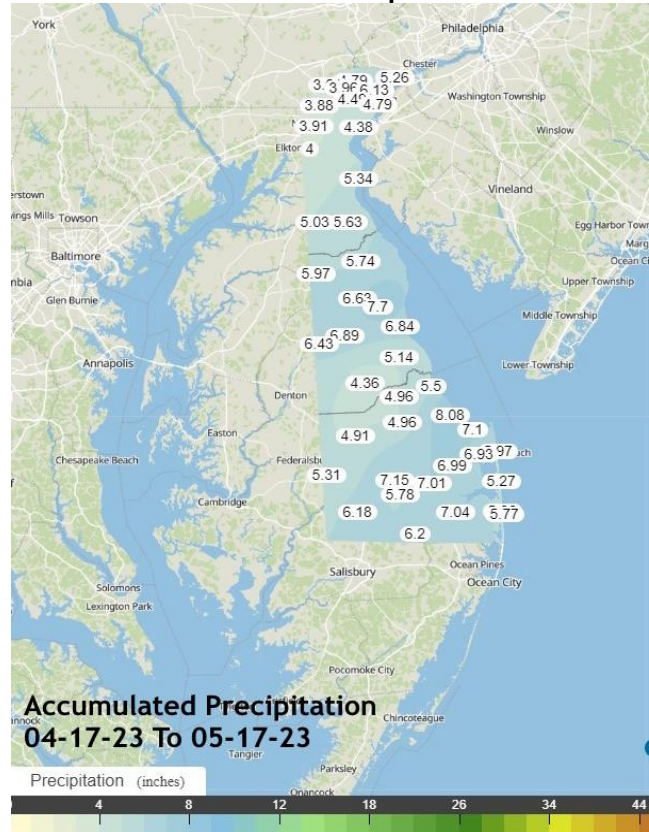
1 Week Accumulated Precipitation



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!

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