



Volume 25, Issue 22

August 25, 2017

## Vegetable Crops

**Calcium Disorders Revisited** -Gordon Johnson, *Extension Vegetable & Fruit Specialist*; [gcjohn@udel.edu](mailto:gcjohn@udel.edu)

Calcium dominates exchange sites in soils and is rarely deficient. However, a number of calcium disorders can affect crops, even in well limed soils including:

- Blossom end rot in tomatoes, peppers, and eggplants
- Blossom end rot in watermelons
- Watercore and glassiness in melons
- Internal leaf tipburn in cabbage
- Leaf tipburn and curd defects in cauliflower
- Internal browning of Brussels sprouts
- Leaf tipburn in spinach
- Leaf tipburn in lettuce
- Leaf tipburn and deformity in strawberry
- Internal browning, hollowheart, storage disorders, and poor skin set in potatoes
- Cavity spot in carrots
- Bitter pit, cork spot, cracking, internal brownspot, and water core in apples

- Hypocotyl necrosis in beans and other legumes
- Meristem death or distortion of new growth from meristems in many plants (cupped leaves)

Calcium is taken up in quantity from the soil by the plants from the undifferentiated area right behind the root tip. Once in the root, it moves in the xylem (water conducting vessels) and is distributed in the plant. Much of this movement in the xylem occurs by exchange. Calcium is attracted to the xylem wall and must be displaced by another ion (another calcium or other cation). This process is driven by transpiration and subsequent water movement through the xylem. Therefore, calcium movement is relatively slow compared to other nutrients that move easily in the transpiration flow. Calcium is not translocated in the phloem (plant food transport system) so it cannot move from one area of the plant to another.

Calcium has many roles in the plant from root growth control, to cell membrane function, to stomatal regulation. The main function that leads to the disorders listed above is in the formation of plant structure. Calcium is component of cell walls and the middle lamella which cements plant cells together. Calcium provides cross linkages in the pectin-polysaccharide matrix and adds to the structural strength of plant tissues. When insufficient calcium is present, plant tissues do not form properly and they may appear deformed and in severe cases may become necrotic - tissues may die or collapse.

Because calcium moves slowly through exchange in the xylem and is dependent upon water flow, disruptions in that flow can lead to localized deficiencies in calcium. Plant organs with low transpiration rates or that are rapidly expanding such as fruits and storage roots often do not receive enough calcium to support that growth. Growing tips and meristematic areas that are rapidly laying down new cells are also at risk for calcium deficiencies when water flow is interrupted. High humidity, drought, flooding (leading to roots shutting down), root injury, compaction, and root diseases can therefore lead to calcium disorders by the reduction of water flow and calcium exchange and movement in the xylem.

Competition from other cations such as magnesium ( $Mg^{2+}$ ), ammonium ( $NH_4^+$ ), and potassium ( $K^+$ ) can also affect calcium ( $Ca^{2+}$ ) uptake and movement. In low pH soils, aluminum can interfere with calcium uptake and lead to deficiencies.

Control of calcium disorders starts with proper liming. This provides soil calcium and raises the pH to eliminate the effect of aluminum. The most important factors to control calcium disorders are to supply a steady rate of water (through a good irrigation program), limit root damage (such as root pruning by cultivation), provide a rooting area for plant that is free from compaction and waterlogging, and create a healthy soil environment that limits root disease potential. Above ground, planting at a spacing that allows for good air movement around the plant will also help. Control fertilizer programs to limit competition between calcium and other ions (use nitrate forms of nitrogen instead of ammonium forms for example). In addition, choose varieties that are less susceptible to these calcium disorders (varieties with very large or very long fruit are more susceptible to calcium deficiencies).

There have been mixed results with foliar application of calcium and these applications should be considered a supplement to help limit these disorders and not a correction for calcium deficiencies and good soil and water management. As stated before, calcium movement is limited so it will be difficult to get calcium to where it is needed by foliar sprays

except when applied to active meristematic tissue. Calcium sprays have been effective in improving quality in crops such as apples. Sidedressed calcium has been shown to have positive effects on root crops such as potatoes, particularly in sandy soils. Calcium nitrate applied through the drip irrigation system can help alleviate calcium disorders in some drip irrigated vegetables such as tomatoes.

