WEEKLY CROP UPDATE
UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

Volume 26, Issue 20 **August 10, 2018**

Vegetable Crops

Sweet Corn Insect Update – *Bill Cissel, Extension Agent – Integrated Pest Management*; bcissel@udel.edu and *David Owens, Extension Entomologist,* owensd@udel.edu and

A whorl-stage sweet corn field on station had an economic infestation of fall armyworms, whorl thresholds are 15%. Be wary of fall armyworm in tassel-push corn, worms dislodged by the emerging tassel may go to the developing ear. Pyrethroids will not give complete worm control, scout fields soon after treatment. Other alternative mode of actions that are softer on beneficials include diamides (Coragen) methoxyfenozide (Intrepid), indoxacarb (Avaunt) and spinetoram (Radiant). Be sure to read the labels for use restrictions (indoxacarb cannot be used after tassel-push) and restrictions on the number of applications. A commonly used earworm product is Besiege which has chlorantraniliprole (Coragen) in it; earlier use of chlorantraniliprole may limit later use.

Corn earworm populations are higher than last week. Drier evening weather favors moth flight, and worms that developed in field corn are starting to emerge as adults. I expect moth flight activity to continue increasing state-wide until early-September. You may notice some trap locations that had been catching a lot of moths are now catching fewer; in some locations traps were adjacent to sweet corn that has since been harvested. However, other traps have been catching many more moths than they had been, especially in the Monday Laurel data. Blacklight trap captures are also increasing. Focus more on the state-wide trends. Monday trap capture can be found at (http://agdev.anr.udel.edu/trap/trap.php), and Monday trap captures were much higher from nearly all sites. As a reminder, what is reported on the website is on a per night basis, the table below is cumulative over Monday, Tuesday, and Wednesday night.

Trap Location	BLT – CEW	Pheromone CEW
	3 nights total catch	
Dover	0	7
Harrington	1	4
Milford	5	11
Rising Sun	7	5
Wyoming	7	25
Bridgeville	2	23
Concord	4	20
Georgetown	2	14
Greenwood	6	---
Laurel	0	78
Seaford	1	21

Fruit Crops

When to Plant Plasticulture Strawberries – *Gordon Johnson, Extension Vegetable & Fruit Specialist;* gcjohn@udel.edu

Chandler has been our main plasticulture strawberry and has shown consistently high yields. For most of Delaware, the recommendation has been to plant Chandler the second week in September. However, Chandler

is more sensitive to fall and winter temperatures than other varieties and in warmer conditions Chandler will put on too much growth, leading to small berries the following spring; therefore, knowing when to plant is difficult. If you could accurately predict fall and winter temperatures, you could adjust planting dates, but, of course, this is not possible.

One strategy has been to make multiple plantings of Chandler one week apart starting the second week in September. This will insure that a part of the crop will come out of winter with the proper number of crowns (not too many, not too little). Unfortunately, this means that part of the crop will be low yield and part will have small berries.

Another strategy is to switch to varieties that are less susceptible to putting on too much growth. This is where the variety Camarosa may have a fit; it is less temperature sensitive than Chandler in the fall and is not prone to putting on excessive growth. Camarosa has not performed as well on Delmarva compared to North Carolina.

Sweet Charlie, the early berry that also can put on a second late crop, is normally planted 7-10 days ahead of Chandler. It is not an option to replace Chandler. For other varieties being tried, we still do not have enough research in our region to know if they can be replacements for Chandler. Flavorfest has performed well but does not produce over as long of a season as Chandler.

Another strawberry that should be considered by growers is Albion, a day-neutral variety. It too is not sensitive to when it is planted in the fall. While much less productive in the main Chandler season, it has some unique properties that make it valuable to growers. First, it will give some early production, ahead of Chandler. Second, even though production is lower, it produces evenly over an extended period from April through early July. In general, it will give 5-6 weeks more production than Chandler. It is a large, firm berry, that, while not as sweet early in the season, has good quality in May and June. Research at Cornell and Penn State has shown that Albion needs much higher levels of nitrogen than the other common varieties and when fertilized properly will give higher yields over an extended period.

