



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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Vegetable Crops

Improving Success with Early Planted Warm Season Vegetables - Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

With the recent cold, windy weather as a reminder, it is important to understand the factors that affect success with transplanting early warm season vegetables. Remember that the average date of the last killing frost is around April 25 for most of the Delaware and cold weather events can occur well into the middle of May.

Earliest plantings of watermelons, cantaloupes, summer squash, and tomatoes will begin the last week in April. First transplanting of crops such as peppers and eggplant will begin in early May. One of the characteristics that all these crops have in common is that they are warm season vegetables that are sensitive to cold temperatures, both in the root zone and above ground. There has been a tendency to risk earlier and earlier plantings as growers try to hit the early market. Over the years, many of our early plantings of summer vegetables have suffered because of early cold damage and inadequate provisions to protect plants.

For early transplanted warm season vegetables, choose the lightest ground that warms up quickly. Plant higher sections in the field first. Avoid areas that receive any shade from woods or hedgerows. Early fields should be protected from extreme wind and should not have frost

pockets. Rye windbreaks planted between each bed are desirable for early plantings because they limit heat transfer by wind. If no rye windbreaks have been planted, then consideration should be given to using row covers to protect the plants - either clear slitted or perforated low tunnels or floating row covers. Even where windbreaks have been used, row covers may be necessary for extremely early plantings.

Lay plastic mulch well ahead of time to warm soil. Black plastic mulch should have excellent soil contact because beds with poor plastic to soil contact will not heat up effectively. Firm beds and tight mulch are much more effective in warming soils. Do not lay plastic on cloddy soils. Make sure that there is good soil moisture when forming beds and laying plastic because soil water will serve as the heat reservoir during cold nights.

When producing transplants, use larger cell sizes and grow plants so that they have well developed roots in those cells for the first plantings. Large cell sizes will perform better than small cells in early plantings.

Careful attention needs to be paid to hardening off warm season vegetable transplants that will be planted early. Gradual acclimation to colder temperatures will reduce transplant shock. Do not transplant tender, leggy plants or plants coming directly out of warm greenhouse conditions for these early plantings.

Watch extended weather forecasts and plant at the beginning of a predicted warming trend. Monitor soil temperatures in plastic beds and do

not plant if they are below 60°F. Soil temperature in beds should be measured at the beginning of the day when at the coolest. When soil temperature conditions are not favorable, wait to plant. Avoid planting in extended cloudy periods, especially if plants have come out of the greenhouse after an overcast period. These plants will not perform well. Extra caution should be taken to minimize root injury during transplanting. When transplanting, make sure that there is good root to soil contact and there are few air pockets around roots.

In years with cold, cloudy, windy weather after transplanting, we have had large losses of transplants in the field, especially seedless watermelons. It is critical to have warm soil conditions after transplanting to allow roots to grow out into the bed quickly. In cold, cloudy conditions, plants shut down physiologically, little root growth occurs, and the existing roots on the transplant do not function well. If there is any wind, plants lose more water than they can take up and they die due to desiccation. This is accelerated when the sun does come out - the first sunny day after an extended cold, cloudy period is when you will see the most wilting of weakened transplants.

If cold weather occurs after transplanting, warm season vegetables vary in their ability to tolerate adverse weather after being set out. Tomatoes will stop growth but will grow out without much damage once warm weather returns. Summer squash and cucumber transplants may be temporarily stunted but generally grow out of the condition. Watermelons will hold if they have been hardened off properly. Cantaloupes can be stunted if exposed to excessively harsh early conditions. Peppers and eggplants will not put on any root growth until temperatures are warm enough. If stunting occurs on any of these warm season vegetables, you may lose the early advantage you were seeking. In addition, remember that these vegetables are susceptible to frost damage and will be killed by a late freeze. Long-term weather records show that there still is a 33% chance of freezing weather in parts of Delmarva up to the 30 of April and a 10% chance of freezing weather up to May 10.

Current forecasts show a four-day warming trend starting May 1 (highs and lows forecasted in degrees F - May 1: 74-55, May 2: 81-61, May 3:

82-64, and May 4: 77-58 for Georgetown, Delaware). I would advise to target May 1 for early seedless watermelon planting.



Good windbreaks, tight mulch, and firm beds will lead to better success with early planted warm season vegetables.

New Technology for Reducing Transplant Shock - Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

A new tool is available for reducing transplant shock. The chemical 1-methylcyclopropene (1-MCP) which is marketed as the product LandSpring by the AgroFresh company reduces ethylene production and stress on young plants. Ethylene in the plant hormone released when plants are injured or are under stress, as is common during transplanting. Excess ethylene can cause leaf drop and wilting and can increase transplant losses. The way 1-MCP works is that it has a similar molecular structure to ethylene but without the negative effects on the plant. It binds to ethylene receptors in the plant and thus blocks ethylene from causing damage.

