



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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Spider Mite Alert

New this year for us is participation in Syngenta's Pest Patrol (<https://www.syngenta-us.com/pest-patrol>) a text to voice mail service that alerts subscribers when a new message has been posted that they can listen to on their phone. Subscribing is free, and the only time you are alerted is when a new post has been made available on crops that you select.

This week we have had several calls and field visits regarding spider mites. Recent rains have rejuvenated some of the weeds that spider mites are feeding on but beware another stretch of hot dry weather. Under hot dry weather, mite populations can increase 10x per week. If you are not using any sort of magnification, it can be almost impossible to see the eggs and early instar spider mites under leaves. I like to use headband magnifiers such as Donegan's OptiVisor. Although it only gives up to 3.5x magnification, it has a nice field of view and depth of field. While looking for stippling can be helpful, and often an indication of an infestation, sometimes older leaves do not reveal stippling until large mite populations are present. If you see stippling on younger leaves, check the undersides of older leaves carefully.

In tomato, sample a mid to upper canopy terminal leaflet. Thresholds in tomato and

eggplant are 4 mites per leaflet. On legume vegetables, thresholds are 20 mites per leaf before podding. Watermelon thresholds are between 20-30% crowns infested with 1-2 mites per leaf early, and 50% of terminal leaves later in the season. In the [MidAtlantic Commercial Vegetable Production Recommendations Guide](#), the various miticides are also ranked according to bee toxicity. As always, read product labels carefully. Generics may have different use rates and even different formulations. Abamectin labels often require the use of an adjuvant. Thorough coverage and higher water rates will help improve efficacy.

Snap Beans

Earworm counts across the state have declined to low numbers, and we have not yet captured a European corn borer from 6 pheromone trap locations. However, damaging levels of **leafhoppers** are present in some fields, along with hopperburn yellowing on leaf margins. Treatments are warranted if there are more than 5 leafhoppers per sweep.

Squash

Continue scouting for **squash bug** egg masses underneath leaves. Thresholds are 1 egg mass per plant and begin treating when eggs begin hatching. In small plantings, sprays targeting squash bug will also help prevent squash vine borer attack. Pay special attention to treated plantings in mid-July onward for aphids.

Scout pumpkins for **seedling pests**, especially if seed was not treated with Farmore FI1400. I enjoy growing heirloom type winter squash and

was recently loathe to see some cutworm damage in my field.

Sweet Corn

Moth counts continue to decline. Traps are checked Mondays and Thursdays, with data uploaded to our website by the following day: <https://agdev.anr.udel.edu/trap/trap.php>. Most sites would indicate a 4-5 day spray schedule. Keep in mind though that we do not move our traps and not all are immediately next to silk-stage sweet corn, which is the most attractive habitat for earworm. Thursday trap counts are as follows:

Trap Location	BLT - CEW	Pheromone CEW
	3 nights total catch	
Dover	0	15
Harrington	1	8
Milford	0	9
Rising Sun	0	4
Wyoming	0	3
Bridgeville	0	14
Concord	1	11
Georgetown	0	1
Greenwood	1	15
Laurel	1	6
Seaford	0	
Lewes		12
Millsboro	6	1

Watermelon

In addition to spider mites, Lepidopteran pests are starting to show up. We have seen an increase in various ‘green worms’ and have seen the occasional yellow striped armyworm in fields. Be sure to scout fruit for signs of rind feeding. As we move into July, we have a few interesting worm options to choose from, including diamides (some of which have decent cucumber beetle activity) and a diamide abamectin premix (Minecto Pro). Another excellent worm control product, Radiant, is also very good against thrips.

Leaf Aging in Cucurbits - Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

We are starting to see the oldest leaves (crown leaves) in watermelons, cantaloupes, squash, cucumbers, and pumpkins with large areas that are discolored (white, tan, or bronze). These leaves will be brittle to the touch and may start to tear or shred with high winds and storms.

This condition is common in cucurbit crops and can be due to a number of leaf aging factors including mineral nutrient scavenging (export of mobile nutrients from oldest leaves to newer leaves), ozone air pollution damage, chemical phytotoxicity, repeated stress cycles, and wind injury.

Leaf cells that die will leak their contents, releasing enzymes and oxidizing chemicals affecting nearby cells thus accelerating the “aging” process. This results in large patches of dead leaf cells that then dry, making the leaf feel brittle. If leaf veins are damaged, water and food transport will be compromised, accelerating leaf decline. This leaf aging is not to be confused with damage from mite feeding which is also concentrated on oldest leaves or any of number of foliar diseases caused by plant pathogens.



Wind damage to Zucchini leaf. This damage will lead to premature aging of the leaf.



Cucumber crown leaf showing leaf aging likely initiated by wind damage.

