



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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Vegetable Crops

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

Sweet Corn

Earworm catches in pheromone traps have decreased slightly, but still remain quite high. Vial testing on this week's moths have resulted in about 40% survivorship. With cooler weather over the next few days, moth eggs will take a little longer to hatch than last week, and 3-day spray schedules will provide sufficient protection.

Trap Location	BLT - CEW	Pheromone CEW
	3 nights total catch	
Dover	6	105
Harrington	1	75
Milford	8	127
Rising Sun	7	134
Wyoming	2	73
Bridgeville	2	77
Concord	3	82
Georgetown	2	105
Greenwood	4	
Laurel	4	78
Seaford	2	38
Trap Pond	2	12
Lewes	9	270

Peppers

Beet armyworm, corn earworm, and yellow striped armyworm are active in the area. Beet

armyworm and corn earworm are resistant or less susceptible to pyrethroids. Early beet armyworm infestations sometimes draw leaves together and feed in groups before dispersing. There are numerous non-pyrethroid insecticides available from 8 different mode of action groups. Options can be found in the Mid-Atlantic Commercial Vegetable Production

Recommendations:

<http://extension.udel.edu/ag/vegetable-fruit-resources/commercial-vegetable-production-recommendations/>.

Hollow Heart in Watermelon Revisited - Gordon Johnson, Extension Vegetable & Fruit Specialist; gjohn@udel.edu

In our 2019 seedless watermelon variety trial, we are seeing higher than normal levels of hollow heart. Hollow heart is an internal split or void in the flesh of the watermelon between the 3 carpels or fruit sections. Research at the University of Delaware has shown that inadequate pollination is a major factor in hollow heart. Hollow heart is generally more severe in the crown set. Varieties vary considerably in their susceptibility to hollow heart. Dense fleshed (crisp) varieties, mini, and personal type watermelons have lower hollow heart incidence.

This year, pollinizers in a number of fields have declined prematurely (this was evident in our variety trial). Reduced pollen availability caused an increase in hollow heart during later sets in susceptible varieties.



Hollow heart in seedless watermelon

Delayed Fruit Set and Pumpkin Color

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

Delayed fruit set in pumpkin can be caused by many factors including late planting, heat and water stress, poor pollination and excess fertility (too much N). When set is delayed until August, the question is will the pumpkin develop and color in time for sales.

Under favorable summer growing conditions pumpkins will start to color about 4 weeks after fruit set and will be completely colored by 7 weeks after set. If fruit set is delayed until August, reduced day lengths and cooler temperatures may increase the time for full

color development. Varietal differences in days to maturity also come into play.

In research at Purdue University, pumpkins that set in August were tagged and then evaluated for maturity in October. They found that for flowers that opened between August 10 and August 21, at least 70% produced pumpkins that were either turning or fully orange by October 2 and 10, respectively. The remaining 20 to 30% either never set a fruit, or the fruit was still immature at the time of harvest.

This indicates that pumpkins set in mid-August will be ready for October sales. In fields with delayed set, it will be critical to keep vines healthy through September. This will mean additional fungicide sprays through the month with special attention being paid to powdery mildew and downy mildew.



Recently set pumpkin. Most fruit at this stage on the 20th of August will turn orange color by the second week in October. Photo credit Howard F. Schwartz, Colorado State University, Bugwood.org

Yellow-Striped Armyworm and Blister Beetle Problems in Vegetable Fields - Jerry Brust, IPM Vegetable Specialist, University of Maryland; jbrust@umd.edu

There have been several reports and sightings of blister beetles *Epicauta spp.* and yellow-striped armyworm *Spodoptera ornithogalli* feeding on various vegetable crops in our area. This is not too unusual as both of these pests tend to

become more of a problem later on in the season - late summer/early fall.

Yellow-striped armyworm larvae vary from dark grey to black with two conspicuous yellow stripes along each side of its body (Fig. 1). Below this yellow stripe there often is one pink or orange stripe running along the length of the worm. There are two dark triangle-shaped marks on the top of the yellow stripe on each segment (Fig. 1), although this is difficult to see in the dark form. And there is a dark spot just behind the true legs. The female moth lays her eggs in clusters of 200 to 500 on the undersides of leaves. A single female may deposit more than 2000 eggs. Eggs hatch in 5 to 7 days and the larvae feed for about 3 weeks before moving to the soil to pupate. There are three to four generations during the year in the mid-Atlantic with the late-summer generation being the most common.

Yellow-striped armyworm is a general feeder and will consume large quantities of foliage. It will feed on asparagus, bean, beet, cabbage, carrot, cucumber, lettuce, onion, pea, rhubarb, sweet potato, tomato, turnip, and watermelon and will also feed on blackberry, clover, grape, peach, raspberry, soybean, sweet clover and sunflower. It will also feed on several of our more common weed species such as: dock, horse nettle, jimsonweed, lambsquarters, morning glory and redroot pigweed. Most of its damage is caused by defoliation of a plant, but later in the season larvae often will feed on the outer surface of vegetables scarring them badly making them unmarketable (Fig. 1).