---

**Downy Mildew on Watermelon and Pumpkin** - *Kate Everts, Vegetable Pathologist, University of Delaware and University of Maryland*; [keverts@umd.edu](mailto:keverts@umd.edu)

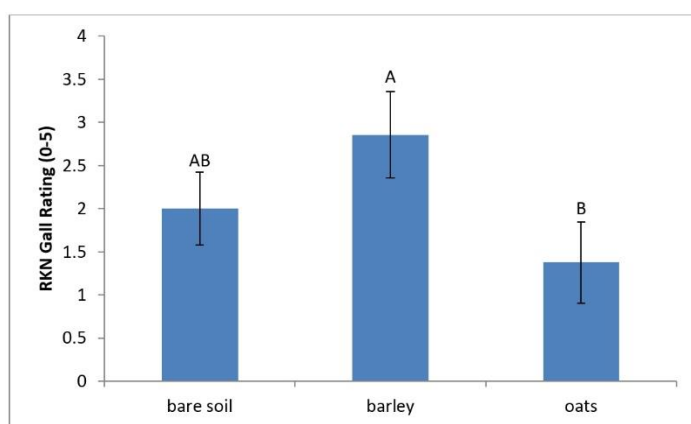
Downy mildew has been confirmed on watermelon in Wicomico County and pumpkin in Wicomico and Sussex counties this past week. All watermelon and pumpkin fields on the shore are at risk and should be treated for downy mildew. This disease is very aggressive on both hosts.

---

**Black Oats for RKN Management** - *Nathan Kleczewski, Extension Specialist - Plant Pathology*; [nkleczew@udel.edu](mailto:nkleczew@udel.edu); @Delmarplantdoc

Last season we had some questions about the use of black oats for managing root knot nematode (RKN) in various crops. Black oats are purported to be a poor host for RKN, and some growers were interested in knowing if they had any potential value here as a cover crop. Last fall, we conducted a small microplot study in Newark where we installed several 3-gallon pots into the ground, and filled these pots with field soil that was free of RKN. We then placed a single tomato plant infested with RKN into the center of each plot, and allowed the plants to grow until September of 2016. The plants were cut at the soil line and worked into the soil. We then either left the soil fallow, or sowed black oats or barley into microplots at recommended rates, with each treatment replicated six times. The plots were fertilized following UD Extension guidelines. In the spring, the plants were mowed and a single cucumber plant planted into the center of each plot in late May, 2017. The plants were allowed to grow for 2 months, were removed from microplots, and were rated for

RKN galling. The scale used was a 0-5 scale where a 0 was free of RKN and a 5 was completely galled. The results of the trial are below. As you can see, we saw that black oats reduced RKN galling somewhat, but that barley slightly increased galling. We also noted that the overall stand and heartiness of the black oats was not overly impressive, even though we had a moderate winter and spring. Black oats do not tolerate freezing temperatures well. Consequently, although this trial provides some indication that black oats may provide some benefit for reducing RKN, other factors, in particular cost and winter hardiness, are likely to prohibit its use in Delaware.



RKN gall ratings on cucumbers planted in microplots previously planted to barley, black oats, or fallow. Different letters indicate significant differences using Fisher's LSD (0.05). 0= free of galling 5 = completely galled.