Physiological Leaf Roll Versus Growth Regulator Herbicide Damage Revisited

Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

Leaf curling, cupping, and rolling in vegetables can be caused by virus diseases, aphid infestations, herbicides and growth regulators. We are currently finding physiological leaf roll and leaf curling due to exposure to growth regulator herbicides in vegetable fields. It is important to know how to distinguish between the two.

Physiological Leaf Roll

Late spring and early summer is the time of the year that we often see leaf cupping and rolling disorders appear in vegetable crops that are not related to pests or chemicals. This can be seen in tomatoes, peppers, potatoes, watermelons, beans, and other crops. This is a physiological disorder that may have many contributing factors.

In tomatoes, leaf roll starts at the margins which turn up, then roll inward, most commonly on the lower leaves. Upward cupping is also found commonly in watermelons and potatoes. Beans, peppers, and other vegetables may cup downwards. Leaves may stay in this rolled or cupped state for a short period of time and then

return to normal, or they may remain permanently rolled or cupped. Rolled leaves may become thicker but are otherwise normal. Physiological leaf roll or cupping is often variety dependent with some varieties being more susceptible than others.



Physiological leaf curl on tomato

There are several possible causal factors for physiological leaf roll or cupping. Water relations are suspected in many cases where there has been a reduction in water uptake or increased water demand placed on the plant. The plant responds by rolling the leaves which reduces the surface area exposed to high radiation. High temperatures, excessive pruning, cultivation, and vine moving activities may also trigger leaf rolling. High nitrogen fertility programs followed by moisture stress may also trigger this type of leaf roll. Inadequate calcium moving to leaf margins may also cause a different type of leaf cupping. This is also related to interrupted water movement.

In most cases, yields are not affected by physiological leaf rolling or cupping. However, growers may choose to select varieties that are less susceptible to this disorder.

Growth Regulator Herbicide Damage

Growth regulator herbicides are often of most concern for drift damage to vegetable crops. This group includes dicamba, 2,4-D, MCPA, MCPP, triclopyr, picloram, clopyralid, aminopyralid, and quinclorac. These herbicides

can drift over one mile from where they were applied when volatilized.

Symptoms include leaves becoming cupped, crinkled, puckered, strap-shaped, stunted, and malformed. Leaf veins can appear parallel rather than netted, and stems become bent, twisted, and brittle.

When compared to physiological leaf roll, growth regulator herbicide injury symptoms will be concentrated on the upper part of the plant (growing points), the leaf veins will be affected showing a parallel pattern, and stems may be twisted - none of these symptoms will be present in physiological leaf roll.



Growth regulator herbicide damage on tomato. Note leaf cupping, strapping, twisting, and unusual vein pattern.

Unusual Pest Found in Tomatillo Crop -

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

I was at a farm the other day that had a wide variety of crops on it and the grower showed me what we at first thought were odd looking Colorado potato beetle larvae in their tomatillos, but they did not really look like CPB. These larvae were three-lined potato beetle *Lema trilinea*, which can be found on Solanaceae crops such as potato, tomato, eggplant, pepper, etc. The funny thing is they are usually not found on potato or tomato, but most commonly found on tomatillo *Physalis ixocarpa* as they were on this farm.

Adults are orange-yellow, with three lengthwise black stripes (Fig. 1). These stripes can look very similar to striped cucumber beetle stripes. The head and thorax are usually orange. Female beetles lay 6-20 orange-yellow eggs in groups, usually on the undersides of leaves. Eggs hatch in about two weeks and larvae feed side by side in a row (Fig. 2), starting at the leaf edge and moving backward. When larvae are larger they separate and move around the plant. Larvae are full grown in about two to three weeks. Larvae pupate in the ground and emerge in 1-2 weeks as adults that will eventually overwinter and emerge next year in early spring.



Figure 1. Adult three lined potato beetle

The weird thing about these larvae is that their body is kept moist and sticky by a coating of their own feces. The larvae feed on Solanaceous plants that contain glycoalkaloids which most other insects do not like to eat. So the larvae cover their bodies with their own feces, making them distasteful to predators.

Larvae and adults feed on Solanaceous crops and prefer tomatillos and husk tomatoes (*Physalis pruinosa* or *P. pubescens*). Both larvae and adults chew angular shaped holes in the leaves, feeding along the margin of the leaf and can consume most leaf tissue except for the mid-vein. Larvae tend to feed on the underside of leaves.

Although the damage by this pest is sporadic and population levels rarely reach economic levels, I have seen them more often in the last couple of years feeding on various solanaceous crops, possibly because tomatillo crops are becoming more common. As of right now controls are rarely needed for management. However if necessary the pesticides used for Colorado

potato beetle, also can be effective against the three-lined potato beetle.