LandSpring is labelled on broccoli, brussel sprouts, cabbage, cantaloupe, cauliflower, cucumber, eggplant, muskmelon, bell pepper, nonbell pepper, summer squash, tomato and watermelon. According to the company “When applied to seedlings 1-5 days before transplanting, LandSpring WP helps decrease transplant shock enabling plants to more rapidly establish and grow. Observed benefits include increased crop biomass due to better root and shoot development when plants are subjected to stress in the weeks following transplantation”.

The label can be found at this site:
https://agrofresh.octochemstore.com/wp-content/uploads/2017/04/LandSpring_epa-approved-seedling-label.pdf

More information can be found at:
<http://www.landspring.info/>

UD Insect Trapping Program to Begin April 30th - Bill Cissel, Extension Agent - Integrated Pest Management; bcissel@udel.edu and David Owens, Extension Entomologist, owensd@udel.edu

We will begin trapping on April 30th for the 2018 season. Traps will be checked twice a week and the trap counts will be updated on Tuesday and Friday mornings.

To get the current trap catch and for decision making information, go to our webpage:

<http://extension.udel.edu/ag/insect-management/insect-trapping-program/>

the *IPM - Latest Trap Counts* page (<http://agdev.anr.udel.edu/trap/trap.php>), click on the link “Historical Interactive Graphs” at the top of the page.

IPM - Latest Trap Counts

Choose a new Date: 2017-08-02 [Submit]
 Average Number of Moths per Night for:

≤ July 31, 2017 - August 2, 2017 ≥

Trap Location	Corn Earworm Black Light	Corn Earworm Pheromone Trap	European Corn Borer Black Light
Kent County			
Dover	0.33	26.00	0.00
Harrington	0.66	5.00	0.00
Little Creek	--	--	--
Milford	0.33	17.33	0.00
Rising Sun	0.33	52.00	0.00
Wyoming	0.00	4.66	0.00
Sussex County			
Bridgeville	0.66	10.66	0.00
Concord	1.66	14.33	0.00
Georgetown	1.33	12.33	0.00
Greenwood	0.33	--	0.00
Laurel	--	0.00	--
Seaford	2.33	6.33	0.00
Harbeson	2.70	1.50	0.00
Lewes	0.67	3.50	0.00
Trap Pond	2.00	2.66	1.00

Previous Years: 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017

Excel data for current year
 Reports for: 2017 show

This brings you to the *Delaware Historical Trap Catches* page where you can select a trapping location and insect/trapping method.

Delaware Historical Trap Catches

CEW BLT	CEW Pheromone Trap	ECB BLT
Wyoming	Wyoming	Wyoming
Laurel	Laurel	Laurel
Harrington	Harrington	Harrington
Rising Sun	Rising Sun	Rising Sun
Dover	Dover	Dover
Milford	Milford	Milford
Greenwood	Greenwood	Greenwood
Seaford	Seaford	Seaford
Bridgeville	Bridgeville	Bridgeville
Georgetown	Georgetown	Georgetown
Little Creek	Little Creek	Little Creek
Concord	Concord	Concord

For example, clicking on CEW BLT (corn earworm, Black Light Trap) for Georgetown, you will get a line graph with historical trap counts from 1998-current trap catch.

INSECT TRAPPING PROGRAM

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WordPress.org

The University of Delaware's Extension IPM Program provides in-season insect trap information to help producers, agribusiness and consultants make informed insect management decision in field and vegetable crops.

Traps are monitored twice a week and current trap catches are posted on this website. The main pests monitored include corn earworms (CEW), European corn borers (ECB), and true armyworm (TAW), and stink bugs.

Attention: The first trap catch for the 2018 season will be on April 30th.

Links for decision making information

- Action Thresholds for Silk Stage Sweet Corn
- ECB and CEW moth catch thresholds for processing snap beans