Agronomic Crops

Soybean Insect Scouting Update – *David Owens, Extension Entomologist,* owensd@udel.edu and *Bill Cissel, Extension Agent – Integrated Pest Management*; bcissel@udel.edu

Continue scouting for defoliators and for pod feeding insects. Primary defoliators are green cloverworm, bean leaf beetle, and Japanese beetles. A few more aphids have been found in fields throughout the state, but only isolated colonies. As a reminder, defoliation the threshold in reproductive stage soybean is 15%, and for aphids the threshold is 250 aphids per plant. Stink bugs are generally present in low numbers in R-stage beans, thresholds are 5 bugs per 25 sweep sample. Take multiple samples throughout the field because stink bugs aggregate. A small number of brown marmorated stink bugs have been found so far, this is an edge species that usually does not move into field interiors; check near woodlines, especially those that have tree of heaven. The high humidity has favored pathogens of spider mites. A few hotspots we have visited in the last week have had alarming visual symptoms of mite defoliation, but close inspection revealed that all the mites were dead. Recent humid weather favors fungal pathogens and in some fields, predatory mites have moved in. Dead spider mites will look brown and fuzzy. Predatory mites will be a creamy white to pale orange color, pear shaped, and with no spots or markings. As a heads-up, soybean looper is active in South Carolina. It usually appears in our area near the end of August.

Growing Degree Days (GDD) and Rainfall Through August 7th - *Jarrod O. Miller, Extension Agronomist,* jarrod@udel.edu

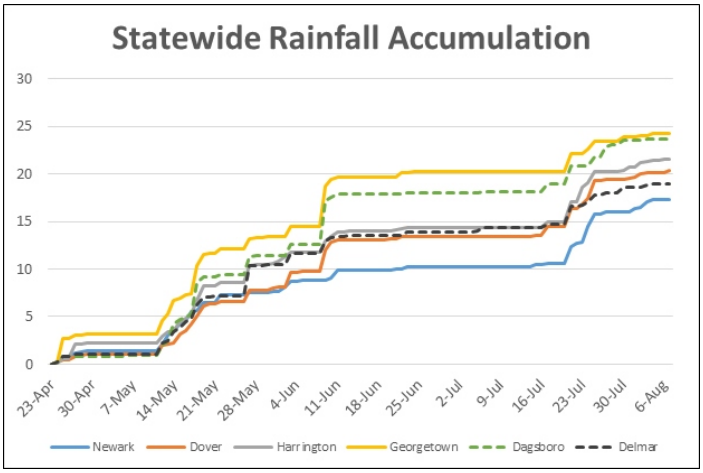
Later planted fields (mid-June) should be undergoing pollination, but temperatures this week are in the low 90s, possibly affecting pollination. Most fields planted in late May were pollinating during ideal conditions, although

weather and soil moisture could certainly vary across the state. If you have good records of when you have planted, take a look in a week or two and check for tip-back or aborted kernels along the ear. Fields planted in early April may be in blacklayer within the next week to ten days, if we keep getting about 30 growing degrees per day. Let us know if you see anything sooner. In the last week we have actually seen lighter rainfall every few days, instead of intense storms or extended drought. It is still a good idea to check soil moisture levels and irrigate if necessary.

VT: 1135 GDD – Pollination can begin
R1: 1400 GDD – Silking, pollination
R6: 2700 - Blacklayer

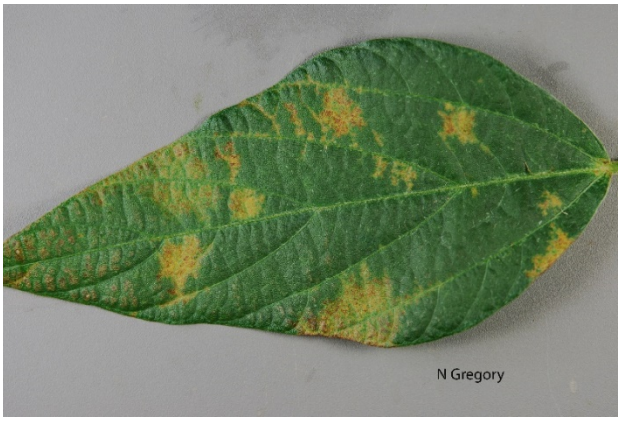
Table 1: Accumulated growing degree days based on planting dates through August 7th.