Figure 2. Three lined potato beetle larvae covered in feces lined up to feed

Watch Your Pumpkins and Squash for Squash Vine Borers - Jerry Brust, IPM Vegetable Specialist, University of Maryland; jbrust@umd.edu

I have gotten several emails and calls from growers in different areas of the state reporting they are seeing the beginnings of squash vine borer problems in their pumpkins or squash crops. IF you rotated at least $\frac{1}{4}$ mile from your squash/pumpkin fields of last year you should be OK, however I know some growers either could not rotate or they could not rotate very far from last year's crop.

Squash vine borer adults, *Melittia cucurbitae*, are moths that look like wasps. They are about $\frac{1}{2}$ inch long with an orange abdomen and black dots (Fig. 1). These moths are day flyers and can easily be spotted flitting about a squash or pumpkin field. The adults emerge in mid or late June in our area. Adults lay most of their eggs in the first 12-15 inches of the stem. Pumpkins, zucchini and summer and winter squash are preferred plants, rarely have I seen them in

watermelon, cucumber or cantaloupe. The eggs hatch in about one week at which time larvae bore directly into stems and feed. The large cream-colored larvae are 1-1.5 inches long (Fig. 2). Their feeding blocks the flow of water to the rest of the plant. Larvae feed for 4-6 weeks, then exit the stems and burrow into the soil to pupate, where they overwinter.



Figure 1. Adult squash vine borer at rest



Figure 2. Squash vine borer larvae (4) in stem

The first symptom of a borer attack is the wilting of plants, which usually occurs in July.

The wilting may occur at first only when in direct sun, but the plants will eventually die. At the base of the plant you can find greenish-yellow sawdust like material (frass) and a scarred swollen stem (Fig. 3).

Squash vine borers can be difficult to manage once larvae are in the stem, as it is too late to do much. When squash vines begin to run or you see adults you can treat the base of the stem (the first 15-18 inches of stem) with a pyrethroid insecticide (or any other recommended pesticide in the Mid-Atlantic Vegetable recommendation guide) every 7-10 days, over the next 21-30 days. You could also use Bt insecticide (it is OK but not great) or Entrust which is better and both are OMRI approved.



Figure 3. Frass (arrow) and pumpkin stem damaged by borers

Fruit Crops

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

Grapes

Japanese beetles have begun emerging this week. Scout vineyard edges for beetle congregations. Wisconsin entomologists recommend using a 30% defoliation threshold before using an insecticide but note that other fruit crops may be more sensitive to defoliation. Effective materials include carbaryl, indoxacarb, acetamiprid, and azadirachtin.

Split Pits in Peaches and Nectarines - Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

Split pit in peaches and nectarines is a physiological disorder that refers to the opening of the pit at the stem end of the fruit. This split becomes evident in the third stage of fruit growth, usually referred to as the final swell. Split pit fruit can develop rot problems much more quickly than sound fruit and allows for easy entrance to insects.

The exact causes of pit breakage are unknown. Low temperatures and/or freeze damage during flowering and early fruit development may be factors. Fruit of most early peach cultivars enters the final swell of growth before the pit is completely hardened. As the fruit enlarges rapidly, stress exerted by the expanding flesh causes much of the pit fracturing. Because most early varieties are cling types, the strong attachment of flesh to pit probably enhances the forces exerted on the immature pit by the expanding flesh.



Stem end of peach showing opening caused by the pit splitting. This fruit will be more susceptible to rots and insects.

Cultural practices that enhance fruit size (such as thinning, nitrogen application, and irrigation) usually increase the level of split pit. If freezes excessively reduce fruit loads, generally pit breakage increases. Excessive rain in the latter

stages of fruit growth is another uncontrollable variable that aggravates pit breakage.

Cultural control of split pit includes leaving heavier crops on problem cultivars (less thinning), limiting irrigation and nitrogen fertilizer near harvest, and choosing cultivars that do not have major problems with split pit.

This information was adapted from <https://pnwhandbooks.org/plantdisease/host-disease/peach-prunus-persica-split-pit>



Split pit peach cut open.

Reminders for Monitoring and Managing Spotted-Wing Drosophila (SWD) - Kelly Hamby, Associate Professor and Extension Specialist, Department of Entomology, University of Maryland; kahamby@umd.edu

Spotted-wing drosophila (SWD) is a small fly that lays its eggs into ripening and ripe soft-skinned fruit. Although they prefer fully colored ripe fruit, they are capable of infesting fruit that is just starting to turn color. Populations in non-crop habitats (wild fruits, compost, manure, nectar, fungi) can move into fruit crops, causing near continual pressure during the season in addition to pressure building on farm, especially when multiple susceptible fruit crops are grown. Caneberries (raspberries and blackberries) experience heavy pressure because they are preferred hosts and fruit during the mid-summer when SWD populations rapidly grow. Cold winters reduce overwintering populations, helping earlier season fruit such as strawberries, cherries, and earlier blueberry varieties escape

damage. However, when we have warm winters with fewer days below freezing and warmer low temperatures, such as 2020 and 2021 (Table 1), populations build faster and more damage will occur, especially in cherries and blueberries.

