WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

Volume 30, Issue 10 **May 27, 2022**

Vegetable Crops

Vegetable Crop Insect Scouting – *David Owens, Extension Entomologist,* owensd@udel.edu

Cole Crops
Diamond back moth continues to be active in fields. As a reminder, thresholds decrease to 5% as the plants begin to produce harvest structures (cupping to head formation in cabbage, beginning flower heads in broccoli), and kale is pretty much a constant low threshold. Rotate among two modes of action during a generation, which is roughly 30 days long. After the first set of rotations, switch active ingredients to a different mode of action set. Once the crop is harvested, destroy it quickly to deny DBM from using it as a green bridge to any later fall crop.

Cucurbits
Continue scouting for cucumber beetles. Recent cool, cloudy weather may have paused their migration into fields temporarily but that only means we need to be extra vigilant this week. Thresholds on young watermelon plants are 2 beetles per plant. While cucumber beetles do not transmit bacterial wilt to melons, they do open the plant up for infection with other pathogens and they can weaken the stem when feeding directly on it. Be sure to look under leaves and in the planting hole, especially in the afternoon as beetles hide from direct sunlight. If your plants are less than 2 weeks from having honeybees, consider a foliar treatment rather than a drip application. Effective foliar products that are less bee toxic include Assail and diamides such as Exirel, Minecto Pro, and Harvanta. Several other neonicotinoids are labeled for foliar application, and I suspect that this type of application is less likely to result in nectar or pollen residues, but have not seen research to indicate such.

Squash bugs are active. Begin scouting for egg masses. If you see one egg mass per plant, get ready to treat the plants. Wait until egg masses hatch, as early instar nymphs are the most susceptible to a treatment, while eggs are impervious to insecticide penetration.

Finally, begin scouting for spider mites. In 2021, spider mite populations peaked in many of the fields we sampled at the end of June. Pay attention to field and obstacle edges. This is where we saw most of our mites last year and the year before. Fields with pivot points often have weeds around that pivot point that can harbor spider mites and serve as a small point source. In 2021, we found some of our first mites adjacent to a small grave plot in the middle of a field.

Tomatoes and Eggplant
Scout for aphids, mites, and flea beetles. Flea beetle feeding on eggplant can very quickly lead to significant and even complete defoliation of small transplants, especially if they are not quickly growing. Tomatoes are also susceptible to flea beetles.

Snap Bean
Continue scouting for bean leaf beetle defoliation. Thresholds are 20% defoliation.

Sweet Corn
Begin scouting for whorl stage corn earworm. While it is unusual for us to reach the whorl threshold of 15-30% this early, it can happen.

Ladino (White) Clover for Row Middles in Plasticulture – *Gordon Johnson, Extension Vegetable & Fruit Specialist;* gcjohn@udel.edu

Researchers at Clemson University showed that the use of ladino clover can be an effective living row middle cover crop for row middles in plasticulture in organic production.

We believe this system could be used in all plasticulture crops with some advance planning.

Ladino clover spreads via stolons and can fill in row middles over time, smothering out weeds and allowing for full cover of row middles. It will not creep up the sides of the plastic but will fill in up to the tucks.

To be successful, follow these guidelines:

● Plant the whole field to ladino clover in September or March at a rate of 10 lbs per acre using a small seed drill. Inoculate seed with appropriate clover Rhizobium. We prefer the Regal variety.

● Till beds in the spring where plastic is to be laid. For spring plantings plastic can be laid in the field without additional tillage

● Limit traffic initially until the clover closes the row middle. If stands are light, wait to plant plastic until the clover has filled in the row middle.

Plastic mulch laid into clover planted in 2021. The clover will fill in the middles up to the plastic mulch tucks.

Plastic mulch laid in a spring planted clover field with no additional tillage. We will test how well it fills in the row middle in 2022.