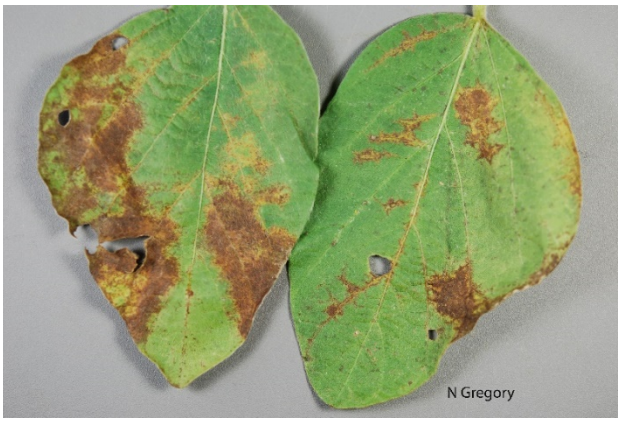
If you planted ⬇	Sussex	Kent	New Castle
22-Apr	2374	2329	2250
29-Apr	2322	2282	2216
6-May	2214	2172	2118
13-May	2110	2067	2021
20-May	1998	1960	1927
27-May	1841	1801	1779
3-Jun	1688	1649	1628
10-Jun	1565	1532	1514
17-Jun	1429	1405	1386



Soybean Vein Necrosis – *Nancy Gregory, Plant Diagnostician*; ngregory@udel.edu

Soybean vein necrosis is beginning to show up in some soybean fields in the region. Soybean vein necrosis, caused by a thrips vectored virus, begins as diffuse yellow blotchy leaf spots, often around the veins. As lesions develop, an amber/brown color shows up. Veins and tissue around the veins turn dark over time as lesions spread. Little is known regarding yield loss from this disease.





2018 University of Delaware Small Grains Variety Trial Results - *Victor Green; vmgreen@udel.edu*

The 2018 Small Grains Trial results have been posted on the web page. Links to the reports are at: http://extension.udel.edu/ag/field-crop-resources/variety-trials-corn-hybrids-small-grains-soybeans/

General

Guess the Pest! Week #19 Answer: Hole Puncher - *Bill Cissel, Extension Agent – Integrated Pest Management*; bcissel@udel.edu

Congratulations Bob Leiby for correctly identifying the damage as mechanical and for being selected to be entered into the end of season raffle for $100 not once but five times. Everyone else who guessed correctly will also have their name entered into the raffle. Click on the Guess the Pest logo to participate in this week's Guess the Pest challenge!

Guess the Pest Week #19 Answer: Hole Puncher
By David Owens, Extension Entomologist

Photo by Joe Deidesheimer, defoliator is Kevin Troyer

This week's guess the pest was a bit of a trick question, the answer is hole puncher operated by a hard-working student. Soybean canopy defoliation can be a little tricky to estimate, defoliation often appears more severe than it really is because our eyes focus on differences. We are simulating bean leaf beetle feeding injury to R-2 stage soybean by removing approximately 25% of the foliage canopy-wide.

Although this looks really severe, soybeans can compensate for this level of defoliation. Our threshold for defoliation at this soybean stage is 20% CANOPY and FIELD wide. Our most common defoliators right now feed primarily in the upper canopy. So if 25% of the upper canopy of R-stage soybean is defoliated, but only 5% of the lower canopy, total defoliation could be lower than 15% and the plants will not suffer a yield impact. If there is little to no defoliation in the lower canopy, the upper canopy can take a severe beating before canopy-wide defoliation hits 20%. We may start seeing soybean looper later in the season, this species often defoliates from the bottom up.

Vegetative stage soybean can compensate even greater defoliation. Recent work out of Mississippi indicates that 66% of the canopy of VEGETATIVE beans can be lost without a significant yield loss. In the Mississippi study they also defoliated beans during vegetative growth, at R3, and constantly during the season to simulate the impact of multiple sub-threshold 'dingers', and found that a constant 17% defoliation did not significantly reduce yields.