Table 1. Calendar year minimum temperatures and days <32 °F in Damascus, MD.

Calendar Year	Minimum Temperature °F	Total Days <32 °F
2018	-1	100
2019	-1	96
2020	15	63
2021	16	61

Monitoring

Monitoring can be used to determine if SWD is active on farm, and management decisions that combine SWD activity and fruit susceptibility (the riper the more susceptible) can help avoid unnecessary applications. There is no treatment threshold for SWD and acceptable damage varies by market and operation.

To determine when adults are active in cherries and blueberries, commercial adult traps and lures can be purchased and/or home-made traps and baits can be used. Traps have to be checked weekly and will capture non-target insects that have to be sorted through to find the adult flies. (see Michigan State's fact sheet: https://www.canr.msu.edu/ipm/uploads/files/MI%20SWD%20Guide%20Cherry%20June_2020.pdf).

Checking fruit for SWD damage, eggs, and larvae can be used to determine SWD pressure and the effectiveness of management programs. Visual inspection of fruit looking for soft and leaky fruit can work to find infestation, and sampling fruit from the interior part of the plant where the habitat is more favorable and insecticide deposition is often poorer can help with early detection.

To monitor fruit infestation use salt or sugar water solutions to float eggs and larvae out of fruit. If you want to know if your management program is working, collect market ripe fruit. If you want to evaluate SWD pressure, collect interior soft and overripe fruit. Lightly crush fruit in a plastic bag or container. Add salt (1 cup salt to 1 gallon water) or sugar (1/4 cup

granulated white sugar to 4 ¼ cup water) water and let the fruit soak below the surface for 15 - 60 minutes (the longer the more likely the larvae will leave the fruit). Pour the fruit and water solution through a coarse filter (to remove the fruit) stacked over a reusable basket style coffee filter. Rinse the soaking bag/container and pour the rinse liquid through the coffee filter too. The coffee filter will collect the eggs and larvae as well as smaller plant parts and fruit flesh if the fruit were crushed a bit too much. Carefully inspect the filter for SWD eggs and larvae with a magnifier (**Figure 1**).



Figure 1. SWD egg and larvae.

Management

Due to their broad host range and quick reproduction, SWD are difficult to manage. In most cases, especially in preferred hosts such as caneberries and later season varieties, a 7-day spray interval is required to maintain near 0 infestation levels, with tighter intervals when rain events occur. Accurate calibration of sprayers, appropriate spray volumes and tractor speeds, and other best practices to ensure good spray coverage are important. There are multiple effective insecticide modes of action for SWD, with group 1A carbamates (e.g., Lannate®) and group 1B organophosphates (e.g., diazinon, malathion), group 3A pyrethroids (e.g., Mustang-Maxx®, Danitol®), group 5 spinosyns (e.g., Delegate®, Entrust®), group 28 diamides (e.g., Exirel®, Verdepryn®) and the premix Cormoran® (group 4A neonicotinoid + group 15 benzoylurea) all ranking good to excellent. For organic production, there are a few OMRI

approved materials, with Entrust® being the most effective option. Rotating modes of action (at a minimum alternate) helps avoid insecticide resistance. *The label is the law, make sure the product is registered in your state and crop(s) and follow all restrictions.*

Removing and destroying cull fruit and shortening harvest intervals to every 2-days can help reduce on-farm population. For some operations, mesh netting (1.0 x 0.6 mm or smaller) has proven very effective for delaying or reducing SWD, though sprays may be needed later in the season if populations build under the netting and supplemental pollination should be considered for some crops. Netting must be installed before SWD are active and cannot have any holes or be left open (e.g., worker or picker entry), so structures with entryways work best. Fruit yields and quality tend to be better when using netting which also protects from bird and other damage. Cooling fruit (32-36 °F) and holding it cold throughout the supply chain increases shelf life and reduces the likelihood that infestation will result in damaged or unmarketable fruit.

Agronomic Crops

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

Spider Mite Alert

New this year for us is participation in Syngenta's Pest Patrol (<https://www.syngenta-us.com/pest-patrol>) a text to voice mail service that alerts subscribers when a new message has been posted that they can listen to on their phone. Subscribing is free, and the only time you are alerted is when a new post has been made available on crops that you select.

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headband magnifiers such as Donegan's OptiVisor. Although it only gives up to 3.5x magnification, it has a nice field of view and depth of field. While looking for stippling can be helpful, and often an indication of an infestation, sometimes older leaves do not reveal stippling until large mite populations are present. If you see stippling on younger leaves, check the undersides of older leaves carefully.