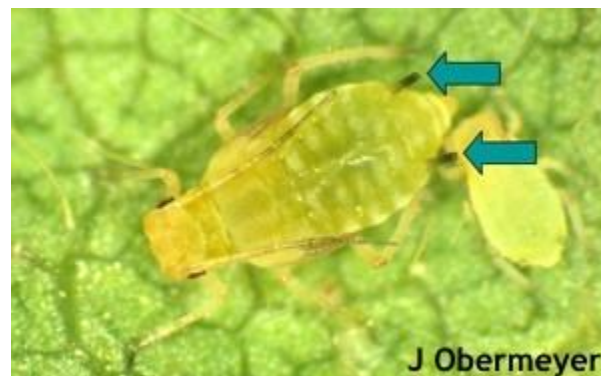
## Agronomic Crops

**Soybean Aphid Populations Starting to Increase in Soybeans** - Bill Cissel, Extension Agent - Integrated Pest Management; [bcissel@udel.edu](mailto:bcissel@udel.edu)

Soybean Aphid Populations Starting to Increase in Soybeans

Soybean aphids are starting to show up in soybeans. Populations are still extremely low in many fields but populations can quickly explode, especially with the cooler temperatures. The soybean aphid is small (less than 1/16" in length), yellow in color, with black cornicles (the dual tail pipes coming out the back end). A

hand lens will be necessary to see the cornicles which can be used a key characteristic to distinguish aphids from other small insects.



Soybean aphid highlighting cornicles.

Soybean aphids have piercing-sucking mouthparts that they use to remove plant fluids, feeding on the pods, stems, and leaves. Their feeding damage stresses plants and under heavy infestations, yield losses in the Midwest have been reported as high as 10-15%.

The economic threshold is an average of 250 aphids per plant, on two consecutive field visits spaced about 5-7 days apart. Aphid populations can quickly crash due to natural enemies and fungal pathogens, so the purpose of the two visits is to determine if populations are increasing or decreasing. When scouting, sample the entire field using a "Z" or "W" pattern, examining 30 plants per field. As you can imagine, counting 250 aphids is time consuming so here is a link with information on how to "Speed Scout" for soybean aphids: <http://ento.psu.edu/publications/speed-scouting-form%20for%20PA.pdf>

The threshold was developed for plants through growth stage R5 (seed at least 1/8 inch long in one of the pods in upper 4 nodes). Once the plants are R6 (full seed), treatment is only necessary if the plants are drought stressed. Treatment is no longer necessary once plants reach R7 (beginning maturity).

**Scout for Podworms in Soybeans** - Bill Cissel, Extension Agent - Integrated Pest Management; [bcissel@udel.edu](mailto:bcissel@udel.edu)

Corn earworm pheromone trap catches have recently increased throughout the state and we are starting to find low levels of larvae in full season and double crop soybean fields. Currently, populations remain low in most fields, however, there is a potential for hot spots to occur. The only way to know what is happening in a particular field is to scout it.

The most accurate way to make a treatment decision is to use the Corn Earworm Calculator developed at Virginia Tech. This tool takes into consideration the sampling method, control cost, soybean price, and row width to generate an economic threshold.

Here is a link to the Corn Earworm Calculator: <http://webipm.ento.vt.edu/cew/>

Corn earworms use corn as a nursery crop before moving on to other crops such as soybeans. Virginia Tech has documented a linear correlation between the level of infestation in field corn and the amount of soybean acreage that is treated with an insecticide based on over 30 years of data. Annually, Virginia Tech conducts a survey of field corn in mid to late July to estimate infestation levels which can then be used to predict the risk of corn earworm infestations in soybeans. Since most of the moths that move into our soybean fields to lay eggs migrate from the South, the level of pressure observed in the south might provide some insight on what our risk is. Here is a link to Virginia Tech's 2017 Corn Earworm Survey: [http://blogs.ext.vt.edu/ag-pest-advisory/files/2017/08/CEW\\_survey\\_results\\_2017.pdf](http://blogs.ext.vt.edu/ag-pest-advisory/files/2017/08/CEW_survey_results_2017.pdf)

Pyrethroids have provided poor control of corn earworms in states to our south and based on vial tests conducted in Virginia, an average of 39% of the moths tested survived after being exposed to cypermethrin for 24 hours. We have not seen the decrease in efficacy to pyrethroids that has been documented in the south but it is important to remember that many of our moths moving into soybeans are migrating from the south. Coragen, Steward EC, Besiege, Radiant, and Blackhawk are all labeled for corn earworm

control in soybeans. If using a pyrethroid, make sure you are using the highest labeled rate.