Vegetable Transplant Stunting 2022 – *Gordon Johnson, Extension Vegetable & Fruit Specialist;* gcjohn@udel.edu

Growers are reporting problems with stunted transplants. In some cases, plants appear to have abnormal growth with compressed internodes, "twisted" stems, or abnormally shaped leaves. In other cases, plants are not putting on any new growth.

Transplant stunting can be caused by several factors during greenhouse production, during shipping and handling, during planting, and post planting.

Problems with Greenhouse Media

Each year there are some problems that arise with vegetable transplants related to issues with the growing medium. This is often seen as poor growth, yellow plants, or stunted plants. Greenhouse media manufacturers have good quality control measures in place but things can go wrong on occasion – inadequate mixing, critical components missing or in the wrong proportions (i.e. wetting agents, fertilizers, lime), or defective, poor quality components. Media can also be affected by poor storage and handling. Most commonly this occurs when it is stored outside and bales or bags get wet. In addition, media has a certain shelf life – old media often dries out and is hard to get rewetted.

When growers start filling trays, any media that does not handle well should be viewed as suspect and should not be used. Contact your supplier and have them inspect and run tests on the suspect media. Avoid using overly dry or caked media, media that is hard to loosen, media with a bad smell, water soaked media or media that is hard to wet.

Most media (but not all) will come with a starter lime and fertilizer charge. The fertilizer is designed to give about 2-3 week of nutrients. If the fertilizer is missing or improperly mixed or in the wrong proportion, seeds will germinate but seedlings will not grow much and will remain stunted. In this case, liquid fertilizer applications will need to be started soon after plant emergence.

Peat based media are acidic in nature and we generally can grow at lower pHs than soil. Plants will perform well from 5.4 to 6.4. Lime is added to peat-based media and reacts over time after first wetting so pH will rise over time. Above 6.4 we often see iron deficiencies in transplants. This also occurs if irrigation water is alkaline (has high carbonates) causing pH to rise too high over time.

In high pH situations, to get transplant growth back to normal, use an acidifying fertilizer (high ammonium content) for liquid feeds. Use of iron products, such as chelated iron, as a foliar application on transplants can help them to green up prior to the pH drop with the acid fertilizer. In severe cases with very high media pH, use of iron sulfate solutions may be needed to more rapidly drop the pH. Acid additions to greenhouse irrigation water may also be considered for where water is alkaline.

If lime is missing or inadequate, and pH is below 5.2, plants may have calcium and magnesium deficiencies or may have iron or manganese toxicities. This also occurs in media that has been saturated for long periods of time. To correct this situation, apply a liquid lime solution to the media and water it in well. Calcium deficiencies will lead to damage to growing points and stunted and distorted plants.

Media that does not wet properly may not have enough wetting agent or the wetting agent may have deteriorated. They will be difficult to water and will not hold water well thus stressing plants. Application of additional greenhouse grade wetting agent may be needed.

If the initial media fertilizer charge is too high, or if too high of concentration of liquid fertilizer feed is used, or if incorporated slow release fertilizer “dumps” nutrients, high salt concentrations can build up and stunt or damage plants. Leaf edge burn, “plant burn”, or plant desiccation will be the symptoms. Test the media for electrical conductivity (EC) to see if salt levels are high. The acceptable EC will depend on the type of test used (saturated paste, pour through, 1:1, 1:2) so the interpretation from the lab will be important. If salts are high, then leaching the media with water will be required.

Problems with Transplants in Small Cell Sizes

More and more transplants are being grown in small tray cell sizes. These small size transplant plugs can become extremely root bound and may not put on new roots after transplanting. Another issue is when small cell transplants become waterlogged by overwatering. There will be limited oxygen to roots in this situation and plants may turn yellow and remain stunted. This is very common in peppers.