In soybean, sample mid to upper canopy leaflets. If stippling is present on more than 1/3 of leaves on approximately 10% of the plants sampled and there are nearing 20 mites per leaflet, a treatment should be considered. Last year, the best treatments were Agri-Mek SC and Zeal SC (note: these are the only labeled formulations for soybean) at mid-label rates. Lorsban and Dimethoate suppressed mite populations for about 2 weeks, Bifenthrin about 1 week. A single application of any of these three products should not be counted on alone to control mites.

Soybean

This week, we have started seeing **Japanese beetle** and **green cloverworm** in fields. **Dectes stem borer** will soon be emerging. As a general reminder, defoliation thresholds in full season bean fields prior to flowering are very conservative, and are also very high. It is also very easy to overestimate defoliation, especially from Japanese beetle, which skeletonizes upper leaves. When evaluating defoliation, look at the entire canopy.

Corn Disease Updates - Alyssa Koehler,
Extension Field Crops Pathologist;
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As tasseling in corn approaches, it is a good time to scout fields to decide if a fungicide will be applied. When considering the economics of a fungicide application, it is important to know your potential for disease based on field history, environmental conditions, and hybrid selection. Many of the foliar pathogens of corn can survive in residue, so corn-on-corn fields carry a higher potential for disease, especially if disease has been observed in previous years. Hybrids with higher resistance ratings may not need a fungicide. Resistant hybrids typically have

smaller lesions and reduced spread of spores. In dryland fields, hot, dry weather will keep disease pressure low.

Reports of foliar diseases have been minimal so far this season. Irrigated fields keep enough moisture to favor environments for disease and may see development of Grey Leaf Spot (GLS) or possibly Northern Corn Leaf Blight (NCLB). GLS is one of our most common diseases of corn and usually begins on lower leaves as small, tan, rectangular lesions with a yellow halo. When lesions are young, they can be difficult to distinguish from other common corn foliar diseases. As lesions mature, they become more diagnostic. At maturity, lesions are grey to tan in color, with a long rectangular shape (Figure 1); partially resistant hybrids can have more jagged margins than lesions on susceptible cultivars. Lesions often join to form large necrotic areas under favorable environmental conditions. Yield reductions are typically observed when lesions are present on the two leaves below the ear leaf or higher, so these are the leaves to pay close attention to when scouting. If over 50% of plants have lesions on 5% or more of this leaf surface, you may want to consider a fungicide application. If applying a fungicide, VT/R1 timing has shown the greatest chance of economic return. Last week we shared the [2021 Fungicide Efficacy for Control of Corn Diseases](#), which provides ratings of product performance across multiple diseases based on trials conducted by Extension specialists across the country.



Figure 1. Rectangular lesions of Grey Leaf Spot on corn

Approaching Last Date for Dicamba

Applications to Soybean - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

Be aware that the last day dicamba-soybeans can be treated with a registered dicamba product is June 30. The dicamba products' registration (Engenia, Xtend, Tavium, etc) state "DO NOT apply after June 30". In addition, need to be certain the conditions are acceptable for application (wind speed, sensitive crops, time of day etc).

Postemergence Soybean Treatments - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

I have been asked a number of questions about postemergence spraying for soybeans. First and foremost, weed height should 3-inches or less for maximum control. We have all heard the stories about how an application of a certain product "cleaned up" a field of big/tall weeds. For every situation where someone controlled large weeds, there are multiple fields where the same large weeds were not controlled and they produced seeds.

At this point of the season, marehail or horseweed is large and should be treated as soon as possible with glufosinate (Liberty), or where its appropriate, dicamba (Engenia/Xtendimax/Tavium) or Enlist One or Enlist Duo. Glyphosate will cause some suppression of marehail and maybe the only option for varieties with only the Roundup Ready trait.

Common ragweed that are resistant to glyphosate, group 2 herbicides (such as FirstRate), and group 14 herbicides (such as Reflex or Cobra) have few options. Glufosinate (Liberty), or where its appropriate dicamba (Engenia/Xtendimax/Tavium) or Enlist One or Enlist Duo are the best options for most fields. Basagran is another option for small plants.

Palmer amaranth plants in this area are often resistant to glyphosate and group 2 herbicides, so herbicide options are limited to fomesafen (Reflex), Blazer Ultra, glufosinate (Liberty), or

where its appropriate dicamba (Engenia/Xtendimax/Tavium) or Enlist One or Enlist Duo. Because Palmer amaranth has a prolonged germination period, be sure to include a residual herbicide with the postemergence application. Options include metolachlor/s-metolachlor (such as Dual Magnum), acetochlor (Warrant), pyroxasulfone (such as Zidua SC or Anthem Maxx), or Reflex.

Fields infested with Palmer amaranth and resistant-common ragweed should receive top priority for postemergence applications.

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 marehail, Palmer amaranth and common ragweed. Use these charts in combination with other resources, such as the Mid-Atlantic Weed Management Guide, yet it 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 on one in the mixing shed.