It is easier to control small larvae vs large larvae as large larvae are more tolerant of several insecticides. Transplanted crops, young plants and fruit bearing vegetables, especially tomatoes in high tunnels, should be observed regularly for early detection of yellow-striped armyworm. In tomato, small yellow-striped armyworm larvae can be managed with several insecticides including Lannate, Pyrethroids, Radiant, Confirm, Avant, Coragen and Exirel. Larger larvae will be more difficult to control and often require the aforementioned pesticides be applied at high rates with high gallonages of spray material. For organic growers *Bacillus*

thuringiensis (Bt) works well for small larvae control while Spinosad tends to work better on larger larvae. In the field yellow-striped armyworms have natural enemies, which include parasitic wasps and Tachinid flies, although these natural enemies are less commonly found in high tunnels.



G Brust, University of Maryland
Figure 1. Yellow-striped armyworm on tomato

Blister beetles have been reported feeding and defoliating swiss chard, eggplant and other vegetables. The presence of blister beetles now is not unusual as they are often found in large clusters in late summer-early fall. They can arrive in large groups, seemingly overnight and can do a great deal of damage in a short period of time.

Adults are large, oblong beetles with relatively large heads, long 'necks' and usually with some stripes (but not always) (Fig. 2). Striped blister beetles are shades of gray or brown with yellow stripes running lengthwise on their wing covers (Fig. 2). The ash-gray blister beetle is gray, the black blister is completely black, and the margined blister beetle is black with a grayish band around the edge of each wing cover (Fig. 2). Blister beetle abdomens usually extend past their leathery wings. Striped blister beetles hide beneath plants during the hotter periods of the day, becoming active when temperatures are

more suitable for them. If disturbed when on plants beetles will immediately fall to the ground and run. Adults begin laying eggs in late spring or early summer and continue through most of the season. A female can lay one to two hundred eggs just beneath the soil surface and eggs hatch within a couple of weeks.

If you look up blister beetles most of the literature deals with the beetles as a threat to horses and livestock. The beetles secrete and contain within them a blistering agent called cantharidin. Cantharidin is toxic if ingested and it persists in beetles long after they are dead. Humans who ingest the beetle can suffer severe damage to the urinary tract and gastrointestinal lining.

Blister beetles begin feeding on the edges of leaves eventually leaving only stems. They will feed on just about any leaf that grows in a vegetable field such as tomato and other solanaceous vegetables as well leafy greens, crucifers, spinach and others.

Pyrethroids can be used to control blister beetles on most vegetable crops. Pyrethroids will reduce the damage, but there is often a 7-day pre-harvest interval (phi) with some of the chemicals depending on what the crop is. So be sure to check the label to find the correct phi for the particular product you are using on the particular crop you are using it on. It should be noted that once established, beetles are difficult to eliminate completely. Organic growers have an even more arduous task of managing them. Row covers will keep this pest as well as harlequin bugs off your plants. However, if row covers are not used then I often see diatomaceous earth (DE) recommended for beetle control. If it rains DE does not work very well and overall, I have not had much luck with it controlling the beetles. Spinosad alone or mixed with other products such as neem or kaolin clay have been found to reduce feeding damage in 24-48 hours.



G Brust, University of Maryland



D Paulk

Figure 2. Margined blister beetles (top) and striped blister beetles (bottom)

20 Tips for Greenhouse Winterization - *John W. Bartok*

As we transition into winter, energy use begins to increase and greenhouses are subject to severe weather. Reviewing the following tips while you perform an inspection of your facilities and equipment will point out where maintenance and improvements need to be made.



Maintain your greenhouse now for a trouble-free winter.

Infiltration

Air gaps are a major source of heat loss in many greenhouses. A 48-inch fan shutter with 1-inch gaps between blades can allow as much as 25,000 Btu per hour (Btu/hr) to escape. Inspect these areas as you walk your greenhouse's perimeter:

1. Glazing: Secure glazing to prevent plastic failure, repair or replace torn plastic, and adjust inflation pressure to ¼-inch static pressure. Clean and lubricate inflation blowers. Remove any shading, as light is critical during winter.
2. Foundation: Seal cracks in the foundation and baseboards with foam caulk or insulation board. Weatherstrip around personnel and vehicle doors with rubber or foam.
3. Gutters: Remove leaves, twigs and trash in rain gutters and downspouts. Drainage swales should be clear so water can drain away from the foundation. Space between houses should be obstruction-free for snow storage or snow removal purposes.

Structural Integrity

Snow and wind can place significant loads on the greenhouse. Inspect inside the greenhouse for:

4. Loose truss and frame connectors: Tighten bolts, cross connectors and fasteners.
5. Diagonal frame bracing: Check to see that cables are tight and rigid braces are secure.
6. Hoop houses: Have 2-by-4 posts available to be placed under the ridge if heavy snow is predicted.

7. Energy screens: Adjust cables and check for tight end- and side-screen closure to prevent chimney effect heat loss.

Yearly Furnace and Boiler Service

Servicing your boiler is key to efficient and trouble-free operation, and maintenance can be paid for with a 2% increase in efficiency.

8. Clean radiators, pipes, ducts and heat exchangers for increased heat output.
9. Calibrate your thermostat/controller accuracy against a digital thermometer.
10. Chimney and flue pipes should extend 2 feet above the roof ridge for better draft.
11. Enclose outdoor fuel tanks for a warmer fuel temperature and greater vaporization of propane in the tank or fuel oil in the firebox.

