



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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Vegetable Crops

Sweet Corn Starter Fertilizer - Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

The first sweet corn has been planted on plastic and bare ground plantings will be starting soon. This is a good time to revisit starter fertilizer use in sweet corn.

Sweet corn does respond to starter fertilizer. Of the nutrients that can be provided in a starter fertilizer, research has shown nitrogen (N) and Sulfur (S) to be the most beneficial, followed by phosphorus (P). In sweet corn it is common to include all 3 in starter fertilizer, although P does not always show a response.

We are starting to see some potassium (K) deficiencies in sweet corn on Delmarva. K in starter can be beneficial but rates should be limited. If soil K levels are high, K in starter fertilizer is not necessary.

We usually do not see a response to boron (B) in sweet corn so it is generally not recommended in starter fertilizer. Fields that receive B broadcast applications (1-2 lbs/A) at least once every 2 years should have sufficient B for sweet corn growth. If B has not been broadcast in the rotation it can be added to starter fertilizer but the rate should be very low to avoid B toxicity ($\frac{1}{8}$ lb/A, or less).

Zinc is usually not added to starter fertilizer for sweet corn except on high pH soils or soils with excessive P.

It is important to be careful in how close you place starter fertilizer to the seed (a concern with sweet corn starter fertilizer is reduction in stands due to fertilizer salt injury). The standard recommendation is to place starter fertilizer 2" to the side and 2" deep. This provides a concentrated band for early uptake (plant roots will proliferate around the band); and the band will be far enough away not to cause salt injury to germinating seedlings. Do not use pop-up (in seed furrow) fertilizers with sweet corn because there is too much risk of salt injury.

Suggested rates for starter fertilizer nutrients in sweet corn are shown below:

N = 20 lbs/A (10-20 lb/A range)

P = 20 lbs/A (15-20 lb/A range)

K = 10 lbs/A (10-15 lb/A range) only if K is not testing high in soils

S = 10 lbs/A (10-15 lb/A range)

Zn = 1 lb/A (none if Zn levels in soil are sufficient)

B = 0.125 lbs/A (none if you apply broadcast B in previous crops).

Potato Growers, Sign Up for the Potato Late Blight Decision Support System Today!
- Nathan Kleczewski, Extension Specialist - Plant Pathology; nkleczew@udel.edu

With potatoes starting to go into the ground, it is important that growers and consultants start to

prepare for late blight during the growing season. Last year, we worked with Cornell University to incorporate weather data from DEOS weather stations throughout the state in their online late blight Decision Support System (DSS). We have since worked to remove any DEOS stations that are not representative of agronomic settings to improve accuracy.

To enroll in the DSS, do the following:

1. Go to <http://blight.eas.cornell.edu/blight/>
2. Click “define new location”
3. Enter state, give the location a name, enter crop, and planting and harvest month
4. Use your mouse to move the red point on the map to where the field is located (or approximately). Alternatively, if you have the coordinates, you can enter these into the lat/long boxes at the top of the screen (Figure 1)
5. Click “Submit when complete”
6. Enter potato cultivar and greenrow date
7. Do not enter pathogen lineage
8. Fungicide information is optional but it is useful to keep up on this information as the season progresses.
9. Click “Get reports”
10. You will see the blitecast report with the severity values, weather information, etc.

You can set up alerts to be sent your email or phone for your sites. In addition, any time you log into the system you will see all of the output for all of your fields. This updates in real time and is much better than waiting for weekly updates on weather through the old system of weekly forecast reports. Remember, these reports are to be used to supplement your, “gut feelings” as well as assist you in making decisions. It is always best to use models such as this in conjunction with other weather forecasts, field based information, etc., to help with disease management.

You can also use the site to track tomato late blight if so inclined. We are working to get early

blight included in the system, but this will not occur for some time. Hopefully we will have both models integrated into DSS by next season.

Next week I will discuss another feature that we have set up with DSS that will provide you with information on late blight and fungicides without setting up an account.