Here is a link to our Soybean Insect Control Recommendations:

<http://cdn.extension.udel.edu/wp-content/uploads/2012/05/18063934/Insect-Control-in-Soybeans-2017-final.pdf>

---

**Using the Misted Nursery Data to Guide Wheat Selections** - Nathan Kleczewski, Extension Specialist - Plant Pathology; [nkleczew@udel.edu](mailto:nkleczew@udel.edu); @Delmarplantdoc

Several weeks ago I published the [results of the misted nursery](#) jointly managed by our lab at the University of Delaware and the Field Trials group at the University of Maryland. I have had several questions about how best to use the data. The misted nursery should be used as the final step in selecting your varieties. Growers should look carefully at varieties and select 5-6 varieties that yield well and have good test weights. Next, check the variety descriptions or [variety trials from DE, MD, and VA](#) to see which of these varieties has the best foliar disease package, paying careful attention to the leaf blotches (septoria/stagonospora/tan spot), and powdery mildew. Finally, of your top selections, which now should have excellent yield and test weight potential as well as leaf blotch and powdery mildew resistance, look at the misted nursery data from 2016 and 2017. Look at the DON column and select the variety or varieties that have the lowest DON values and hopefully, are located in the green section of the listing. Avoid varieties that are red and be cautious with those that are yellow. Using this protocol you will ensure that you are not only selecting a high yielding variety, but also one that will be at far less risk for major diseases, should require less inputs, and will put you in a better situation should FHB favorable conditions arise next season.



## **Soybean Sudden Death Syndrome in DE and**

**MD** - Nathan Kleczewski, Extension Specialist -  
Plant Pathology; [nkleczew@udel.edu](mailto:nkleczew@udel.edu);  
[@Delmarplantdoc](https://twitter.com/Delmarplantdoc)

Over the past three weeks there have been increasing reports of soybean sudden death syndrome (SDS) in full season soybeans. SDS is one of the top ten most important diseases affecting soybeans, but is still a minor player in the Mid-Atlantic. Yield loss can occur when foliar symptoms show up before R5.



Sudden Death Symptoms on a soybean leaf.

Infection of soybeans typically occur early in the growing season, when conditions are cool and wet and plants are in the vegetative stage of growth. The fungus responsible for SDS then infects the lower portion of the stem. When plants reach the later reproductive stages, the fungus can produce a toxin that moves with the water conducting tissues into the foliage, where it accumulates. Accumulation of the toxin results in the development of foliar symptoms. Leaves of infected plants develop yellow spots,

which expand, while the leaf veins remain green. Roots will often be rotted, and the lower stem, when split, will be brown on the outside while the inner tissue will remain unaffected. This stem symptom can help differentiate between SDS and Brown stem rot (BSR) and BSR will rot the entire central stem column, resulting in a brown, dry rotted appearance. Foliar symptoms alone are not diagnostic of SDS. Occasionally blue fungal growth can be observed on the root or soil surface, especially after heavy rains. In Delaware and Maryland, we see SDS in small patches, often 15 yards across or less. Many times affected areas are found in low lying areas that hold more water.



Blue growth on the root and soil line is indicative of Sudden Death Syndrome.



Foliar symptoms of SDS can cause leaf curling and death.



When split, lower stems will be necrotic and brown, while the inner tissue will remain relatively untouched.

Management of SDS starts with crop rotation to a non-host, such as corn for at least two to three seasons. Unfortunately the pathogen can still overwinter and survive on corn and other residues for quite some time, so in severe cases, you will need at least three years out of soybeans. Thusfar, I have yet to see a field where infection was severe enough to warrant this approach. When rotating, even short term, rotations with snap or lima beans should be avoided.

If you have soybean fields with known SDS issues, select a variety with tolerance to the disease to minimize potential yield losses. Tolerant varieties are much less likely to suffer severe yield losses if the disease does occur.