Local

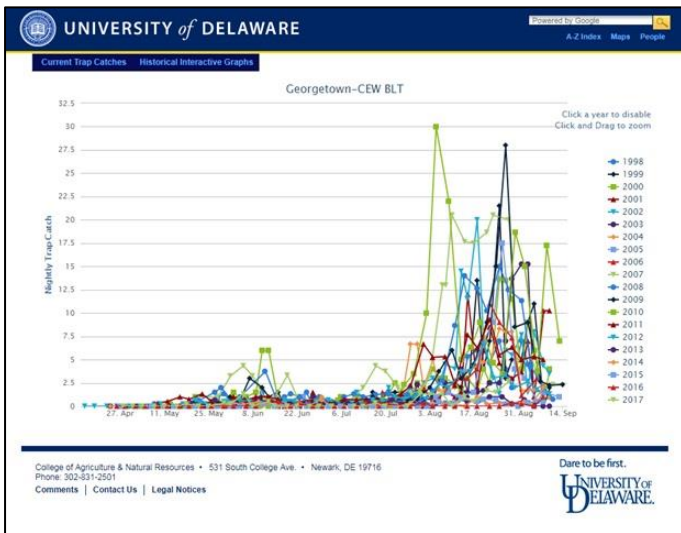
- UD IPM Black Light and Pheromone Trap Counts (European Corn Borer & Corn Earworm)
- True Armyworm Black Light Trap Counts
- Stink Bug Black Light Trap Counts

Regional

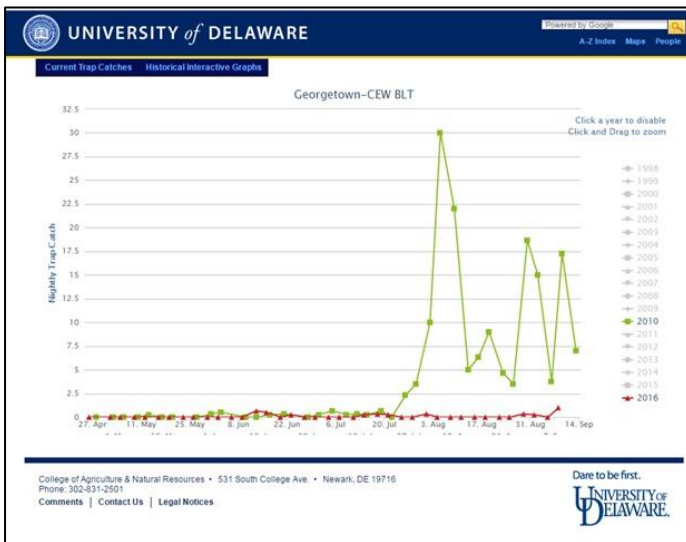
- Rutgers (New Jersey) ECB and CEW Moth Trap Catch Maps
- Penn State Pest Watch Sweet Corn Pest Maps (Penn State Univ. site - data from MD, ME, DE, NJ, NH, NY, PA, VA, VT for ECB, CEW and FAW)

On this page, you will find links with current trap catches and decision making information including action thresholds for silking stage sweet corn and processing snap beans.

If you are not familiar with our trap catch webpage, I want to highlight some of the features that will allow you to compare current trap catch results with historical data. Once on



If you click on each year on the right side of the graph, you can disable years to compare the current year to one that may have been a break out year. Such as comparing 2010 as a year with high CEW pressure to 2016. You can also click and drag to zoom to focus on a particular trapping period.



Agronomic Crops

Time to Scout Alfalfa for Alfalfa Weevil - Bill Cissel, Extension Agent - Integrated Pest Management; bcissel@udel.edu and David Owens, Extension Entomologist, owensd@udel.edu

Spring has sprung! Well, kind of, and that means it's time to scout for alfalfa weevils in alfalfa. If

you haven't been scouting your alfalfa for alfalfa weevil, now is the time!



B Cissel
Alfalfa Weevil Damage

To sample alfalfa for alfalfa weevils, examine 10 random stems per field on a weekly basis until first cutting, noting the presence of alfalfa weevil larvae and feeding injury. If damage or larvae are found, a full stem sampling should be conducted by randomly collecting 30 stems throughout the field. Once the stems have been collected, separate them into 3-4 bundles and beat them against the inside of a bucket to dislodge larvae from the stems. Count and record the total number of larvae found from the 30 stems. Measure the length of the stems to determine the average stem height and note the percentage of plants in the bud or flower stage.

Here is a short Youtube video demonstrating how to do a "full stem" sampling:
<https://youtu.be/M983UMsGk0Q>

For more information refer to our Extension Fact Sheet for thresholds and control decisions:
<http://extension.udel.edu/factsheets/alfalfa-weevil-control-in-alfalfa-2/>

If alfalfa is in the full-bud stage and economic levels are present, early harvest is an option if harvest is possible within 3 days and populations are increasing. If cutting early versus spraying, be sure to check fields within one week for damage to re-growth. Re-growth can be significantly damaged from alfalfa weevils and in some cases; a stubble treatment may be needed if you find 2 or more weevils per stem. If cutting early is not an option, please refer to our Insect Control in Alfalfa Recommendations for chemical control options. Be sure to pay special attention to the pre-harvest intervals. Please also note

that the guide is for pure stand alfalfa, greater numbers of larvae would be needed to cause economic injury in mixed stands.