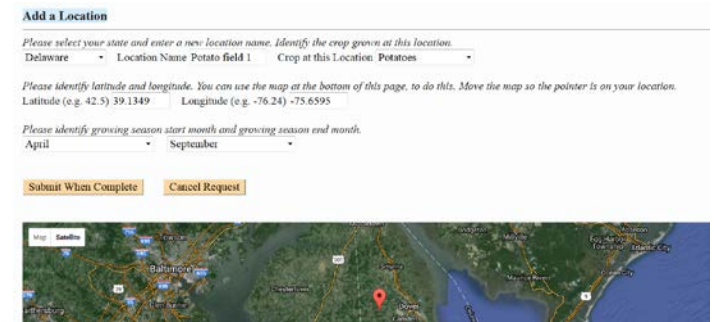


Figure 1. An example of the main page for setting up a DSS account. DSS information can be accessed any time via computer, smart phone, or tablet.

Dickeya dianthicola in Potatoes, Update for 2016 - Nathan Kleczewski, Extension Specialist - Plant Pathology; nkleczew@udel.edu

In 2014 and 2015, growers in many parts of the region started to notice black leg symptoms popping up in fields. However, careful inspection of plants suggested that this was not your typical black leg, which is a seed piece issue resulting from contamination with *Pectobacterium* followed by excessively wet growing conditions. In the case of the atypical black leg, growers noticed significant blanking after planting, and rapid wilting of plants during the season, particularly after very hot weather. Infected stems were not mushy, as typically observed with black leg, but were dry, black, and hollow. Tubers were macerated and had a tapioca-like appearance, but did not have the typical, pungent smell associated with *Pectobacterium*-derived black leg. Samples from affected fields from several states were sent for assessment via DNA based techniques, and in all cases, the bacterial pathogen associated with plants was *Dickeya dianthicola*. Only special, DNA-based techniques can accurately identify *D. dianthicola*.

D. dianthicola is an organism that has been present in the United States for many years, but only recently have we observed it causing issues in potatoes at a significant level. The organism can degrade potato tubers much more rapidly than *Pectobacterium*, and at much lower levels of infestation. Infection and growth of the bacterium can also occur at temperatures above what is considered optimal for *Pectobacterium*. Like typical blackleg, the main route of entry for the disease is contaminated seed pieces. Under wet conditions the bacterium can rot the mother tuber, resulting in poor emergence. In some instances the mother tuber may not rot completely, but may be colonized by the bacterium, which then moves into the stem. When this occurs you may observe black lesions developing from the soil line, hollow, dry stems, and wilted plants. Very wet conditions can cause the bacterium to spread in the soil to new tubers, which may rot under favorable conditions.

Data from other countries indicates that the bacterium will not likely persist in the absence of a host. Crops such as brassicas and onions may serve as alternate hosts. Other species of *Dickeya* can colonize corn, but there is no published data indicating that is the case for this particular species. **Currently, all samples taken from symptomatic potatoes have been identified as *D. dianthicola*.** There are plans to conduct surveys to better assess the population of *Dickeya* species associated with potatoes in the region and other areas in the United States where potatoes are grown.

Now that many growers are planting their potatoes they should be aware of the potential to see *D. dianthicola* in their fields this season. **The following best management practices should be followed:**

1. Save your seed certificate. This will be useful in tracking down infested lots should this be an issue in the future.
2. Avoid over irrigation, flooding
3. Plant to maximize airflow
4. Use a balanced fertilization program
5. Ensure adequate calcium levels in soil

6. Scout fields regularly. Initial symptoms will be areas of poor emergence. Symptoms later in the season include rapid wilting and death of plants, especially following very hot conditions. You may observe rotted tubers underneath symptomatic plants. If you see symptoms, have your county Agricultural Extension Agent take a look or contact me at 302-300-6962. We can help confirm if *Dickeya* is the issue.