General

The Confusion of Herbicide Product Naming - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

A common strategy in product marketing to build upon name recognition, and I find this can be very confusing. One example is when someone writes "Oreos" on the shopping list; do they want the original or one of the twenty-five different varieties.

In the case of herbicides, how often do we mention "Roundup"? Does that mean one of the

nine formulations listed on the CDMS database or one of the countless generic versions in the marketplace? Does it matter? Yes, because different formulations have different concentrations and that will influence the maximum amount of product allowed for a single application or for the entire season.

Another example of naming confusion is the proliferation of premixes that rely on name recognition. One specific case is Zidua (active ingredient is pyroxasulfone). The first named product was “Zidua” which was a dry formulation. It was followed by the “Zidua SC” formulation, which is a liquid and if someone did not catch the difference, the end result was an application of a lower rate of the active ingredient. Now there is “Zidua PRO” which is a prepackaged mixture and not only contains pyroxasulfone, but also “Pursuit” and “Sharpen”. Zidua and Zidua SC are labeled for application for over the top of soybeans, but Zidua PRO is not because it contains Sharpen, which will kill (or severely injure) emerged soybeans. So it is important to be precise and don’t hesitate to question what formulation or premixtures of a product someone is referring to when discussing herbicides.

Guess The Pest! Week 12 Answer: Potato Leafhopper - David Owens, Extension Entomologist, owensd@udel.edu

Last week’s photo was a bit tricky, as this was no longer a photo of a live insect, but rather a shed skin. The most common sheds that you will see under leaves are from spider mites, aphids, lace bugs, and leafhoppers. Spider mite sheds are much smaller, and usually not seen unless there is a large population present with heavy webbing. Aphid sheds are about the same size, but usually there will be a large colony nearby. Leafhoppers however are highly mobile and do not aggregate in the same way that aphids and mites do. This is the shed skin from potato leafhopper on a hop plant, but also watch out for them in snap beans, alfalfa, and potato.



Guess The Pest! Week 13 - David Owens, Extension Entomologist, owensd@udel.edu

Get out your field guides and practice your pest management knowledge by clicking on the GUESS THE PEST logo or following this link: <http://www.udel.edu/008255> and submitting your best guess. For the 2021 season, we will have an “end of season” raffle for a scouting toolkit for one lucky winner, and five winners will be sent a small jar of locally produced honey. Remember, you can’t win if you don’t play!

Now that it is officially summer, Get out your fruit guides! Besides blackberries, the highlight of summer is peach season in late July and August. However, odd, dimpled fruit and bleeding fruit can be a frustrating. What has caused this dimpling on the peaches? (Hint, this thing also can leave an off taste in caneberries)



G Johnson, University of Delaware

Go to <http://www.udel.edu/008255>
to Guess the Pest!



Announcements

Pesticide Safety Exam Reviews

Beginning in March the Delaware Department of Agriculture Pesticide Section will provide a Pre-Certification Pesticide Core Exam Review. This review will provide essential information, covering laws, equipment, personal safety and more to help you prepare for the core certification exam.

The core exam is for private pesticide applicators and a prerequisite for all commercial pesticide applicators.

2021 Pesticide Exam Dates

Wednesday, August 11, 2021

Wednesday, September 29, 2021

Wednesday, November 17, 2021

Schedule for Exam/Review Dates

Core Exam Review: 9 – 11:30am

Lunch Break

Pesticide Testing for ALL: 1 – 4pm

You may choose to test in the afternoon of the review or on another testing date.

Sign up is free!

Log into your account on dda.force.com/pesticide then click on Exam Registrations.

For more information on this training course and testing please contact Amanda Strouse at amanda.strouse@delaware.gov or 302-698-4575.

Extension302 Podcast

Episode 20: Got Dairy?

Featuring Charmayne Busker of Jenamy Farms

Milk, cheese, butter...ice cream! What's not to love about local dairy? The Extension302 team sits down with Charmayne Busker and our own Dan Severson to explore their favorite topic.

To listen, go to:

<https://www.udel.edu/academics/colleges/canr/cooperative-extension/about/podcast/>

COVID-19 Vaccination Opportunities in Delaware

COVID-19 vaccination is currently available to Delawareans ages 12+ at numerous sites throughout the state. Some sites require an appointment and others offer walk-in hours. Information about vaccine sites and appointments is online at <https://coronavirus.delaware.gov/vaccine/where-can-i-get-my-vaccine/>.

Mental Health First Aid Training

What is this training about?

The Mental Health First Aid training is an 8 hour evidence based program that introduces participants to risk factors and warning signs of mental illnesses, builds understanding of their impact, and overviews common ways to help and find support. Using interactive educational methods, you'll learn how to offer initial help in a mental health crisis and how to connect with the appropriate level of care. You will also receive a list of community healthcare providers and national resources, support groups, and online tools for mental health and addictions treatment and support.