The recommendation guide can be found at: <https://cdn.extension.udel.edu/wp-content/uploads/2012/05/25073121/Insect-Control-in-Alfalfa-2018.pdf>

Insecticide Recommendations Updated for the 2018 Growing Season

- *Bill Cissel, Extension Agent - Integrated Pest Management; bcissel@udel.edu and David Owens, Extension Entomologist, owensd@udel.edu*

Below are links to our Insecticide Recommendations updated for the 2018 season.

Alfalfa Insecticide Recommendations: <https://cdn.extension.udel.edu/wp-content/uploads/2012/05/25073121/Insect-Control-in-Alfalfa-2018.pdf>

Field Corn Insecticide Recommendations: <https://cdn.extension.udel.edu/wp-content/uploads/2012/05/25073353/Insect-Management-In-Field-Corn-2018.pdf>

Soybean Insecticide Recommendations: <https://cdn.extension.udel.edu/wp-content/uploads/2012/05/25073537/Insect-Control-in-Soybeans-2018.pdf>

Small Grain Insecticide Recommendations: <https://cdn.extension.udel.edu/wp-content/uploads/2012/05/25073712/Insect-Control-in-Small-Grains-2018.pdf>

The label is the law. Be sure to read the label for use rates, correct placement, days before harvest after application, and other restrictions.

Avoiding Compaction Now that Warmer Temperatures Have Arrived

- *Amy Shober, Extension Nutrient Management and Environmental Quality Specialist, ashober@udel.edu; Jarrod O. Miller, Extension Agronomist, jarrod@udel.edu; Phillip Sylvester, Kent County Extension Agent, phillip@udel.edu; Cory Whaley, Sussex County Extension Agent, whaley@udel.edu; and Richard Taylor, Retired Extension Agronomist.*

With warmer temperatures finally here, you are probably in a hurry to plant. Don't forget that the ideal planting dates for maximum corn yield are between April 20 and around May 10. Even with the cool start this spring, we are only a few days behind our ideal time frame for planting. Therefore, you should not be a rush to plant into saturated fields. Where you are tilling soil before planting either corn or soybeans, avoid tillage operations in the very wet areas of the field or in those fields that tend to stay wet longer in the growing season. Plant your better, well-drained fields first since these have a higher yield potential and can return higher profits to you. Your better, higher yielding fields are best planted during the April 20 to May 10 time frame to improve overall farm yield averages.

Rushing to plant into wet fields can cause compaction and rutting issues that can stick around for more than one season. Wheel traffic is a significant cause of soil compaction and has been correlated to both axle load and wet soils. When soils are saturated, the weight from equipment can cause compaction up to two feet deep. This kind of compaction will be hard to correct, so be sure to plan ahead and get into your well-drained fields first.



Keeping Your Small Grains Clean - Alyssa Collins, Extension Plant Pathologist (Penn State), collins@psu.edu; Phillip Sylvester, Kent County Extension Agent, phillip@udel.edu

A cool, dark spring has slowed development of grains across the region, and it shows in the progress of small grain development. However, we are getting close to heading and flowering in small grains, and forecasted temperatures may push them quickly. The environment also has been unfavorable for the development of many of the fungal diseases we usually deal with, so much of the wheat and barley in the region is pretty clean so far.

Our most pressing concern right now will be preparing to control Fusarium head blight (a.k.a. head scab). As many of you know, this is a disease of wheat and barley that can lead to the production of vomitoxin (DON) in grains. If you intend to protect your **barley** from scab be prepared to spray a triazole fungicide at heading or shortly thereafter, which we could see in the next few weeks. For **wheat**, once it begins flowering, there is about a 5 to 6-day window to apply a fungicide. The labels state the last stage of application is mid-flower and there is a 30-day to harvest restriction. Do **not** use any of the strobilurins (Aproach, Headline), or strobilurin/triazole (Quilt Xcel, Stratego YLD) combination products at flowering or later. There is evidence that they may cause an increase in mycotoxin production.

At this point in the season, the only way to reduce the scab problem is to spray. But in general, do not rely solely on fungicides, as they will provide at most a 50-60% reduction in scab severity and vomitoxin. Start with selecting resistant wheat varieties, and time sprays properly to achieve greater control.