If you have symptomatic fields and *D. dianthicola* is suspected/confirmed:

1. Harvest these fields last
2. Disinfest equipment with quaternary ammonium. Typical sanitation products such as bleach will not work against *Dickeya spp.*
3. If potatoes are to be stored, ensure rooms are adequately ventilated and are maintaining cool temperatures
4. Avoid including brassicas or onions in rotations
5. Manage volunteer potatoes
6. Avoid placing cull piles near fields or production areas
7. Check your seed certificate

Reports from 2015 Vegetable Variety Trials are Online - Emmalea Ernest, Associate Scientist - Vegetable Crops; emmalea@udel.edu

Trials of seedless watermelon, processing sweet corn and baby and Fordhook lima bean varieties were conducted in 2015. Results from these trials have been posted online at: <http://extension.udel.edu/ag/vegetable-fruit-resources/vegetable-small-fruits-program/variety-trial-results/>.

Fruit Crops

Fruits and Freeze Damage During Flowering - Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

Tree fruits are ahead of schedule on bloom in March this year and as a result there has been a greater risk of freeze damage. Platiculture strawberries are also in bloom and subject to freeze injury. We had temperatures in the mid 20s (F) last week and on March 30 temperatures dropped as low as 25°F in parts of Delmarva.

Plums and apricots are past full bloom, peaches are in full bloom, and cherries are in pre-bloom stage. Research has shown that when stone fruits are in the First Pink Stage (flower petals coming out of bud but not open), the temperatures required to cause 10% and 90% kill at this bud development stage were 25°F and 15°F, respectively. At First Bloom, the temperatures required to cause 10% and 90% kill were 26°F and 21°F, respectively. At Full Bloom Stage the temperatures required to cause 10% and 90% kill were 27°F and 24°F, respectively and at Post Bloom Stage the temperatures required to cause 10% and 90% kill were 28°F and 25°F, respectively.

For strawberries the critical temperature during bloom at the blossom level is 28°F. Below 28°F, there is a progressively higher risk of flower damage, and below 26°F most blooms will be damaged or killed. Flowers that are not open and just emerging from the crown can tolerate temperatures down to 22°F and once fruit has formed temperatures down to 26°F can be tolerated for short periods of time. Flower acclimation is also important. Plants with flowers exposed to several cold days before a frost will be more tolerant than those exposed to warm days before a frost. In addition, not all flowers in a field will have equal risk of damage. Flowers under leaves or near the soil will often be warmer than those higher on the plant or those more exposed.

Most Delmarva growers are using floating row covers for frost and freeze protection in platiculture strawberries. Row covers reduce temperature loss by cold winds, radiational cooling, convection, and evaporative cooling.

With row covers, temperatures drop more slowly under the cover and therefore the nighttime temperatures will be higher than in uncovered areas. This will usually give you 2-8 degrees of protection depending on the thickness of the row cover and weather conditions. Monitoring temperatures under the row covers can verify this. In freezing, windy conditions where outside temperatures are expected below 23°F, additional protection may be needed. This can be done by double covering the strawberries or by sprinkler irrigation over the row covers during the night.

Agronomic Crops

Agronomic Crop Insect Management - Joanne Whalen, Extension IPM Specialist; jwhalen@udel.edu

Alfalfa

All fields should be sampled for alfalfa weevil by examining 5-10 stems for damage and larvae. A full stem sample will be needed once damage and/or larvae are found on the plants. If leaf feeding is present, randomly collect 30 stems from throughout the field. Grasp stems at the base and place each stem upside down in a bucket. After collecting the stems, separate them into 3 or 4 bundles and beat them against the inside of the bucket to dislodge larvae from the stems. Count and record all larvae found per 30 stems. You will also need to measure 10 of the 30 stems and record the average stem height. The following thresholds, based on the height of the alfalfa, should be used as a guideline when making a treatment decision: up to 11 inches tall - 0.7 per stem; 12 inches tall - 1.0 per stem; 13 to 15 inches tall - 1.5 per stem; 16 inches tall - 2.0 per stem and 17 to 18 inches tall - 2.5 per stem. More information on alfalfa weevil biology, damage and treatment options can be found at the following links:

<http://extension.udel.edu/factsheets/alfalfa-weevil-control-in-alfalfa-2/>
<https://cdn.extension.udel.edu/wp-content/uploads/2012/05/31152336/InsectControlinAlfalfa2016.pdf>

Small Grains

It is time to start checking fields for cereal leaf

beetles. Adult beetles begin to leave overwintering sites when daily high temperatures are consistently above 60°F. During the past week, we started to find adult feeding and the first egg masses. Treatment decisions are based on the number of eggs and/or small larvae per 100 tillers. More information on insect identification, sampling, treatment thresholds and management options can be found at the following links:

<http://extension.udel.edu/factsheets/cereal-leaf-beetle-control-in-small-grains/>
<https://cdn.extension.udel.edu/wp-content/uploads/2012/05/31152336/Insect-Control-in-Small-Grains2016.pdf>

Although aphid populations have increased over the past couple of weeks in some fields, overall populations still remain low. Aphid outbreaks in the spring are favored by a mild winter followed by a cool, dry spring. Under these conditions, aphids reproduce rapidly whereas their natural enemies reproduce slowly. The predominant species being found is the English grain aphid which is the only aphid species known to move into grain heads, causing shrunken kernels and reduced test weights. Once grain heads emerge, it will be important to sample for aphids and treat if you find 15-25 aphids per head and low beneficial insect activity.

<http://extension.udel.edu/factsheets/aphid-control-in-small-grains-in-the-spring/>

Timothy

Continue to watch for an increase in cereal rust mites which are favored by cool temperatures. Symptoms can appear as retarded growth, leaf curling, stunting, and plant discoloration. Injured plants appear to be drought stressed even when adequate moisture is available for plant growth. As a general guideline, treatment is recommended in fields with a previous history of cereal rust mites and/or when 25% of the plant tillers exhibit curled tips of the new leaf blades within several weeks following green-up. The use of a 20x-magnifying lens is often necessary to find mites on leaves. The only effective and labeled material on timothy is Sevin XLR Plus. Be sure to read the label for information on the number of applications per season as well as the days to harvest. For effective rust mite control, the use of the higher labeled rate and at least 25 gal/A of carrier to

get good coverage of leaf surfaces generally results in better control.

<http://extension.udel.edu/factsheets/cereal-rust-mite-in-timothy/>

Sign Up for the Fusarium Head Blight Prediction Center - *Nathan Kleczewski, Extension Specialist - Plant Pathology;* nkleczew@udel.edu

Now is a good time to sign up for the Fusarium Head Blight Prediction Center (<http://www.wheatscab.psu.edu/>). This is a tool that correctly predicts severe head blight epidemics 80% of the time. If you recall, we integrated the DEOS stations into the FHB model last season, giving Delaware and Eastern Shore Maryland additional model precision (you can see this by clicking the Agnet box in the legend-Figure 1). This tool has saved wheat producers in the United States over \$15 million in the last few years, and I recommend becoming familiar with the system. If you are on the fence about making a costly fungicide application, the model can give you another piece of information that can help you with this decision. If you recall, last year the model, for the most part, suggested that the head blight fungicide should not be applied. With very few exceptions in a field here and there, the model was correct. In 2013, the model told us to spray: we all remember what happened that season. The model can be used to take a peek 2-3 days into the future as well, based off of the previous 7-10 days of weather.



Figure 1. A screen shot of the Wheat Scab Prediction center website showing new weather stations for use in helping with local risk prediction (recall there used to be only three in Delaware).

The model has been tweaked to better predict outbreaks under cooler conditions and other situations where the model was underperforming in the past. You will also notice that you can change your forecast based on the Fusarium head blight resistance level of the wheat you planted. Most of our varieties are susceptible; I would not consider any commonly planted varieties to be "Very Susceptible." I would advise only considering your variety moderately resistant if, after looking at the Virginia Tech Misted Nursery data (2-3 year averages), the DON (vomitoxin) levels are reduced 45% or more compared to a susceptible check such as Dynagro Shirley or Pioneer 25R40. **Do not look at severity or incidence data-it is DON, particularly that which accumulates in healthy, plump kernels, which concerns us the most.** The VT misted nursery data can be found here: <https://pubs.ext.vt.edu/CSES/CSES-129/smgrains15sect5.pdf>. Reliable scab resistance data can only be generated from misted nurseries. Field based observations for rating varieties for head scab resistance are unreliable, misleading, and not useful.