Two other important factors that reduce soybean's compensatory ability are drought and planting date. Late planted beans have less time to recover from severe defoliation and may (but

not always) loose yield. Drought stress may also reduce this compensatory ability. The Mississippi defoliation experiments involved a small army of students around the clock picking leaves off of over 100 10-ft plots.

Guess the Pest! Week #20 – *Bill Cissel, Extension Agent – Integrated Pest Management*; bcissel@udel.edu

Test your pest management knowledge by clicking on the GUESS THE PEST logo and submitting your best guess. For the 2018 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.

This week, one lucky participant will also win A Farmer's Guide To Corn Diseases ($29.95 value).

You can't win if you don't play!

What is this insect?

Announcements

The Department of Agriculture is reminding Delaware farmers to make sure your irrigation systems are not spraying water onto our state highways and roads. Wet roadways reduce pavement friction that creates a hazard for motorists, especially for motorcycle riders. Check your pivots and make adjustments. You don't want to be the cause of a crash.

Carvel Research and Education Center Field Crop Tour

Thursday, August 16, 2018 3:30-5:30 p.m.
University of Delaware
Carvel Research & Education Center
16483 County Seat Hwy
Georgetown, DE 19947

Please mark your calendars to join us for the 2018 Field Crop Tour at the University of Delaware Carvel Research and Education Center on August 16th. The crop tour will take place at the Thurman Adams Jr. Agricultural Research Farm located on County Seat Highway west of Georgetown at 3:30 pm and end at 5:30 pm, culminating with a chicken dinner. Highlights of the wagon tours will include the latest research on vegetable and agronomic crops, including precision agriculture.

*Please R.S.V.P. by **Monday, August 13th** for attendance and meal planning by calling **302-856-7303.***

Sussex Master Gardeners Summer & Fall Workshops

The Master Gardeners are planning an interesting array of workshops for the summer and fall. The classes are free, unless otherwise specified, and held at the Elbert N. and Ann V. Carvel Research and Education Center, 16483 County Seat Highway, Georgetown, DE 19947.

Pre-register for workshops by contacting Tammy Schirmer at (302) 856-2585, ext. 544 or by email at tammys@udel.edu. You can also register online at http://extension.udel.edu/lawngarden/mg/sussex-county/workshops/.

Tuesday, August 28, 1:00 p.m. Master Gardeners Karen Wilkens and Linda Peters lead a hands-on class making **Stepping Stones**. Few projects are as practical, useful and kid-friendly as handmade garden stepping-stones. They are easy and inexpensive to make. Limit 20 participants. **Fee $3.00**

Thursday, September 13, 1:00 p.m. Master Gardener Sandi Dew will teach us how to make **Draped Hypertufa**. New to hypertufa or looking for new hypertufa project? This is a new, messy and fun adventure making draped hypertufa flowerpots. **Limit 14 participants. Fee $15.00.** (please register, but receiving payment reserves your spot) Wear old clothes, bring an old bath towel and latex gloves.

Tuesday, September 25, 1:00 p.m. Master Gardener Judy Pfister will lead a program on common **Native Plant Seed Harvesting**. Workshop will also include propagation including when to harvest, how to dry and store them. We will also discuss testing seeds for viability before planting. Weather permitting, we will go into the demo garden to identify seed heads of fall bloomers and select some seeds for harvesting back in the classroom. Please bring a pair of tweezers and a magnifying glass if you have them.

Tuesday, October 2, 6:30 p.m. Master Gardener Terry Plummer will present a workshop on **Landscaping with Native Plants**. Make your garden life easier with less watering and less fuss. Plant native trees, shrubs, and perennials for a delightful landscape. Terry will introduce you to a wide variety of native plant materials, that will draw insects and the birds that love to eat them to your garden.

Tuesday, October 16, 1:00 p.m., Woodland Trail Master Gardeners will lead the group along a trail through the woods. The trail invites attendees to enjoy the woods and learn interesting things about trees, soil, and the residents of the woods. The trail is about a 40-minute walk. Wear closed-toe shoes and long-sleeved shirts or jackets.

Tuesday, October 23, 1:00 p.m., Woodland Trail Master Gardeners will lead the group along a trail through the woods. The trail invites school-aged children to enjoy the woods and learn interesting things about trees, soil, and the residents of the woods. The trail is about a 40-minute walk. Children must wear closed-toe shoes and long-sleeved shirts or jackets.