What is the training format?

The course will be offered in two parts. The first part is offered online in a self-study format, takes about 2 hours, and needs to be completed before the live session. The second part will be offered live and virtually via a Zoom connection. This session will be held from 9am-3pm. You will receive the link for the self-paced session and Zoom info for the live session after you have registered. You need to register by the dates listed below to be able to attend the scheduled live Zoom training date.

Why attend?

In Delaware our agriculture community is facing many stressors. Those who are in the position to consult and aid them need to know the signs, symptoms and

strategies to best serve them. Farm family members also need to know how best to help their loved ones. This training is being taught by instructors from the Delaware Mental Health Association.

A certificate of completion is provided to attendees who attend all 8 hours of the training.

There are four dates for the Zoom session. Seating is limited. Please choose only one:

Mental Health First Aid Zoom Sessions with Registration Links

Friday, July 30, 2021 9 a.m.–3 p.m.

Register by June 30

<https://www.pcsreg.com/mental-health-first-aid-training-july-2021>

Friday, September 24, 2021 9 a.m.–3 p.m. Register by August 24

<https://www.pcsreg.com/mental-health-first-aid-training-sept-2021>

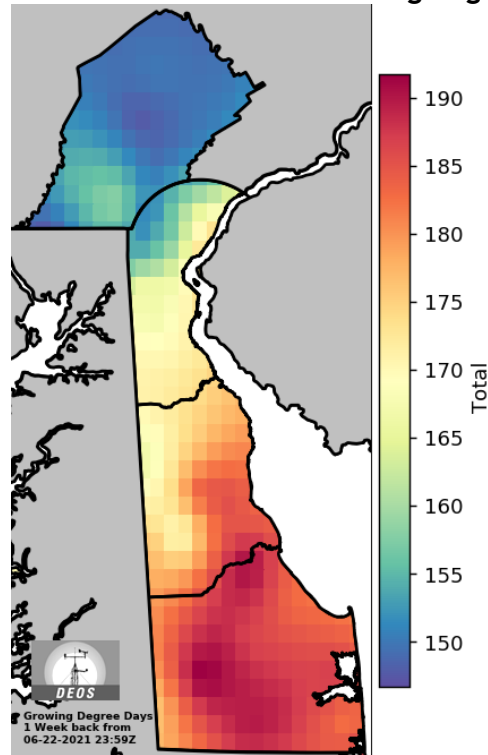
Friday, October 5, 2021 9 a.m.–3 p.m. Register by September 5

<https://www.pcsreg.com/mental-health-first-aid-training-oct-2021>

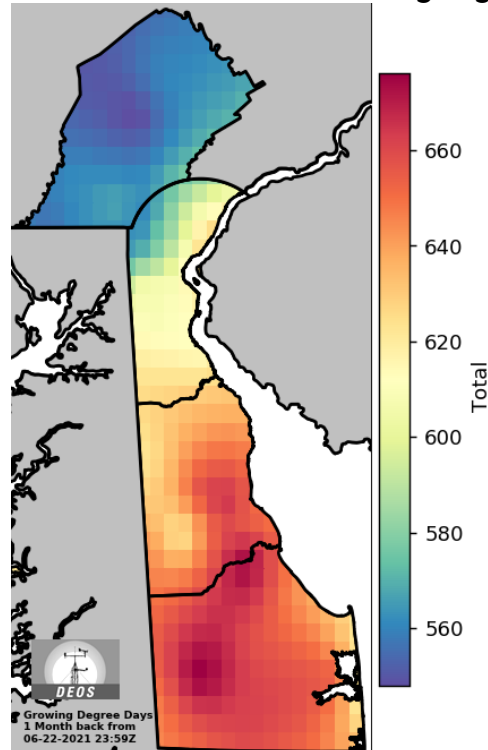
This training is underwritten by the Sustainable Coastal Communities Project, Delaware Farm Bureau and University of Delaware Cooperative Extension. These organizations are equal opportunity providers.

New Weather Summary!