Once you have signed up don't forget to ensure that you receive email updates on regional commentary. I will update you on the overall situation, etc. In addition, remember that the model is generating the map based on data collected from hundreds of different sources, so this takes time. As a result, the most up to date forecast for the day will not be available until around lunch time. If you view the map in the morning, you are looking at the previous day's forecast. Again, remember that this is a tool that should be used in addition to local weather, your intuition, and other sources to help you make profitable fungicide decisions in wheat in 2016.

Small Grain Disease Update - Nathan Kleczewski, *Extension Specialist - Plant Pathology*; nkleczew@udel.edu

Since my last article, the temperatures have been fairly cool and very windy, which has not been favorable for disease development. We are seeing low levels of spot/net blotch in barley and some minor powdery mildew in some wheat

fields and varieties. There are also a few-virus-like symptoms out there, but nothing widespread at this point. Typically we see symptoms of the soil borne viruses at this point in time, when weather is cool. When we warm up and put on the second shot of N, symptoms disappear. If you do see some virus-like symptoms in small grains call your county Extension Agent or myself and we'd be glad to help you get them tested for virus.

As I mentioned on March 4, only consider a fungicide treatment with your 2nd nitrogen application if you see powdery mildew in your fields at this time. There are striking differences in varietal resistance, so you can save the fungicide cost, potential environmental impacts, and potential fungicide resistance development by scouting your fields before you make that second application of nitrogen. Applications at FGS 4-5, with the first shot of nitrogen, are not going to provide you much benefit. The plant is not actively growing, it is cold, and the fungus is likely still dormant. Dormant fungi are not impacted much by fungicides, particularly the DMI-group 3 class. The best chance to see an early application pay off, is when applied with the second shot of nitrogen in fields where powdery mildew is already present. I do worry that if we continue to apply propiconazole or other DMI (group 3) fungicides to fields at cut rates and without need that we will soon see fungicide resistance develop to these fungicides. We do not need that in addition to all of the other issues we are currently facing. As usual, the best thing you can do is scout your fields to ensure that you are making applications when they are needed and at the appropriate time. A good disease resistance package goes a long way in wheat and barley.

General

Common Ragweed Not Controlled By Various Herbicides - Mark VanGessel, *Extension Weed Specialist*; mjv@udel.edu

UD Weed Science Program received seed from common ragweed plants in the fall of 2015. The seeds came from one field on the Eastern Shore of Maryland, a farm in New Jersey, and two different locations in Delaware. All the fields

were heavily infested with common ragweed late in the soybean crop, and all appeared to have survived a glyphosate application.

Individual plants were sprayed with glyphosate, Reflex (fomesafen), and FirstRate (cloransulam) in the greenhouse. Each herbicide was applied at 1X, 2X, and 4X of the normal field use rate. Glyphosate, Reflex and FirstRate are commonly used in soybeans to control common ragweed and they represent three different herbicide sites of action (glyphosate is group 9 (EPSP synthase inhibitors); Reflex is group 14 (PPO inhibitors); and FirstRate is group 2 (ALS inhibitors)).

Plants from MD and NJ survived a 4X application rate of glyphosate, FirstRate (cloransulam), and Reflex (fomesafen). Plants from MD and NJ treated with Reflex did show significant amount of injury, but after 2 weeks the plants began to regrow from meristematic tissue at the leaf axils and quickly recovered. Both fields in DE survived glyphosate and FirstRate, but were successfully controlled with Reflex.