Problems Related to Transplant Height Control and Greenhouse Conditions

Growers use a range of techniques to manage transplant height in the greenhouse. This includes limiting phosphorus (P) fertilization, minimizing day-night temperature differentials, brushing plants, limiting water, and using plant growth regulators (limited for vegetable transplants). Each of these if not properly managed can cause long term stunting. Most growth regulators labelled for floral crops are not labelled for vegetables. Plants exposed to limited P may have a severe deficiency that will take several weeks to grow out of. Warm season transplants exposed to cold air can become yellow and be stunted because roots stop growing. This is particularly a problem near vent inlets and in hardening off areas. Plants that are overly water stressed drop leaves and take a long time to recover. Plants exposed to damage from heaters that are improperly venting exhausts into the greenhouse may suffer severe damage and show yellowing, distorted growth,

and leaf drop. Diseases of roots, Pythium in particular, can be an issue, particularly when plants are placed directly on the ground (even if landscape fabric is in place). This can be a major source of plant stunting and transplant losses.

Herbicide Use in and Around Greenhouses
Transplant deformities and stunting can also occur when herbicides have been used to kill weeds in and around greenhouses. In the enclosed environment of a greenhouse, volatilization is enhanced and severe damage can occur from many common herbicides. Greenhouse vents and fans can draw in herbicides applied nearby also causing severe damage.

Problems During Shipping and Handing

Growers often receive boxed transplants from southern sources but cannot plant immediately. Plants that are shipped without trays (already pulled) or that are bare rooted that are packed tightly in boxes must be planted quickly. Delays will lead to plant deterioration, leaf loss, and potential disease buildup. Once transplanted, some of these plants may now grow out.

Planting and Plant Stunting
Transplants that are planted in extended cloudy periods may not grow well in the field, especially if plants have come out of the greenhouse after an overcast period. In years with cold, cloudy, windy weather after transplanting, we have had large losses of transplants in the field. 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 will often result in extensive losses of weakened transplants. Extra caution should be taken to minimize root injury during transplanting, particularly with vine crops. When transplanting, make sure that there is good root to soil contact and there are few air pockets around roots. Plant stunting can also occur with improper application of chemicals or fertilizers in the transplant water (phytotoxicity, salt damage)

Post Planting
We have already seen severe damage to transplants this year with seed corn maggots and root maggots post planting. Currently cucumber beetle feeding is a major problem that can lead to poor plant performance.

Fruit Crops

Scout Orchards for San Jose Scale – *David Owens, Extension Entomologist,* owensd@udel.edu

If you have not already done so, begin scouting for San Jose scale crawlers. We placed pheromone traps in several orchards to help time when to expect crawlers, but did not catch any. This does NOT mean that they are not present. Based on previous years' catch dates and degree day timing, crawlers should have just begun to emerge in the southern portion of the state, and a report came in mid-week of crawlers on black electrical tape. Crawlers will peak at about 500 degree days. Extension recommendations from other states suggest that if you have had weakened trees or observed fruit infestation last year, a treatment is advisable roughly a week after crawlers appear on tape samples.

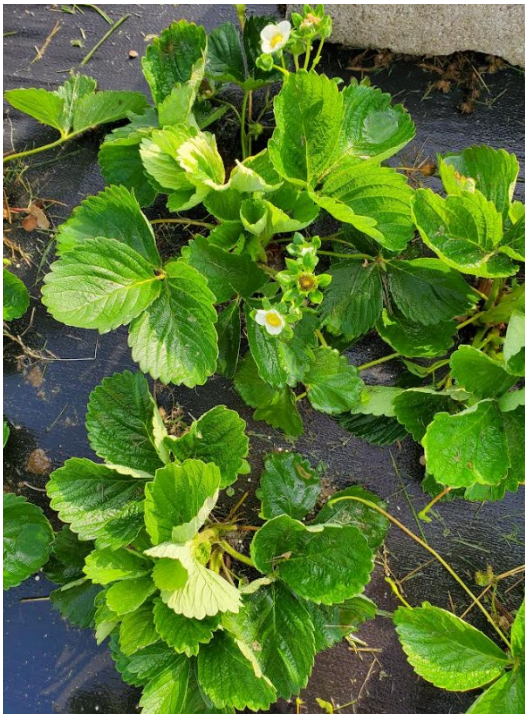
Strawberry Flowering, Runner Formation and Heat – *Gordon Johnson, Extension Vegetable & Fruit Specialist;* gcjohn@udel.edu

In our region, commercial strawberries are grouped in two classes based on their flowering habit: those that flower and fruit mostly once in the spring and those that continue to flower and fruit as long as temperatures are moderate. Strawberries thrive in cooler weather and production is affected when temperatures are hot.