Fans and Vents

12. To save energy and reduce cold air drafts on plants, close fans and vents not needed for winter cooling.
13. Drain and close the evaporative cooling system.
14. Check fan belts for wear, tightness and alignment.
15. Horizontal Air Flow (HAF) fans should be cleaned and serviced to increase air flow by up to 25%.

Water Systems

16. Water systems need periodic service. Drain hot and cold water tanks to remove sediment and reset water pressure. Clean filters and screens.
17. Check hot water tank temperature. For most uses, 120° F is adequate. Insulate pipes with ½-inch foam insulation, at minimum, to retain heat and reduce condensation.
18. Eliminate water leaks. 60 drops/minute wastes 113 gallons/month.

Backup Power

Backup power is a must for winter operation. Prepare by:

19. Operating the standby generator monthly. Keep extra fuel on hand.
20. Check and operate alarm system weekly.

The author is an agricultural engineer and an emeritus Extension professor at the University of Connecticut. He is an author, consultant and certified technical service provider doing greenhouse energy audits for USDA grant programs in New England.

Agronomic Crops

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

Soybean

The primary pest that is active in numerous fields right now is corn earworm. All double crop soybean fields should be scouted. Fields at greatest risk are those that were or are drought stressed and with open canopies, but this is not a guarantee. We have a late-planted field at Carvel planted on 30" centers with low earworm activity and a field planted earlier on 15" centers and with a better canopy that is over threshold. Vial testing indicates that a significant number of moths are somewhat resistant to pyrethroids. Exactly how this translates to field efficacy is less well understood, but states farther south have seen very inconsistent and less adequate field efficacy using pyrethroids alone. Non-pyrethroid options include Besiege, Prevathon, Intrepid, Intrepid Edge, Radiant, Blackhawk, and Steward. Use NCSU's earworm threshold calculator to help decision making: <https://www.ces.ncsu.edu/wp-content/uploads/2017/08/CEW-calculator-v0.006.html>. Another pest to keep a wary eye out for heading into September is soybean looper. Low numbers of loopers have been observed in soybean fields in Delaware. This critter starts defoliating from the middle of the canopy and working up. While scouting for earworms and stink bugs, take a moment to pull back the canopy to assess the middles.

Sorghum

Heading sorghum to milk stage sorghum needs to be scouted for corn earworm. Economic infestations have been reported in the region. There is a very good threshold calculator available from Texas A&M <https://agrillife.org/extensionento/sorghum->

[headworm-calculator/](#). This calculator lets you estimate control cost given your insecticide and application method of choice, grain value, and plant population. Note, large larvae are more difficult to kill and some products may not work as well on them. Other worms present include fall armyworm (difficult to kill with pyrethroids), yellow striped armyworm and true armyworm (easiest to control).

Scouting for Stalk Rot in Corn - Alyssa Koehler, Extension Field Crops Pathologist;
akoehler@udel.edu

We are entering that time of year to begin scouting for stalk rots in corn. Stalk rot signs and symptoms do not appear until later in the season. After pollination, the ear becomes the major sink of sugars produced by the plant. If a stress event occurs, plants will divert or remobilize sugars from the stalk and roots to meet the needs of the developing ear. Often the pathogens that cause stalk rots are opportunistic and take advantage of plants that have been weakened by potential stress events (drought, flooding, hail, insect damage, foliar disease damage). It is also possible to have multiple stalk rot organisms in the same plant.

Yield losses occur when stalks become brittle and lodge close to harvest. Stalk rots can also result in premature plant senescence and reduced grain fill. When plants are a few weeks from physiological maturity (kernel black layer), stalk rots can be scouted by walking the field in a W pattern and randomly checking stalks with either the pinch or push test. (Aim to check 10-20 plants for every 10-20 acres). For the pinch test, pinch the stalk between the lowest two internodes to see if it can withstand the pressure, if the stalk collapses, it fails. To complete a push test, push the stalk 30 degrees from vertical (around 8 inches) and see how many spring back to upright or lodge. In cases where more than 10% of plants are lodging, you may want to consider harvesting at higher moisture and drying grain after harvest to avoid yield loss due to lodging.

Since stalk rots are linked to stress, the best management strategies are to reduce stress by

planting optimal stand populations, irrigating when possible, managing insect pests and foliar diseases, and using a balanced nutritional program. Planting hybrids with some level of foliar disease resistance can also help to reduce plant stress and encourage strong stalk development.

Growing Degree Days through August 20th - Jarrod O. Miller, Extension Agronomist, jarrod@udel.edu

We have observed a few ears of corn at black layer, while fields planted in late April have kernels with moisture contents around 30%. As of this week we have even observed a few fields across the state being harvested. Blacklayer needs around 2700 growing degree days, which most corn planted mid to late April has passed in Sussex County, and about to reach in New Castle County (Table 1). Most fields after that are probably a week or less behind with the heat we have seen.