Below are plants from UD-REC (known susceptible) and from MD. Plants were treated with FirstRate (cloransulam, Group 2), glyphosate (Group 9), and Reflex (fomesafen, Group 14). The plants are arranged from bottom row to top in each photo as FirstRate, glyphosate, and Reflex. Rates are 1X, 2X, and 4X of the field rate and arranged from left to right for each herbicide.



Note the plant treated with 1X rate of cloransulam died. This is a result of not all plants carrying the trait for herbicide resistance. This is often observed in the field with dead plants adjacent to living plants of the same species.

The plants below were sprayed with a tankmixture of three herbicide sites of action. Reflex, glyphosate, and FirstRate were mixed in the same spray mix and all at the 2X rate. As observed in the field, some plants were susceptible.



Based on experience with other populations of common ragweed, it is likely that these common ragweed will not be killed with other active ingredients in the same group. So our best advice at this point is to not rely on these herbicide sites of action to control common ragweed in the field. Given that Reflex caused initial injury to common ragweed, it is possible that a crop canopy would suppress the growth and effectively result in not observing these



plants late in the season. However, if Reflex was applied early or the soybean canopy was slow to develop or the soybean stand was “thin”, then it is likely that Reflex treated common ragweed plants could recover and complete their life cycle in the field. However, it is not advisable to rely on this strategy.

Because common ragweed typically emerges early in the spring, it is likely that seedlings will be present at the time of applying burndown herbicides in no-till soybeans. Thus an effective herbicide (2,4-D or paraquat) will be needed as part of the burndown tankmixture. Common ragweed is a species that will generally not emerge after the postemergence herbicides are applied. It is a relatively large seeded species and as such the emergence is reduced under no-till conditions compared to conventional tillage.

Current options are limited to only three herbicide sites of action, with Group 5 (atrazine and metribuzin) being the only effective soil-applied herbicides. Cover crops, cultivation or other non-chemical strategies must be included to reduce the density and growth of common ragweed, allowing for higher levels of chemical weed control and ensuring the long-term utility of the few remaining herbicide options.

The populations from Delaware are at risk of developing resistance to Group 14 herbicides as well (Reflex, Cobra, Ultra Blazer, Aim, or Cadet). Currently, Group 14 herbicides labeled for preemergence application (flumioxazin [Valor], saflufenacil [Sharpen], and sulfentrazone [Authority]) are not very effective for common ragweed control. If Group 14 herbicides are used as postemergence herbicides, fields should be scouted within 7 days of applications for surviving plants, and they should be removed to prevent seed production.

Pesticide Labels Change with Time - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

Be aware that pesticide labels can change over time, and sometimes these changes are not well publicized. It is important to read the individual

labels each season to be sure no changes have occurred.

Funding Available for Bank Stabilization Projects on Tax Ditches in Sussex County, Delaware

Sussex County landowners can now sign up for special funding to restore eroded banks in tax ditches for improved water quality. Approximately \$500,000 is available to restore the tax ditches, or watershed channels, utilizing vegetative material such as coir logs and live stakes — also known as green technology or bioengineering. Stabilizing the banks will reduce or eliminate erosion, therefore minimizing the transport of sediments and nutrients into surface and ground water.

Landowners are encouraged to apply by April 15 to implement practices such as stream and shoreline protection, or stream habitat improvement and management. Additional partner funds will help landowners implement denitrifying bioreactors and water control structures, which are also designed to reduce amount of nutrients in the ditches for enhanced water quality. Projects must be on agricultural lands.

Interested applicants must meet eligibility requirements of the Environmental Quality Incentives Program (EQIP), which is administered by the USDA Natural Resources Conservation Service (NRCS). NRCS accepts applications year round; however, all applications received by the first application deadline of April 15 will be ranked and considered for funding.

This Watershed Channel Restoration Project in Sussex County, Delaware, was selected as part of the Regional Conservation Partnership Program (RCP) administered by NRCS. The project is led by the Sussex Conservation District and participating partners include DNREC's Division of Watershed Stewardship; Sussex County's Tax Ditch Organizations, and Advanced Drainage Systems (ADS). The project will increase the implementation of green technology/ bioengineered practices in tax ditch drainage systems utilizing natural vegetative material for stabilization purposes.