Although the seed treatment iLeVO has been shown to help reduce SDS, it may not be economically sound to plant entire fields with this seed treatment if only sections or small portions of the field are affected. If considering this seed treatment, one potential route would be to scout and map out affected areas and plant treated seed in the field sections or areas where SDS is problematic, and plant your untreated or regularly treated seed in unaffected areas of the field.

The pathogen infects when it is cool and wet. Therefore, double cropped soybeans are less likely be infected by the SDS pathogen. They can still develop the disease, especially if persistent cool wet weather occurs during the vegetative stages, but the likelihood for this is far less than in full season beans.

Finally, if you have a field with SDS and are working the ground, ensure that you clean the equipment before utilizing it in another field or till SDS impacted fields last. This will minimize potential movement of the pathogen to additional

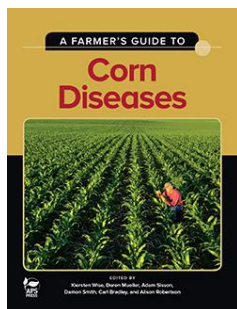
## General

**Guess the Pest!** - Bill Cissel, Extension Agent - Integrated Pest Management; [bcissel@udel.edu](mailto:bcissel@udel.edu)

Congratulations to Jim Palermo for accurately identifying the disease in Guess the Pest Week #20 as Soybean Vein Necrosis Disease (SVNd).



Jim will not only have his name entered into the end of season raffle for \$100 gift card not once but five times, he will also receive a FREE copy of A Farmer's Guide to Corn Diseases. Click on the Guess the Pest logo below to participate in this week's Guess the Pest! Guessing correctly will automatically enter you into a raffle for \$100 gift card at the end of the season and one lucky winner will also be selected to have their name entered into the raffle five times. For Guess the Pest # 21, we will also be giving away A Farmer's Guide To Corn Diseases (\$29.95 value) to one lucky participant.



<http://www.plantmanagementnetwork.org/book/cornfarmersguide/>

**Guess the Pest Week #20 Answer: Soybean Vein Necrosis Disease (SVNd) - Nathan Kleczewski, Extension Specialist - Plant Pathology; [nkleczew@udel.edu](mailto:nkleczew@udel.edu); @Delmarplantdoc**







N Kleczewski



N Kleczewski

Soybean vein necrosis disease (SVNd) is caused by the Soybean Vein Necrosis Virus, and is the most prevalent virus infecting soybeans. This virus is transmitted by several species of thrips during the early parts of their life. After the thrips have acquired the virus, they can transmit it for the remainder of their lifespan. Symptoms typically start around veins, likely because thrips focus feeding in this area. After entering the plant, the virus replicates, and the tissues surrounding the veins turn yellow and eventually brown. Recent research demonstrated that the virus may also be moved through seed, although the role this plays in disease epidemiology is currently unknown.



J Obermeyer, Purdue Extension Entomology

Adult thrips



J Obermeyer, Purdue Extension Entomology

Thrips adult and immatures.

Research we conducted in the region indicates that SVNd is more prevalent in double cropped soybeans, and that varieties differ in susceptibility. However, it is not known if varietal differences are due to reactions of the plant to the virus, or if the plants differ in features that alter thrips feeding preference. Research we recently published with colleagues indicates that the virus may impact seed quality, and research we are conducting in the region indicates that there may be some yield impacts, although this does not appear to be significant. Thus, management of this disease currently is not recommended. However, it is important to recognize the symptoms and realize that this is not a fungal disease. Fungicides will not impact foliar symptoms.



## Guess the Pest Week# 21



To submit your guess click the Guess the Pest logo below or go to:

[https://docs.google.com/forms/d/e/1FAIpQLSfUPYLZnTRsol46hXmgqj8fvt5f8-JI0eEUHb3QJaNDLG\\_4kg/viewform?c=0&w=1](https://docs.google.com/forms/d/e/1FAIpQLSfUPYLZnTRsol46hXmgqj8fvt5f8-JI0eEUHb3QJaNDLG_4kg/viewform?c=0&w=1)



## Delaware Department of Agriculture Warns Delawareans About Pesticide Application Scam - Delaware Department of Agriculture

Secretary of Agriculture Michael Scuse and Pesticide Administrator Christopher Wade are warning Delawareans of people impersonating farmers and agricultural pesticide applicators coming door to door.