Table 1: Accumulated growing degree-days based on planting dates through August 20th

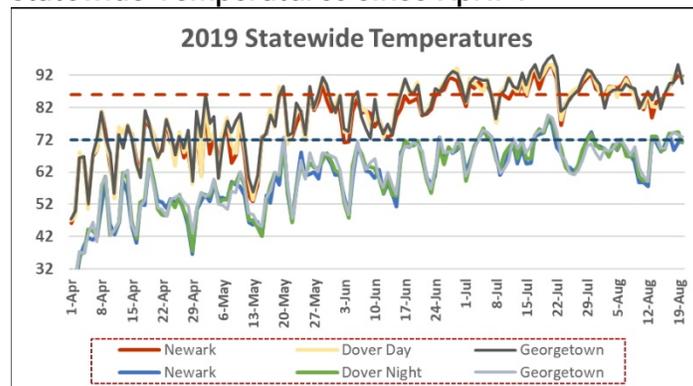
If you planted ↓	Sussex	Kent	New Castle
14-Apr	2930	2866	2769
21-Apr	2839	2773	2683
28-Apr	2758	2698	2602
5-May	2657	2617	2531
12-May	2557	2519	2440
19-May	2486	2454	2380
26-May	2347	2318	2246

R1 = 1400 GDD, R5 (Dent) = 2190-2450, R6 (Blacklayer) = 2700

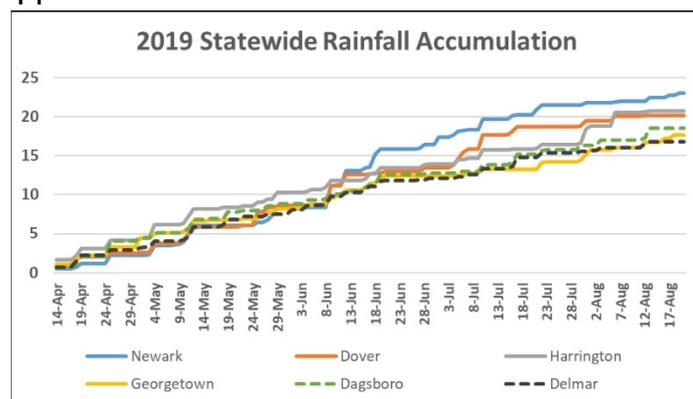
While it has been cooler than July, day time temperatures have cycled between the upper 80s and low 90s, which may have caused a few grain fill issues in dryland fields. The steady rainfall observed north of Dover in July has tapered off, leading to some droughty dryland

corn and soybean fields. Still, the region north of Harrington is still leading the state in total rainfall, as many storms continue to pass through the center or just south of Delaware this month.

Statewide Temperatures Since April 1st



Statewide Rainfall Accumulation Since April 14th



Considering Cover Crops in Grain Crop Production - Jamie Taraila, Graduate Research Assistant, Agronomy; jtaraila@udel.edu

As fall approaches, it is time to start thinking about your cover crop choices. There are three main categories of cover crops: legumes, grasses, and brassicas. Making the decision on which one is right for your operation should be based your current field conditions, management, and expected outcomes. Each category of cover crop has varying benefits that could help to increase yields, improve soil health, and decrease input costs the following planting season.

Cover Crop Comparison

When determining which cover crop is most beneficial to your farm, it is important to consider what purpose you want that crop to serve. Legumes, grasses and brassicas are common cover crops that can offer a wide variety of benefits to the soil and following crop. Depending upon your individual field's needs or conditions, you should plan you cover crops accordingly.

LEGUMES	GRASSES	BRASSICAS
Nitrogen Fixing	Holds onto Nitrogen	Suppresses Soil Pests
Increase Soil Microbes	Scavenges Nutrients	Breaks up Soil Compaction
Recycles Nutrients	Reduces Erosion	Improves Rainfall Infiltration
Increases Organic Matter	Suppresses Weeds	Increases Disease Suppressive Bacteria
Increase Soil Porosity	Conserves Soil Moisture	Reduces Erosion
Break Pest Cycles	Increases Organic Matter	Suppresses Annual Winter Weeds

Jamie Taralla

If adding nitrogen to your soil is something you seek from a cover crop, legumes or a legume mix would be worth considering. Legumes are well known for nitrogen fixation, and nearly two thirds of the nitrogen fixed by legumes can be utilized by the following crop. This increase in N can not only cut down on input costs but can also lead to an increase in soil microbes, which help break down the carbon-rich fodder left over from last year. Legumes are also a viable option for a cover crop due to their ability to increase soil organic matter, recycle nutrients, and break-up weed and disease presence after grass-type crops.

Grasses also have the ability to provide additional N in your soil and other nutrients due to their scavenging abilities. Their root systems are extensive and establish rapidly, helping to decrease erosion and suppress weeds. Large amounts of biomass are produced by grasses, which ultimately helps add organic matter to the soil. However with grass cover crops it is necessary to be aware of the high C:N ratio at

maturity. Residues with high C:N ratios (>30) may tie up N instead of making it available to grain crops. To avoid this problem, terminate the grass crop before maturation or supply additional N.

If soil compaction is a prominent issue, brassicas are able to penetrate through compacted soils with their large taproots, allowing for the next crop to root deeper. Some brassicas will winterkill and decompose by the spring, which helps to aerate the soil and improve rainfall infiltration. Additionally, brassicas like mustards and oilseed radishes are attractive to pollinators and other beneficial insects.