RCPD promotes coordination between the USDA NRCS and its partners to deliver conservation assistance to producers and landowners. The Watershed Channel Restoration project is a 2015 RCPD project that bring additional resources to Sussex County.

To sign up for this project or for more information, contact the USDA Service Center at 302-856-3990 ext. 3, or visit in-person at 21315 Berlin Road, Unit 4, Georgetown, Delaware; or go online to www.de.nrcs.usda.gov. Delaware NRCS works with the Delaware Conservation Districts to address resource concerns on privately-owned agricultural and forest lands.

Cover Crop Funding Targeted for the Chesapeake Bay Watershed in Sussex County, Delaware

Special funding is now available for Sussex County, Delaware farmers located in the Chesapeake Bay Watershed to plant cover crops. This effort focuses on improving water quality and soil health by targeting additional financial assistance in the watershed. The additional acres planted will help Delaware meet its Total Maximum Daily Loads (TMDL) and achieve the goals and milestones of the Chesapeake Bay Watershed Implementation Plan (WIP) through the uptake of excess nutrients and improved soil health.

Approximately \$528,000 is available over the next two years to help Sussex County landowners implement cover crops in the Chesapeake Bay Watershed. Additional Chesapeake Bay Program funds from the Delaware Department of Natural Resources and Environmental Control (DNREC) will allow an additional incentive of \$25 per acre for farmers using winter cereal rye or a cereal rye mix. Landowners are encouraged to apply by April 15.

Interested applicants must meet eligibility requirements of the Environmental Quality Incentives Program (EQIP), which is administered by the USDA Natural Resources Conservation Service (NRCS). NRCS accepts applications year round; however, all applications received by the first application deadline of April 15 will be ranked and considered for funding.

This special funding is possible as part of the Accelerating Chesapeake Bay Watershed Implementation Plans (WIP) project, which was selected as part of the Regional Conservation Partnership Program (RCPD) also administered by NRCS. The project is led by the Maryland Department of Agriculture who partnered with DNREC's Division of Watershed Stewardship and the Sussex Conservation District. The goal of this project is to increase the implementation of cover crops in the Chesapeake Bay Watershed.

RCPD promotes coordination between the USDA NRCS and its partners to deliver conservation assistance to producers and landowners. The Accelerating Chesapeake Bay Watershed Implementation Plans (WIP) is a 2015 RCPD project that bring additional resources to Sussex County.

To sign up for this project or for more information, contact the USDA Service Center at 302-856-3990 ext. 3, or visit in-person at 21315 Berlin Road, Unit 4, Georgetown, Delaware; or go online to www.de.nrcs.usda.gov. Delaware NRCS works with the Delaware Conservation Districts to address resource concerns on privately-owned agricultural and forest lands.

Funding Available to Target Conservation Activity to Maximize Water Quality Improvement in the Clear Brook-Nanticoke Watershed

USDA's Natural Resources Conservation Service (NRCS) has committed \$139,000 in exclusive funding to help Delaware farmers in the Clear Brook-Nanticoke River watershed make improvements on their land to improve water quality.

Through the National Water Quality Initiative (NWQI), farmers can invest in voluntary conservation practices to reduce the runoff of nutrients, sediment and pathogens from agricultural land that can flow into waterways. Now in its fifth year, NWQI builds on efforts to target high-impact conservation in areas such as the Chesapeake Bay Watershed.

The goal of NWQI is to concentrate conservation practices within select watersheds to maximize

gains in the effort to improve water quality. Eligible practices include nutrient management, manure storage structures, composters, no-till, cover crops and filter strips.

The Clear Brook-Nanticoke Watershed is located in the western region of Sussex County between Bridgeville and Seaford and is part of the Chesapeake Bay Watershed. Of the 24,000 acres that make up the watershed, 14,000 acres or 60 percent are in agricultural land. The watershed is on the State of Delaware's list of impaired watersheds due to excess nutrients. State and federal agencies have been extensively monitoring water quality in select areas of the watershed and are looking into new strategies to address agricultural related water quality issues.