In the scam, the homeowner is told that they must leave their house for a period of 12 hours while the individual sprays crops in the nearby vicinity.

There are some indicators that these visits are a scam in an attempt to get the homeowner to leave their house unattended. There are currently no agricultural pesticide spraying practices in Delaware that would require one to leave their home. An agricultural pesticide applicator is required to prevent drift when spraying.

The Department of Agriculture cautions homeowners to be vigilant by:

Not opening your door to unfamiliar persons;

Take notice of your surroundings; and

Report suspicious people in your neighborhood or on your property to the local authorities.

## Announcements

### Fall Pasture Walk

Thursday, September 7, 2017 6:00 - 8:00 p.m.

Woodside Creamery

378 North Star Rd, Newark, DE 19711

Come and see how Woodside Creamery uses pasture to effectively feed the dairy herd. Learn how to identify weeds and how to control them in a pasture setting. In addition, the topic of integrated pest management on forage fields will be discussed. Hear how to take a proper soil sample and how to pick out the right fence charger for your operation. NRCS will give an update on the programs available for pasture planting. Experts will be on hand to answer specific questions.

The meeting is free and everyone interested in attending is welcome. If you have special needs in

accessing this program, please call the office two weeks in advance.

**Credits:** Nutrient Management (1) Pesticide credit(1)

6:00-6:05

**Welcome and Introductions**

Dan Severson, University of Delaware Cooperative Extension

6:05-6:20

**Tour of Pastures and Pasture Management**

Jim Mitchell, Woodside Farm Creamery

6:20-6:35

**Soil Sampling Techniques and How to Properly Submit Your Sample**

Karen Gartley, University of Delaware Plant and Soil Science Research Manager

6:35-7:00

**Weed Identification and Control in Pastures**

Quintin Johnson, University of Delaware Cooperative Extension

7:00-7:15

**Update on Natural Resource Conservation District Programs**

Brooke Jones, NRCS District Conservationist

7:15-7:35

**Integrated Pest Management in a Pasture Setting**

Bill Cissel, University of Delaware Cooperative Extension

7:35-7:50

**Choosing the Right Fence Charger for your Operation**

Dan Severson, University of Delaware Cooperative Extension

7:50-8:00

**Wrap up and Evaluations**

Dan Severson, University of Delaware Cooperative Extension

*To register or request more information, please call our office at (302) 831-2506. Mark your Calendar and call to register by Friday, September 1!*

Thank you and see you there. Dan Severson, Susan Garey

**New Castle County Fall Equine Program**

October 10, 2017

New Castle County Extension Office  
461 Wyoming Road  
Newark, DE 19716

**6:00 p.m. Global Worming: How to Prevent Dewormer Meltdown in the 21st Century**

*Dr. Rose D. Nolen-Walston, University of Pennsylvania School of Veterinary Medicine*

**6:40 p.m. New Castle County Conservation District Programs for Equine Operations**

*Mr. Kevin Donnelly, New Castle Conservation District Coordinator*

**6:55 p.m. Break**

**7:05 p.m. Preparing Your Pasture for Winter: Fall Fertilization and Weed Control**

*Ms. Susan Garey, University of Delaware Cooperative Extension*

**7:30 p.m. Preparing an Animal Waste Management Plan for Your Farm**

*Ms. Sydney Riggi, University of Delaware Cooperative Extension*

**7:55 p.m. Paperwork**

**8:00 p.m. Adjourn**

Nutrient Management CEUs are pending

---

**DSU Woodland Workshop Series**

*Please register for any or all of these workshops by contacting Megan (302) 857-6438 or emailing [mpleasanton@desu.edu](mailto:mpleasanton@desu.edu). (Please note that these workshops are not all at the same location.) You must register to attend these free workshops.*

**Chainsaw 101**

Saturday, September 23 10:00 a.m. – noon  
915 Kenton Rd. Dover DE 19904

This workshop will show you the do's and don'ts when it comes to chainsaw operations. You will learn safety tips as well as general chainsaw maintenance techniques. The class will be taught by Sam Topper from the Delaware Department of Agriculture's Forest Service.