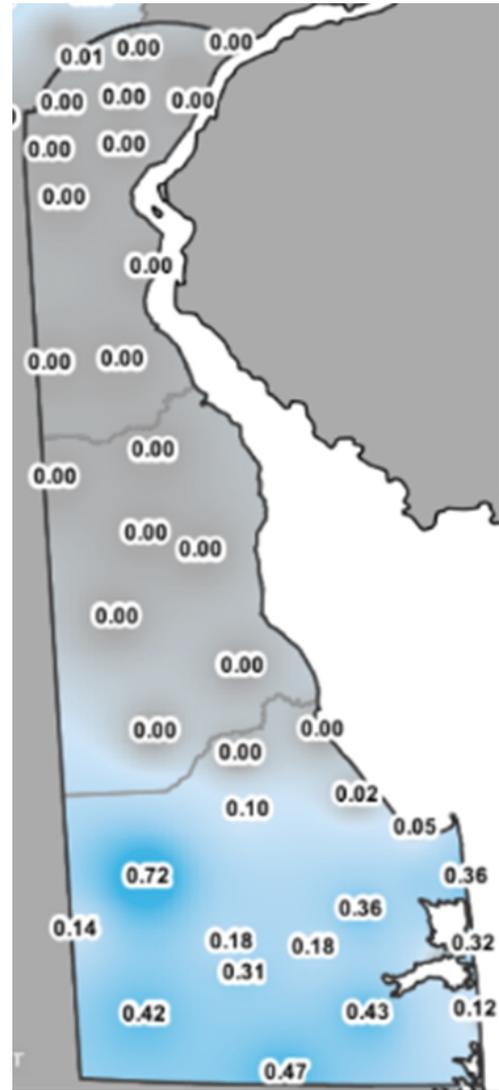
When considering a cover crop, it's important to consider all ecological and biological aspects that your farm or field could benefit from. Making the decision to plant a cover crop is a step towards increasing soil health, improving yields and decreasing input costs.

General

Irrigation Management: When to Terminate Corn Irrigation - James Adkins, Agricultural Engineer; adkins@udel.edu

While some early corn is starting to be harvested, much of the irrigated crop is still in the R5-R6 stage. Once corn has passed the dent stage and the milk/starch line progresses down the kernel, daily crop water use is roughly a third of the peak. Average daily water use after ½ milkline is typically 0.1"-0.12" per day. The tough question for most farmers is whether additional irrigation will provide a return on the fuel/electric invested. Soil moisture stress after dent can reduce kernel density and test weight and therefore reduce yield. If you have missed the scattered rains and the profile is approaching 50% of available water it is advisable to apply another ½" of irrigation to carry the crop through black layer. It will typically take 10-11 days to progress from ½ milkline to black layer and our sandy loam and loamy sand soils should hold enough moisture to carry the crop through this period **provided we start with a full profile**. Soil moisture levels below field capacity at R5.5 (1/2 milk) will need irrigation or rainfall to make it stress free until physiological maturity. At this point I am unaware of any research-based evidence that irrigation after black layer provides yield benefit.

The information presented below is an example of the soil moisture status at University of Delaware's Warrington Irrigation Research Farm. Actual field values will vary greatly depending on crop stage, soil type and local rainfall. There are many tools available that provide field by field values to assist farmers in making irrigation scheduling decisions including paid services through local crop consultants, irrigation equipment manufacturer's, Climate Corp, etc. and free tools like KanSched and the Delaware Irrigation Management System (DIMS) <http://dims.deos.udel.edu/>