Caramba or Prosaro are effective on scab and give control of most leaf diseases and glume blotch. They do not need to be tank mixed with another product to control these diseases. For growers planting lima beans after small grains, Proline is an option since the plant back restriction is only 30 days compared to 120 days for Caramba and Prosaro. Spray nozzles should be angled at 30° down from horizontal, toward the grain heads, using forward and backward

mounted nozzles or nozzles with a two-directional spray, such as Twinjet nozzles. We anticipate a new active ingredient will be on the market for the control of scab soon, but it will not be labeled in time for the 2018 season. If you choose to use a fungicide for these or any other diseases on wheat this year, an updated fungicide efficacy chart is included at the back of this week's issue of WCU and available as a PDF [here](#).

If you have some other diseases prior to heading, like rust or leaf blotches, the question becomes: do you spray for leaf diseases now and come back for a second pass with a head scab product? Or do you hold out and just spray once at flowering?

The answer depends on how close you are to heading, what diseases are present in your field now, and how willing you are to run through your field twice. The goal is flag leaf protection here, but lesions on lower leaves can give rise to spores that can infect higher leaves. If you've got a bunch of blotch in your canopy now, and you're at Feekes 9 or earlier, it may be worth your time to make a trip through the field with a fungicide now, as most of these products are systemic and will give you a few weeks of control. If your wheat is already heading when you discover leaf diseases, it might be more economical to wait until flowering begins so that you can apply Prosaro or Caramba for head scab, since these will also give you great control of flag leaf diseases.

Currently, most of Delaware is at a "low" risk of scab development because it has been so cool to this point. As your crop progresses toward heading, keeping an eye on the FHB Risk Assessment Tool will become critical for those farmers who are trying to make the decision to spray or not. This forecasting site, <http://www.wheatcab.psu.edu>, is an online model that helps us predict infection risk levels everywhere in the state. It works best in the Mozilla Firefox browser and updates each day around 10am. Visit it at your convenience, or sign up to have updates e-mailed or texted directly to you.

I (Alyssa) will do some guest commentary while UD searches for a great new pathologist. So, when you visit, please select "Pennsylvania" as your state so that you can see my commentary where I will also be including information for Delaware growers. You'll still be able to view your Delaware counties from there.

General

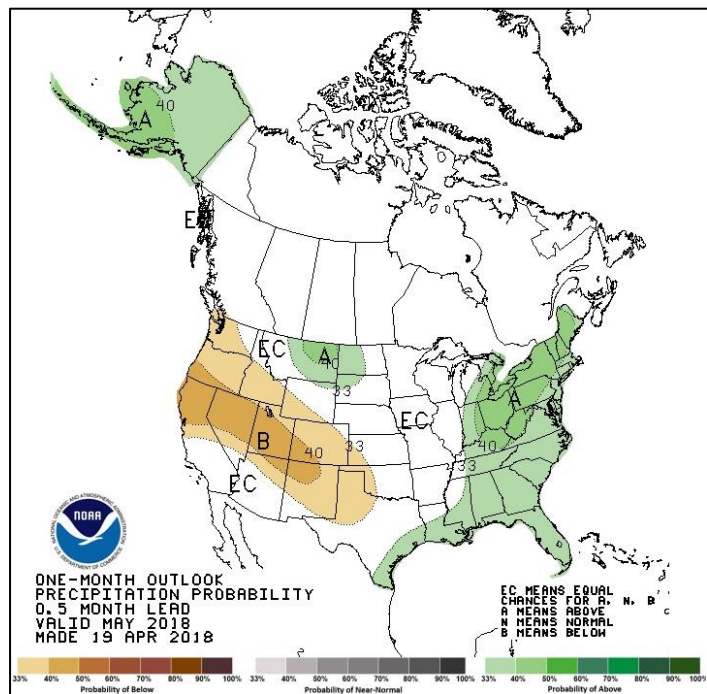
Delaware Monthly Weather Outlook - Jarrod