**Selecting and Harvesting Firewood**

Thursday, October 26 3:00 – 5:00 p.m.  
142 Simmental Meadows Ln, Marydel, DE



During this workshop, you will learn what trees to choose for harvest and which to let grow. You will also learn techniques for harvesting and selecting firewood for sale. This class will be taught by a Delaware Department of Agriculture Forest Service Representative.

### **Tree Trimming**

Thursday, November 9 10:00 – noon  
884 Smyrna Leipsic Rd, Smyrna DE 19977

This workshop will teach you the importance of proper tree trimming. The first half of the class will be instructions on how to make a proper cut and the second part will be a demonstration outside.

### **Building Wood Duck Boxes**

Thursday, December 14 6:00 -8:00 p.m.  
884 Smyrna Leipsic Rd Smyrna DE 19977

Build them and they will come. During this session you will learn the importance of wood ducks and why we should promote the species. You will be able to build and prepare a wood duck box and take it home with you free of charge.

---

### **Small Ruminant Field Day: Reproduction**

Saturday, September 16, 2017

9:00 a.m. – 3:00 p.m.

DSU Hickory Hill Farm

2065 Seven Hickories Rd, Dover, DE 19904

Registration: 9:00 - 10:00am

Program: 10:00am - 3:00pm

Cost: \$15 (Lunch included)

### **AGENDA**

#### **Morning Session**

Basic Small Animal Reproduction

Reproduction: Pros and Cons of AI

Nutrition: Basics for Small Ruminants

Buck and Ram Selection & Management

#### **Afternoon Session** (1 hour each, pick 2)

Pasture Walk

Mobile Meat Processing Lab

Hoof Trimming

Register using the link below by September 2, 2017

<https://www.surveymonkey.com/r/HZPQW3K>

To request more information or for assistance due to disabilities, contact:

Kwame Matthews, Ph.D. - 302-857-6540,

[kmatthews@udel.edu](mailto:kmatthews@udel.edu)

Susan Garey - 302-730-4000, [truehart@udel.edu](mailto:truehart@udel.edu)

Dan Severson - 302-831-8860, [severson@udel.edu](mailto:severson@udel.edu)

---

### **Large Animal Emergency Rescue Training**

October 7 or 8, 2017 8:00 a.m. – 4:00 p.m.

University of Delaware Equine Science Program

UD Webb Farm, Farm Road, Newark

Do you know what to do in a large animal emergency? Are you prepared with equipment, know who to call, what to do? Whether you are a public safety official, a first responder, a veterinary professional, or an equestrian, this course is essential to prepare you for an emergency. You will learn how to move large animals safely and quickly in cases of disaster or injury, while preventing potential injuries to the humans involved. The course offers classroom instruction and hands-on scenarios using our specialized equipment and equipment that may be readily available to first responder departments.

A one-day clinic is being offered to educate first responders, horse owners or anyone interested in learning basic large animal rescue techniques instructed by Roger Lauze, the Equine Rescue and Training Coordinator for MSPCA. Fair Hill NRMA's new rescue trailer, donated by the Volunteer Mounted Patrol, will be utilized for the training. The cost for the full day of training is \$10 per person. Please bring your own lunch and drinks.

Registration is limited to 40 participants per day so please register early. Dress appropriately for the weather as you will be hands on after classroom work. Please bring leather gloves and safety helmet.