24-hour rainfall Aug 21 - Aug 22

Field Corn

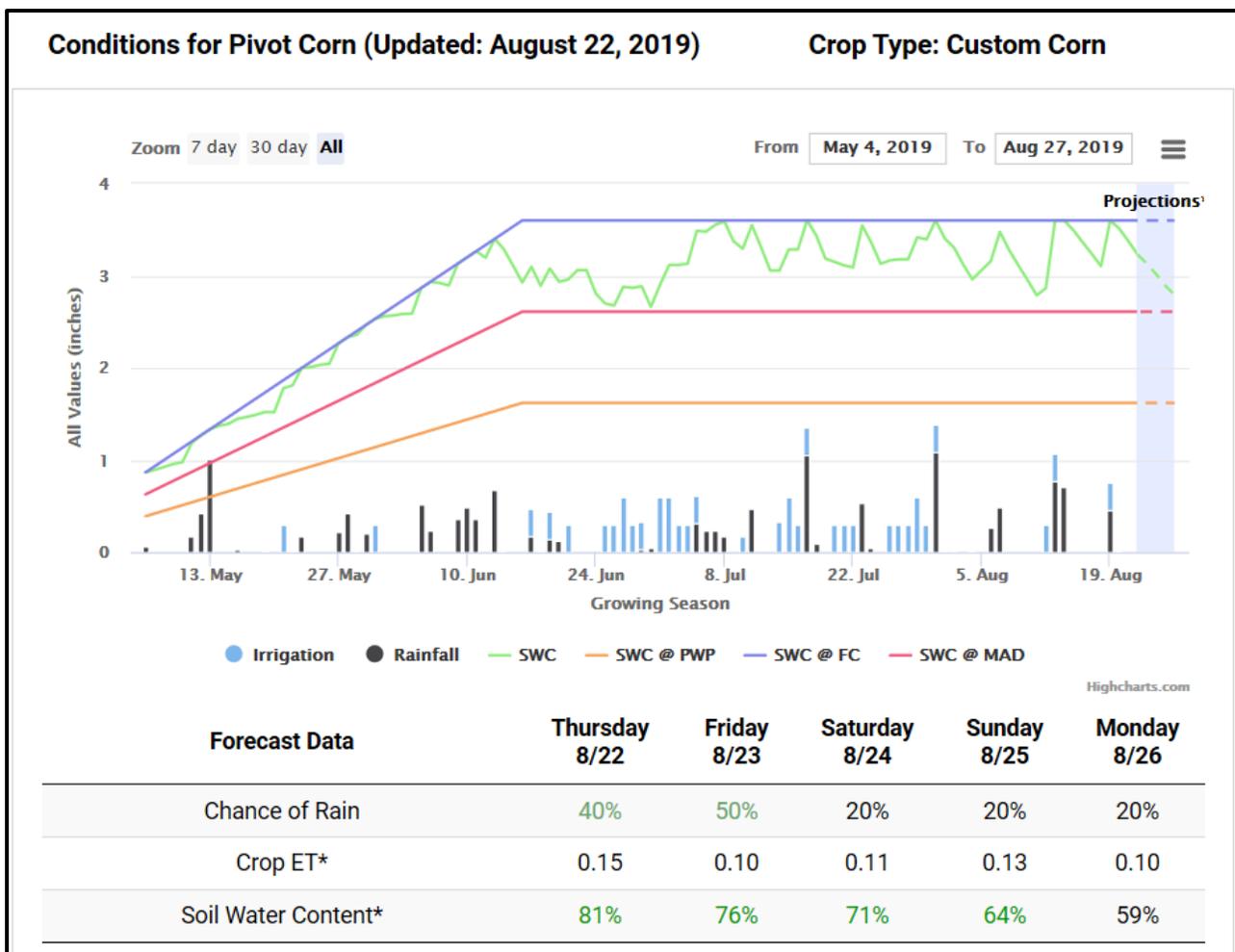
Daily corn evapotranspiration (ET) rates for April 25th planted 114 day corn at R5.5 averaged 0.12"/day for the past week. This field received 1.18" of rain in 2 events on Wednesday 8-14 (0.71") and Monday 8-19 (0.47") in addition to 0.3" of irrigation on Monday 8-14. This field is predicted to use 0.15", 0.10", 0.11", 0.13", 0.10" for Friday 8-16 - Tuesday 8-20 for an estimated average daily usage of 0.12" per day for the upcoming week. These are estimated values and are no substitute for daily ET use models and field level soil moisture data.

At this point in the growing season most corn fields are at least into the R5 stage. Research data from across the US indicates that soil moisture should be maintained through R6/Black

layer. This guide <https://www.mississippi-crops.com/2016/07/19/how-to-determine-when-you-can-terminate-corn-irrigation/> from Mississippi State gives a good explanation of irrigation strategies just keep in mind that the moisture holding capacity of our soils is less than half of the furrow irrigated scenarios they describe. It will generally take 10 days for corn

to progress from ½ milcline to black layer. With late season daily usage at 0.1"-0.12" per day sandy loam and loamy sand soils can hold 8-12 days of crop water use so any profile filling rain after R5.5 should carry the crop until black layer. We have no data to suggest that irrigation after black layer has yield or test weight benefits.

Irrigated Corn Soil Moisture Report for the UD Warrington Farm Stage R5.5 - DIMS Report