O. Miller, Extension Agronomist,

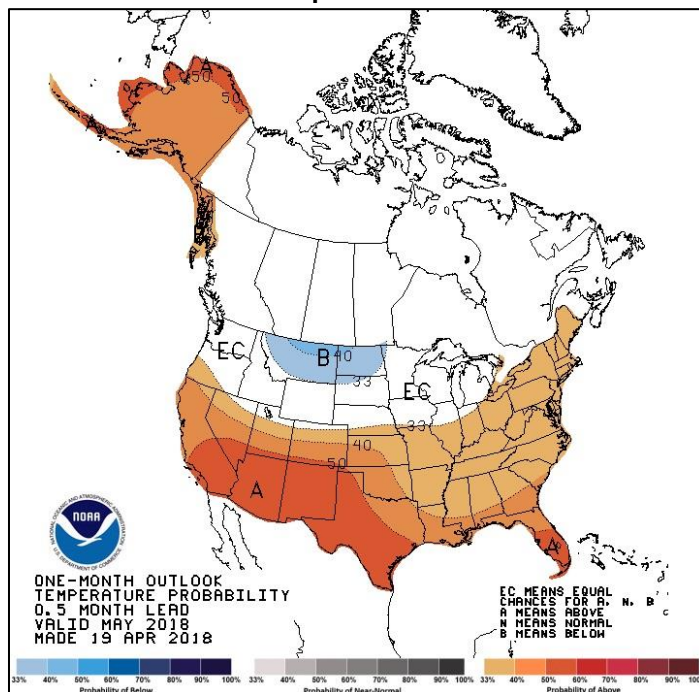
jarrod@udel.edu

Rainfall and temperatures for May are expected to be above normal for the east coast. This may be a welcome change compared to March and early April, where cooler temperatures have slowed planting and small grains growth.

NOAA One-Month Precipitation Outlook

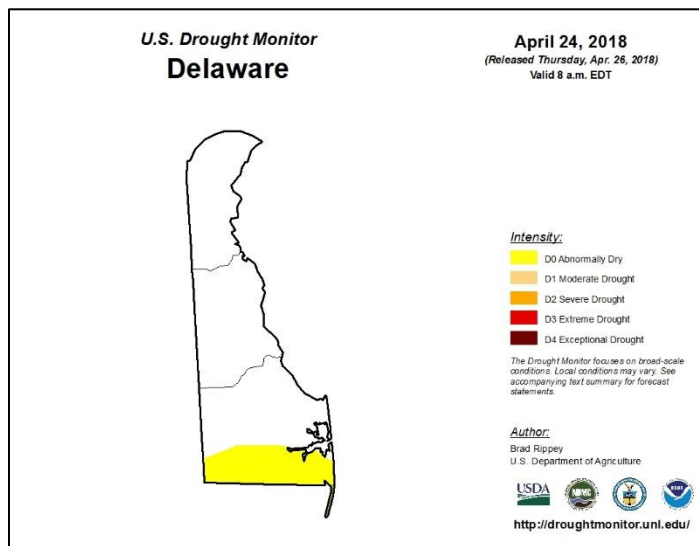


NOAA One-Month Temperature Outlook



Delaware Drought Monitor

As of April 17, some abnormally dry conditions are predicted for lower Sussex County, representing about 16% of the state. This is an improvement since January, where up to 60% of the state was experiencing droughty soils. The rain slowed planting, but may have helped recharge our soils a bit, which should help later in the season, when roots reach deeper depths.



Farmers Now Exempt from DUNS and SAM Requirements for NRCS Assistance

Effectively immediately, farmers participating in USDA Natural Resources Conservation Service (NRCS) programs will no longer need a Dun and Bradstreet Universal Number System (DUNS) number, or to register in the System for Award Management (SAM). The Consolidated Appropriations Act of 2018 (2018 Omnibus Bill) on March 23 eliminated these requirements.

According to U.S. Secretary of Agriculture Sonny Perdue, DUNS and SAM were not designed for everyday farmers trying to support their families. These changes help streamline the customer experience of farmers, which is a top priority at USDA, he said.

“This change allows our producers to focus on getting conservation on the ground—instead of the contracting process,” said Kasey Taylor, State Conservationist. “Conservation program participants will soon receive letters from their local NRCS office with more details.”

The exemption does not apply to any current or future agreements or federal contracts with eligible entities, project sponsors, vendors, partners, or other non-exempt landowners or producers.

DUNS/SAM registration is still required for:

- Partnership agreements entered through the Regional Conservation Partnership Program (RCPP).
- All agreements with eligible entities under the Farm and Ranchland Protection Program (FRPP)
- Agreements under the Agricultural Land Easement (ALE) component of Agricultural Conservation Easement Program (ACEP).
- Partnership agreements under the Wetland Reserve Enhancement Program (WREP) component of ACEP-Wetland Reserve Easements (WRE).
- Watershed operations agreements with project sponsors.

- Emergency Watershed Protection Program (EWP) agreements with project sponsors, including Recovery and Floodplain Easements.

- All cooperative, contribution, interagency, or partnership agreements of Federal contracts used by NRCS to procure goods or services.

NRCS reminds program participants that there is no longer a need to respond to any emails, phone calls or other communications from third-party vendors offering assistance for registering in SAMS or applying for a DUNS number.

For more information about [DUNS and SAM](#) or information on NRCS programs and services, producers are encouraged to contact their [local USDA service center](#). In Delaware’s Sussex County, call 302-856-3990, ext. 3; in Kent County, call 302-741-2600, ext. 3; and in New Castle County, call 302-832-3100, ext. 3. Or visit www.de.nrcs.usda.gov for more information.