Tuesday, October 30, 6:30 p.m. Master Garden Joe Parish will discuss **Bats**, an organic choice for insect control. Bats are not just a cute Halloween creature but should become a part of your garden planning. Why not invite some in today.

Master Gardeners are working volunteers and are supported by Delaware Cooperative Extension through the University of Delaware and Delaware State University Extension offices. Delaware Cooperative Extension's policy that no person shall be subjected to discrimination on the grounds of race, creed, color, sex, age, religion, national origin, sexual orientation, veteran or handicap status. If you have special needs that need to be accommodated, please contact the office two weeks prior to the event.

Designer Ditch Workshop

Saturday, August 25 11:00 a.m.-1:00 p.m.
Laurel Public Library
Laurel, DE

Does your ditch look like this?

Want it to look more like this?

The Nanticoke Watershed Alliance invites you to our Designer Ditch Workshop! Learn how to make your local waterways healthier and improve wildlife habitat. We'll talk about ditches, of course, and how you can participate in this brand new program, but also cover native plants and the pollinators who love them, Livable Lawns, and more! Plus, all participants will receive a free native plant to take home!

NWA will also select two ditches for demonstration projects; demonstration project locations must be in the Delaware portion of the Nanticoke River watershed (or one of its tributaries, such as Broad Creek and Deep Creek). If you're uncertain of your watershed, please see http://delawarewatersheds.org/find-your-watershed-address/.

To register please contact Volunteer and Outreach Coordinator Beth Wasden at bethwasden@nanticokeriver.org or at 443.944.1175 or register online at NanticokeRiver.org/designerditches/.

The Agriculture Horizon Conference: Can Delmarva Farmers Survive 2018 Perfect Storm?

Thursday, August 23, 2018 9:00 am–2:30 pm
University of Delaware
Carvel Research & Education Center
16483 County Seat Highway, Georgetown

2018 has been a season threatening a "perfect storm" of risks for Delmarva farmers. Weeks of flooded fields, followed by weeks of excessive heat and dry conditions causing soil to look like talcum powder, delayed planting, and crashing commodity prices have created income uncertainty for producers. Combine these natural risks with questions about tariffs affecting global commodity trade and how a new Farm Bill may shape up (or not) and you have a situation with more questions than answers.

An **Agriculture Horizon Conference** is being held on August 23, 2018 at the Carvel Research & Education Center 16483 County Seat Highway Georgetown, Delaware 9:00 am – 2:30 pm. Lunch will be served. The conference will include the perspectives of Delaware Secretary of Agriculture Michael Scuse and FSA State Executive Director Sean McKeon on 2018 Farm Bill possibilities, US trade policy, and recently announced USDA plans to address falling commodity prices with a $12 billion package.

In addition, there will be updates on how crop insurance, revenue protection, and whole farm coverage can be used individually or in combination to protect farm income and address many of the risks which have become a reality in 2018. Some producer frustrations with some aspects of crop insurance will be addressed along with potentials solutions. Also discussed will be how program choices made by producers at their FSA office within the next Farm Bill may impact other risk management choices like crop insurance.

This will be a two-part program, with the first part centered on the ag community and farmers and the second focusing on Non-producer stakeholders, with a lunch in between. Registration is not required, but is encouraged to allow conference organizers to provide enough materials and meals. Please register by emailing DECropHelp@gmail.com or calling 302-831-2538.

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USDA
U.S. Department of Agriculture
Risk Management Agency

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of August 2 to August 8, 2018

Readings Taken from Midnight to Midnight

Rainfall:

0.10 inch: August 2
0.03 inch: August 3
0.14 inch: August 4
0.01 inch: August 5
0.03 inch: August 6

Air Temperature:

Highs ranged from 92°F on August 6 to 86°F on August 3.

Lows ranged from 75°F on August 2 to 69°F on August 5

Soil Temperature:

78.3°F average

Additional Delaware weather data is available at http://www.deos.udel.edu/monthly_retrieval.html and http://www.rec.udel.edu/TopLevel/Weather.htm

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