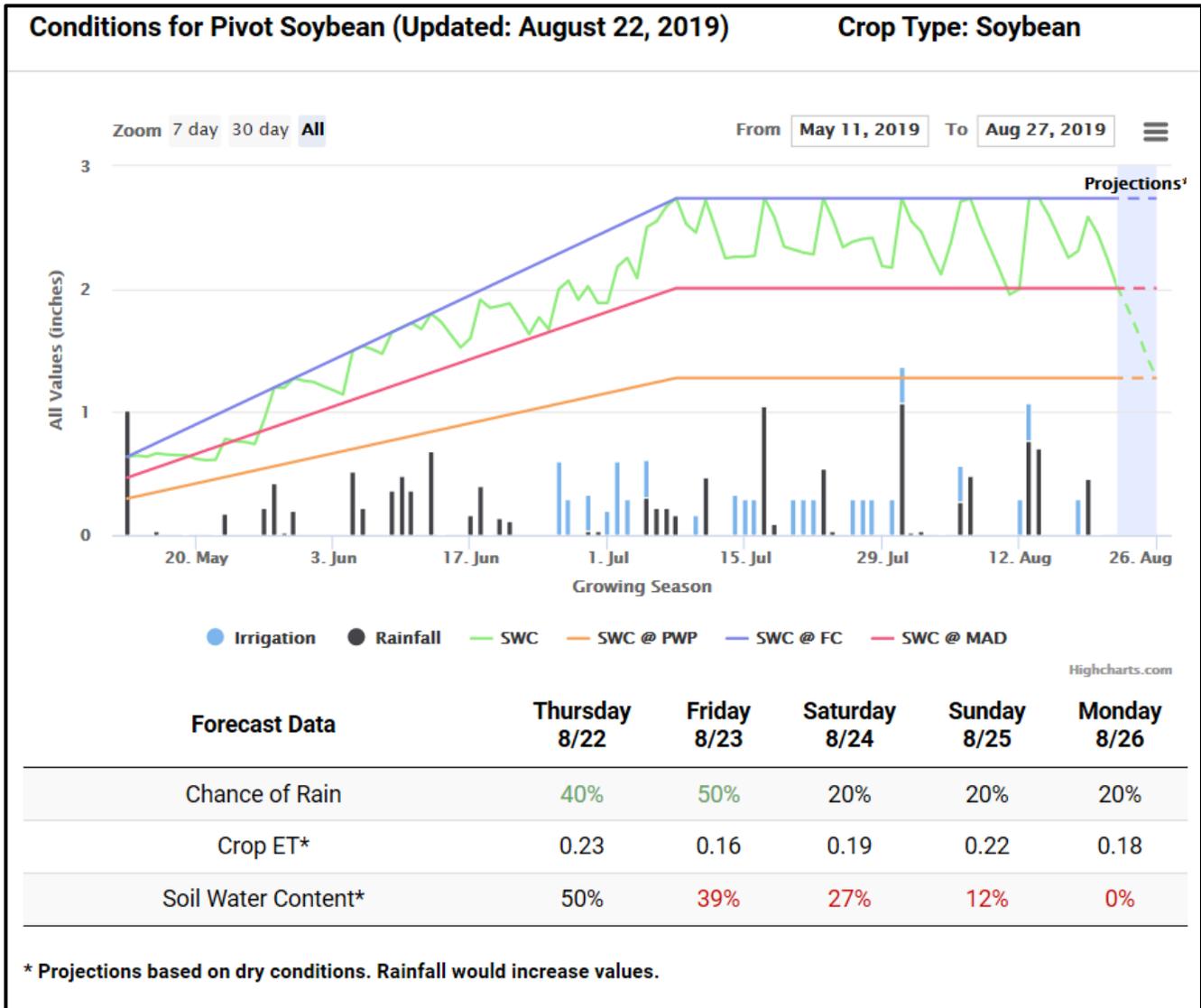
Full Season Soybeans

May 2nd planted soybeans at the UD Warrington Irrigation Research Farm are into the R5/R6 stage as of Aug 22nd. The average daily crop water use for the past week was 0.17" per day and the predicted daily ET for next week is 0.19" per day. Despite several rain events over the past week, this field required irrigation on Monday 8-18 and without further rain will need irrigating again on Thursday 8-24. We have observed high rate of water use from the shallow

profile; Remember to irrigate in small but frequent doses to avoid pushing water beyond the root zone. Multiple years of soil moisture sensor data show so use water primarily from the shallow (0-8") soil profile.

Double Crop/Late Season Soybeans

At this point double crop soybeans full canopied. Once full canopy is achieved, late soybeans will use the same amount of water as the full season beans above.



LEADelaware Accepting Applications for Class VI

LEADelaware, the state's agriculture and natural resources leadership program, is now accepting applications for its sixth fellowship class, which will run for two years beginning January 2020. Applications must be received by October 1, 2019; applicants will be notified of their selection in early December.

During the fellowship, LEADelaware participants develop leadership skills within the food, fiber, and natural resources industries. The program is

designed for individuals who seek to resolve the economic, environmental, and policy challenges facing the world's farming and food systems. LEAD programs across the United States challenge participants to engage and be a voice for the future of agriculture.

"I have worked with leadership programs in several states and can say that the completion of the fellowship makes a big difference in people's lives; both personally as well as professionally," said Delaware Deputy Secretary of Agriculture Kenny Bounds. "I encourage prospective candidates to apply and become a part of a

much larger leadership team. LEADelaware may be the best investment you make in personal development."

Participants in the past have included growers and producers, agribusiness professionals, educators, marketers, consultants, agency employees, and service providers. The program consists of ten sessions throughout Delaware and Washington, D.C., where fellows actively learn about the current issues impacting agriculture and natural resources in Delaware and around the world. Learning and interactions occur through site visits, seminars, expert panels, team activities, and workshops.

The fellowship culminates with an international study trip during the second year of the program that is selected and planned by the cohort. Previous classes have explored agriculture in Argentina, Chile, New Zealand, and Peru. Class V will travel throughout Vietnam and Cambodia in February 2020.

Applications are available online at <http://sites.udel.edu/leadelaware>, by contacting Aubrey Jerman at the Delaware Department of Agriculture via email at aubrey.jerman@delaware.gov, or requesting an application by phone at 302-698-4500.

LEADelaware is a partnership between the Delaware Department of Agriculture and University of Delaware's College of Agriculture and Natural Resources, in collaboration with agricultural businesses, organizations, and other industry partners. For more information on the program, visit <http://sites.udel.edu/leadelaware>.

Guess the Pest! Weeks 18 & 19 Answers **Green Stink Bug and Sorghum Anthracnose**

- David Owens, Extension Entomologist,
owensd@udel.edu

Congratulations to Jacob Urian for correctly identifying the stink bug species as a green stink bug. Jacob will be the proud recipient of a sweep net and entered into the end of year raffle. Green stink bugs come in two color

morphs - the most common being green. A less common morph is orange.