Guess the Pest! Week #4 Cover Crop ID

Answers - *Bill Cissel, Extension Agent - Integrated Pest Management; bcissel@udel.edu*

Congratulations to John Swaine for correctly identifying the cover crop species 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!



Photo 1: Austrian Winter Peas



W. Cissel
Photo 2: Hairy Vetch



W. Cissel
Photo 3: Winter Rape



W. Cissel
Photo 4: Forage Radishes. This was a little misleading since we had a good winter kill. If you look carefully, you can see the divots where the radish roots once were.

If you didn't guess all the species correct or if you would like to find out about some of the research and demonstrations that are going on in Delaware, join us at one of the Cover Crop Twilight Tours this coming week.

You will have an opportunity to walk through the demonstrations planted last fall including cover crop species, cover crop mixes, and cover crop planting date comparisons. Discussions will also include issues associated with terminating cover

crops, slugs and insect issues, effects on weeds, soil health, and planting.

For more specifics visit www.DECCnetwork.com



UD Cooperative Extension presents

Cover Crop Twilight Tour



MAY 1

6PM - 7PM

UD RESEARCH AND EDUCATION CENTER

16483 COUNTY SEAT HWY

GEORGETOWN

MAY 3

6PM - 7PM

MARL PIT ROAD DEMO SITE

JUST WEST OF INTERSECTION OF MARL PIT RD AND CEDAR LANE

MIDDLETOWN

DECCNETWORK.COM

Guess the Pest! Week #5 - 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 pest?](#)



Announcements

2018 Delaware Cooperative Extension Horticulture Short Courses

[Register for the course online.](#)

Pest and Beneficial Insect Walk

\$15, 2 Pest., 1 CNP, 2 ISA credits

Wednesday, June 6, 4-6 pm

Sussex County Extension Office

16483 County Seat Highway, Georgetown

or

Wednesday, June 20, 4-6 pm

University of Delaware Botanic Gardens

531 S College Avenue, Newark, Meet at the entrance to Fischer Greenhouse.

Learn to identify insect and disease pests, as well as beneficial insects in the landscape at either the Sussex County Extension Office or the University of Delaware Botanic Gardens. **Instructors:** Nancy Gregory, Brian Kunkel, Carrie Murphy, and Tracy Wootten

Carvel Research and Education Center
16483 County Seat Hwy, Georgetown, DE

The 2018 Weed Science Field Day will be held the morning of Wednesday, June 20 at the University of Delaware Research and Education Center, Georgetown, DE. More details will be available at a later date.

Tours and Discussion of Cover Crop Demonstration Plots

Tuesday, May 1, 2018 6:00-7:00 p.m.
UD Carvel Research & Education Center
16483 County Seat Hwy, Georgetown, DE

or

Thursday, May 3, 2018 6:00-7:00 p.m.
UD Demonstration Site on Marl Pit Rd
Just west of intersection of Cedar Lane and Marl Pit Rd, Middletown DE

We are holding two twilight tours. Both on the same topics, Walk through the demonstrations of plots planted last fall:

1. Cover crop species
2. Cover crop mixes
3. Cover crop planting dates

Discussion on issues associated with terminating cover crops, slugs and insect issues, effect on weeds, soil health, and planting

0.5 credit for nutrient management and 0.5 CEU for CCA (Soil and Water category)

For more specifics visit DECCnetwork.com

In case of threatening weather call 302/856-7303. New Castle County rain date is May 8, and Sussex County is May 10.

2018 UD Weed Science Field Day

Wednesday, June 20, 2018

University of Delaware

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of April 19 to April 25, 2018

Readings Taken from Midnight to Midnight

Rainfall:

0.06 inch: April 19
0.24 inch: April 24
2.50 inch: April 25

Air Temperature:

Highs ranged from 73°F on April 25 to 55° F on April 20.

Lows ranged from 56° F on April 25 to 30° F on April 21

Soil Temperature:

53.7° 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**

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Reference to commercial products or trade names does not imply endorsement by University of Delaware Cooperative Extension or bias against those not mentioned.

Management of Small Grain Diseases Fungicide Efficacy for Control of Wheat Diseases (2018 Final)

The North Central Regional Committee on Management of Small Grain Diseases (NCERA-184) has developed the following information on fungicide efficacy for control of certain foliar diseases of wheat for use by the grain production industry in the U.S. Efficacy ratings for each fungicide listed in the table were determined by field testing the materials over multiple years and locations by the members of the committee. Efficacy is based on proper application timing to achieve optimum effectiveness of the fungicide as determined by labeled instructions and overall level of disease in the field at the time of application. Differences in efficacy among fungicide products were determined by direct comparisons among products in field tests and are based on a single application of the labeled rate as listed in the table. Table includes most widely marketed products, and is not intended to be a list of all labeled products.