*For more information, contact Amy Biddle, Department of Animal and Food Sciences, [asbiddle@udel.edu](mailto:asbiddle@udel.edu) or (302) 831-2642.*

To register mail or email **registration form** to Amy Biddle. Pre-registration must be received by September 30, 2017 <https://cdn.extension.udel.edu/wp-content/uploads/sites/12/2017/08/25133805/LAERTform2017.pdf>

## Cut Flower Tour on the Eastern Shore

Tuesday, September 12, 2017

Commercial Cut Flower Farm Tours at: **Honeybee Farm**

Cordova, MD

**Smokey Cat Lavender Farm**

Federalsburg, MD

**Seaberry Farm**

Federalsburg, MD

Lunch and short Extension talks are part of the afternoon session at Seaberry Farm. For details of the program, get the brochure at

<https://extension.umd.edu/sites/extension.umd.edu/files/docs/programs/ipmnet/17Sep12C.pdf>

Cost is \$30 before September 8th; \$35 after this date. Lunch is not guaranteed after September 8th. Please note that no refunds will be given after September 8, 2017.

For more information on the program: (301) 596-9413 or [sklick@umd.edu](mailto:sklick@umd.edu)

Organized by University of Maryland

---

## Delaware Beekeepers Association's Open Hive Event

Saturday, September 23, 2017

8:30 a.m. – 12:00 p.m.

Delaware State University

Outreach and Research Center

884 Smyrna-Leipsic Road Smyrna, DE 19977

Please join us for educational lectures, demonstrations and a first-hand look inside a real honeybee hive. Get your first exposure to these important and fascinating insects!

(Rain Date September 24, 2017)

RSVP: *Kathy Hossler, DBA President*,  
[dbapresidenthossler@gmail.com](mailto:dbapresidenthossler@gmail.com)

Or for more information about DSU's beekeeping program, contact *Jason Challandes*,  
[jchallandes@desu.edu](mailto:jchallandes@desu.edu) or 302-388-2241

Cooperative Extension Education in Agriculture, 4-H and Home Economics, Delaware State University, University of Delaware and United States Department of Agriculture cooperating, Dr. Dyremple B. Marsh, Dean and Administrator. It is the policy of Delaware Cooperative Extension that no person shall be

subjected to discrimination on the grounds of race, color, sex, disability, age, or national origin.

---

## 2017 Dickeya and Pectobacterium Summit

November 9, 2017

The Potato Association of America meetings were held last week in Fargo, ND. Interesting items of note were:

- Scottish scientists (including Ian Toth and Gerry Saddler) recommend regulating *Dickeya dianthicola* as A2 quarantine pest. They also recommend a zero tolerance for all *Dickeya* spp. on potatoes in Scotland.
- Work from North Dakota and Maine presented changes in dormant tuber tests that increased *Dickeya* recovery (reduced the false negatives) by as much as 30 percent.
- There is a new *Pectobacterium* species reported from Maine that affects plants in the field and tubers in storage.
- There may be some progress in chemical control of the pathogens (and NO, it is not phosphorous acid, Tanos, or anything else applied to the foliage!!!)

Sound interesting? Valuable? These, and other speakers will all be presenting on these and other topics at the *Dickeya* and *Pectobacterium* summit in Bangor on November 9, 2017.

This is an opportunity to hear the latest information that you, as a grower, need to know about these pathogens and diseases.

There is still room at the upcoming *Dickeya* and *Pectobacterium* Summit:

<https://extension.umaine.edu/agriculture/programs/dickeya-and-pectobacterium-summit/>



# Weather Summary

Carvel Research and Education Center Georgetown, DE

**Week of August 17 to August 23, 2017**

**Readings Taken from Midnight to Midnight**

## **Rainfall:**

1.41 inch: August 18

## **Air Temperature:**

Highs ranged from 91°F on August 18 to 83° F on August 23.

Lows ranged from 74° F on August 21 to 64° F on August 21.

## **Soil Temperature:**

80.4° F average

Additional Delaware weather data is available at  
<http://deos.udel.edu/>

*Weekly Crop Update is compiled and edited by  
Emmalea Ernest, Associate Scientist - Vegetable  
Crops with assistance from Don Seifrit.*

University of Delaware Cooperative Extension in accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

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