A Koehler, University of Delaware

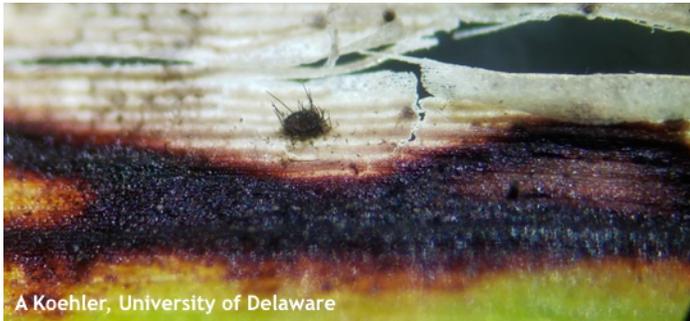
The sorghum disease in the photo is that of sorghum anthracnose.



D Owens, University of Delaware

This from Alyssa Koehler:

Leaf spots on sorghum can be difficult to distinguish because multiple issues (pathogens, environmental stress, and herbicide injury) can present similar symptoms. Zooming into sorghum lesions can help with diagnosis. Inside of this lesion we are able to see pin cushion-like structures of *Colletotrichum* that causes leaf Anthracnose of Sorghum. More information on this disease is located in the article titled [Diseases in Sorghum](#) in last week's issue of [WCU 27:21](#).



A Koehler, University of Delaware

Sorghum Anthracnose lesion magnified to view fungal structures

Guess the Pest! Week 20 - David Owens, Extension Entomologist, owensd@udel.edu

Test your pest management knowledge by clicking on the GUESS THE PEST logo and submitting your best guess. For the 2019 season, we will have an "end of season" raffle for a \$100.00 gift card. Each week, one lucky winner will also be selected for a prize and have their name entered not once but five times into the end of season raffle. A lucky winner will also receive a heavy duty sweep net.

While scouting weedy vegetables, including some solanaceous vegetables, and sweeping weedy soybean fields, this worm was encountered in the sweep net. Who is it? (Hint: they are not earworms, no orange heads, small earworms tend to have a bumpy orange-ish appearance).



P Coffey, University of Maryland

To submit your answer(s), please go to:
https://docs.google.com/forms/d/e/1FAIpQLSfU-PYLZnTRsol46hXmgqj8fvt5f8-JI0eEUHb3QJaNDLG_4kg/viewform



Announcements

Upcoming MidAtlantic Women in Ag Events

Fall Farm Tour - September 4

Laurel Farmers Auction Market ▪ Covered Bridge Inn
Historic Farmhouse and Wedding Venue ▪ Hopkins
Farm Creamery ▪ Dogfish Head Brewery
<https://www.extension.umd.edu/womeninag/farm-tours-0>

Wednesday Webinars

<https://www.extension.umd.edu/womeninag/webinars>

Women in Ag Conference – save the dates Feb 12 & 13, 2020

<https://www.extension.umd.edu/womeninag/annual-conference/2020-conference>

Cut Flowers 2: Advanced Annuals, Post-Harvest Handling & Season Extension

Saturday, September 28, 2019 1:00–4:00 p.m.

Masterpiece Flower Farm

7945 Old Ocean City Road, Whaleyville, MD 21872

Join us at Masterpiece Flower Farm and learn how to grow advanced annuals such as Dahlias, Ranunculus, and Lisianthus. Special focus will be given to post-harvest handling practices. We will also discuss tips for season extension. All experience levels are welcome. (Rain Date: September 29th, same time, same place.)

This workshop will be led by farmer/owner Crystal Giesey, who is deeply committed to growing flowers sustainably and organically. Thanks to Crystal and to the organizers Future Harvest CASA and the University of Delaware.

<https://www.eventbrite.com/e/cut-flowers-2-advanced-annuals-post-harvest-handling-season-extension-tickets-64194508503>

Small Ruminant Field Day: Nutrition for Productive and Efficient Sheep and Goat Farms

Saturday, September 14, 2019

8:45 a.m.-3:00 p.m.

DSU's Hickory Hill Farm

2065 Seven Hickories Rd, Dover, DE 19904

TOPICS

- Basic nutrition for raising production sheep and goats
- Pregnancy and kidding nutrition
- Raising animals on pasture

HANDS ON DEMONSTRATIONS

- Pearson Square
- Grinding and Mixing Feed Ration
- Body Condition Scoring
- Evaluating Hay

KEY PRESENTERS

Susan Schoenian

Sheep and Goat Specialist, University of Maryland Extension

Amanda Grev

Extension Specialist, Pasture Management for Livestock Operation, University of Maryland Extension

Cost is \$15 per person! Lunch is included.

Last day to register is September 7, 2019. Register online at: <https://www.eventbrite.com/e/small-ruminant-field-day-tickets-68734886897>

For more information, to register, or for assistance due to disabilities contact:

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Value Added Dairy Products Interest and Needs Assessment Survey

The UDairy Creamery & Cooperative Extension are asking for participation in a survey regarding Value-Added Dairy Products. The Creamery will be offering free ice cream to 10 random participants that fill out the survey.

https://delaware.ca1.qualtrics.com/jfe/form/SV_1zhjmcOg2E1vc0d

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of August 15 to August 21, 2019

Readings Taken from Midnight to Midnight

Rainfall:

0.46 inch: August 17

0.57 inch: August 19

0.02 inch: August 21

Air Temperature:

Highs ranged from 95°F on August 19 to 82°F on August 15.

Lows ranged from 74°F on August 18 and August 19 and 69°F on August 16.

Soil Temperature:

80.9°F average

Additional Delaware weather data is available at

<http://www.deos.udel.edu/>

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

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