Efficacy of fungicides for wheat disease control based on appropriate application timing

Fungicide(s)				Powdery mildew	Stagonospora leaf/glume blotch	Septoria leaf blotch	Tan spot	Stripe rust	Leaf rust	Stem rust	Head scab ⁴	Harvest Restriction	
Class	Active ingredient	Product	Rate/A (fl. oz)										
Strobilurin	Picoxystrobin 22.5%	Aproach SC	6.0 – 12.0	G ¹	VG	VG ²	VG	E ³	VG	VG	NL	Feekes 10.5	
	Fluoxastrobin 40.3%	Evito 480 SC	2.0 – 4.0	G	--	--	VG	--	VG	--	NL	Feekes 10.5 and 40 days	
	Pyraclostrobin 23.6%	Headline SC	6.0 - 9.0	G	VG	VG ²	E	E ³	E	G	NL	Feekes 10.5	
Triazole	Metconazole 8.6%	Caramba 0.75 SL	10.0 - 17.0	VG	VG	--	VG	E	E	E	G	30 days	
	Tebuconazole 38.7%	Folicur 3.6 F ⁵	4.0	NL	NL	NL	NL	E	E	E	F	30 days	
	Prothioconazole 41%	Proline 480 SC	5.0 - 5.7	--	VG	VG	VG	VG	VG	VG	G	30 days	
	Prothioconazole 19% Tebuconazole 19%	Prosaro 421 SC	6.5 - 8.2	G	VG	VG	VG	E	E	E	G	30 days	
	Propiconazole 41.8%	Tilt 3.6 EC ⁴⁵	4.0	VG	VG	VG	VG	VG	VG	VG	P	Feekes 10.5.4	
Mixed modes of action ⁵	Tebuconazole 22.6% Trifloxystrobin 22.6%	Absolute Maxx SC	5.0	G	VG	VG	VG	VG	E	VG	NL	35 days	
	Cyproconazole 7.17% Picoxystrobin 17.94%	Aproach Prima SC	3.4 - 6.8	VG	VG	VG	VG	E	VG	--	NR	45 days	
	Prothioconazole 16.0% Trifloxystrobin 13.7%	Delaro 325 SC	8.0	G	VG	VG	VG	VG	VG	VG	NL	Feekes 10.5 35 days	
	Fluapyroxad 2.8% Pyraclostrobin 18.7% Propiconazole 11.7%	Nexicor EC	7.0 - 13.0	G	VG	VG	VG	E	E	E	VG	NL	Feekes 10.5
	Fluoxastrobin 14.8% Flutriafol 19.3%	Preemptor SC	4.0 - 6.0	--	--	VG	VG	E	VG	--	NL	Feekes 10.5 and 40 days	
	Fluxapyroxad 14.3% Pyraclostrobin 28.6%	Priaxor	4.0 - 8.0	G	VG	VG	VG	E	VG	VG	G	NL	Feekes 10.5
	Propiconazole 11.7% Azoxystrobin 13.5%	Quilt Xcel 2.2 SE ⁵	10.5 - 14.0	VG	VG	VG	VG	VG	E	E	VG	NL	Feekes 10.5.4
	Prothioconazole 10.8% Trifloxystrobin 32.3%	Stratego YLD	4.0	G	VG	VG	VG	VG	VG	VG	VG	NL	Feekes 10.5 35 days
	Benzovindiflupyr 2.9% Propiconazole 11.9% Azoxystrobin 10.5%	Trivapro SE	9.4 - 13.7	VG	VG	VG	VG	VG	E	E	VG	NL	Feekes 10.5.4 14 days

¹Efficacy categories: NL=Not Labeled; NR=Not Recommended; P=Poor; F=Fair; G=Good; VG=Very Good; E=Excellent; -- = Insufficient data to make statement about efficacy of this product.

² Product efficacy may be reduced in areas with fungal populations that are resistant to strobilurin fungicides.

³Efficacy may be significantly reduced if solo strobilurin products are applied after stripe rust infection has occurred.

⁴Application of products containing strobilurin fungicides may result in elevated levels of the mycotoxin Deoxynivalenol (DON) in grain damaged by head scab.

⁵Multiple generic products containing the same active ingredients also may be labeled in some states.

⁶Products with mixed modes of action generally combine triazole and strobilurin active ingredients. Nexicor, Priaxor and Trivapro include carboxamide active ingredients.