NRCS accepts applications year-round but makes funding selections at application cut-off deadlines. Producers with applications in before April 15 will have a higher chance of application approval as funding is limited. An additional application cutoff date is set for May 20, 2016.

The National Water Quality Initiative is an initiative under NRCS' Environmental Quality Incentives Program. For more information on NWQI, contact your local USDA Service Center. In Sussex County, call 302-856-3990, ext. 3. Additional information on all NRCS programs and services is available online at www.de.nrcs.usda.gov.

RCS in partnership with conservation districts work with producers to implement voluntary conservation practices on privately-owned agricultural and forest lands.

Announcements

Free Webinars in April, Sponsored by the Mid-Atlantic Women in Agriculture

4/13: Deciding on a Business Structure - Business structures can often be one of the simplest tools producers can utilize to limit their business liability. At the same time, they often confuse those considering adopting one as a tool to utilize in their business. This webinar will cover business structures from the simplest (sole proprietorship) to the most complex (corporation and cooperative) to better help producers understand how to utilize them in their operations. Speakers will be Ashley Ellixson and Paul Goeringer,

both Extension Legal Specialists with the Department of Agricultural and Resource Economics and partners with the Ag Law Education Initiative.

4/27: Soil pH, Liming Rates and Fertility - Soil pH is only one number on a soil test report, but can control a lot of your production potential. To maximize your returns from the soil, understanding where soil acidity comes from and how we determine lime rates is essential.

To register:

<http://www.eventbrite.com/e/wednesday-webinars-registration-11452674257>

Webinars begin at noon EST. Duration is approximately 1 hour. For optimal performance we suggest using Internet Explorer as your web browser and connecting via Ethernet connection instead of wireless (wireless will work, but a hard line is more stable)

See website for more information and other upcoming topics: <https://extension.umd.edu/womeninag/webinars>

If you do not have access to high speed internet and would like to participate in one of the above webinars, contact Tracy Wootten at wootten@udel.edu.

2016 Horticulture Short Courses

For the complete list of 2016 courses go to:

<http://extension.udel.edu/lawngarden/commercial-horticulture/2016-horticulture-short-courses/>

Plant Identification- Woody Shrubs

April 5 4:30 – 5:30 p.m.

University of Delaware Botanic Gardens
531 S College Avenue, Newark, DE

Cost: \$15

Credits: 1 Pest., 1 ISA, 1 CNP

Learn to identify some of the woody shrubs used in the landscape. We will cover the common disease and insect pests of each and strategies for incorporating into the landscape. Many of these shrubs are on the Certified Nursery Professional Exam, so you can attend this short course as a review for the fall exam. Meet at the entrance to Fischer Greenhouse. Instructors: Valann Budischak and Sue Barton

Register with Carrie Murphy (302) 831-2506 or cjmurphy@udel.edu.

Tree Identification Walk

April 7 4:30-6 p.m.

Delaware State University Campus
1200 North DuPont Highway, Dover, DE Washington
Building near the Herbarium (additional details will be
provided following registration)

Cost: \$15

Credits: 1 Pest., 2 ISA, 1 CNP

Come prepared to walk around the Delaware State
University TREE CAMPUS USA - Arboretum as we
exam the growing characteristics of nearly 178
different tree/shrub species (*of which 70 are native to
Delaware*) established at this location. Discover
common insect and disease issues found in the urban
landscape. Instructors: Dot Abbott and Megan
Pleasanton

Register with Jan Unflat (302) 730-4000 or
jmunflat@udel.edu.

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of March 24 to March 30, 2016

Readings Taken from Midnight to Midnight

Rainfall:

0.02 inch: March 25

0.48 inch: March 28

Air Temperature:

Highs ranged from 75°F on March 25 to 52°F on
March 27.

Lows ranged from 53°F on March 25 to 30°F on
March 30.

Soil Temperature:

55.0°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
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