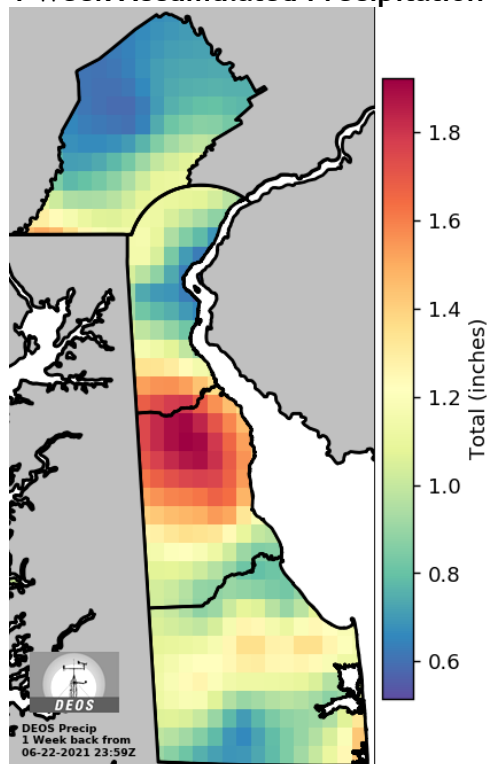
1 Week Accumulated Growing Degree Days



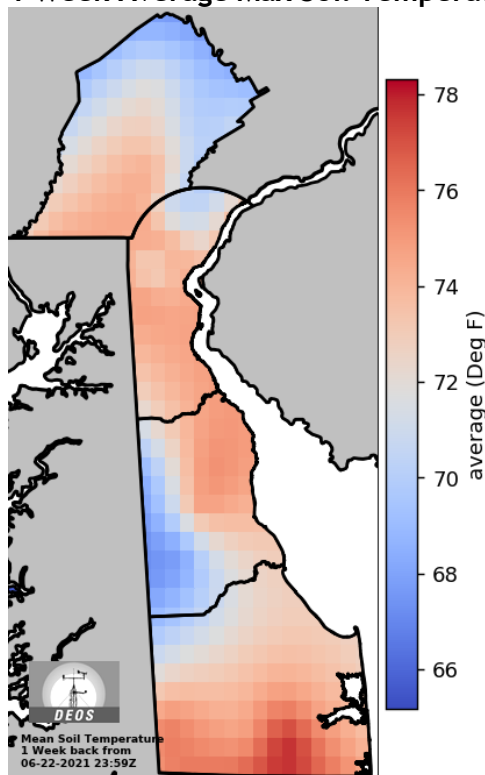
1 Month Accumulated Growing Degree Days



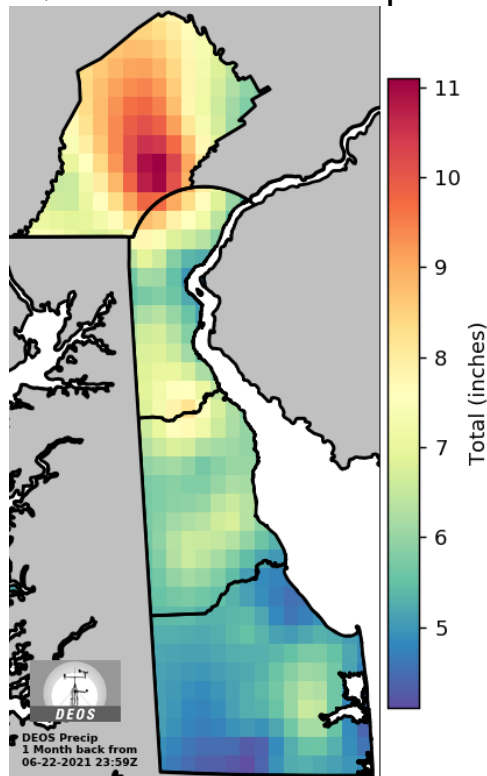
1 Week Accumulated Precipitation



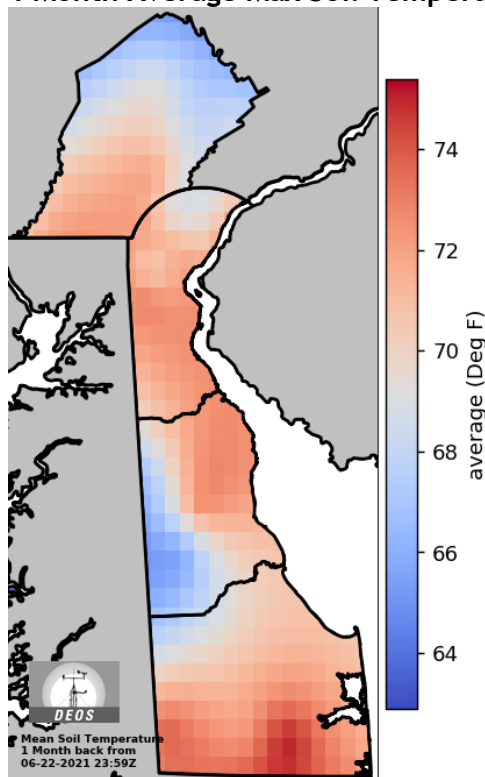
1 Week Average Max Soil Temperature



1 Month Accumulated Precipitation



1 Month Average Max Soil Temperature



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!
Thanks!! Emmalea (emmalea@udel.edu)

***Weekly Crop Update is compiled and edited by
Emmalea Ernest, Scientist - Vegetable Crops***

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