Short day or June-bearing has been used to describe plants which start to bloom in late winter and produce one fruit crop per spring. Day-neutral, long day, or repeat blooming have all been used to describe plants which flower

multiple times and produce multiple crops over the course of the spring, cooler parts of the summer and fall.

Most of our commercial strawberries planted on Delmarva are June-bearing types. They start initiating flower buds after planting in the fall and begin flowering in late winter and spring as temperatures warm up. Flowering will continue until critical high temperatures are reached. This critical temperature at which flowering slows or ceases varies with cultivar but ranges are 80 to 86 ˚F daytime and 75 to 78 ˚F nighttime. At these temperatures runners form instead of flower-bearing branch crowns. The 90 ˚F temperatures we had this past weekend will have effectively stopped flowering in June-bearing varieties. Day-neutral varieties may also have stopped flowering but will start flowering again when temperatures drop down below the critical values noted above. Day-neutral varieties are also induced to produce flowers as days get longer in June.



June-bearing strawberries starting to runner in the heat.

Agronomic Crops

Agronomic Crop Insect Scouting – *David Owens, Extension Entomologist,* owensd@udel.edu

Corn

Continue scouting for cutworm, stink bug, slug, and the soil pest complex. Cutworm thresholds are 5% cut plants at V2-V4 or 10% of plants with signs of fresh leaf feeding. Dig around plants to determine if cutworm larvae are actively present. We visited a field last week that had cutworm feeding and cut plants, but many of the larvae we found were dead or dying as a result of an in-furrow insecticide application. Cutworms tend to be more common in late cover crop terminated, late planted corn fields. Another pest that can be present in such fields are brown stink bugs. They are attracted to small grains to reproduce, and if corn is planted into a small grain cover crop, they may feed on the seedlings. This can result in plants with rows of ragged holes, often with yellowing streaks above the hole. Severely impacted plants may tiller multiple times if the growing point has been fed upon. Early thresholds in corn are 13 or more bugs per 100 plants.

There are no rescue treatments for soil pests. Damage will appear as wilting whorl leaves or leaves with bright yellow streaks along the leaf margins.

Soybean

Continue scouting for slugs. Fields that have not yet been planted or beans that have not yet emerged, planted in no-till, cover crop, and/or fields with prior history of slug infestation should be carefully monitored. Slug baits are most effective if applied before soybeans have begun to crack the ground. Once soybean emergence begins, slug bait rapidly loses its best window of opportunity to protect a stand. Do not apply bait once stand emergence issues are evident unless your goal is to protect a replant. Remember to close seed slots, and if a field is a heavily infested, it might be more beneficial to lightly work the ground. I do not think tillage needs to be aggressive. We want to remove residue from the furrow and work the ground around the furrow. Anything that stimulates rapid

emergence and unifoliate leaf production will aid in slug management.

Alfalfa
Begin monitoring for potato leafhopper, especially on any fields that have just been cut. This is about when potato leafhopper begins to appear in our area. PLH saliva is phytotoxic to the plant, resulting in yellowing leaf margins. Once you see this characteristic 'hopper burn', yield potential is reduced. If you begin to see significant PLH numbers and the plants are large enough to cut, consider an early harvest. Harvesting alfalfa destroys nymphs and forces adults to leave the field.

Pythium Root Rot Infecting Corn

– *Madeline Henrickson, Graduate Student* and *Alyssa Koehler, Extension Field Crops Pathologist*; akoehler@udel.edu

Rainfall and cooler temperatures can favor root rot caused by the oomycete pathogen *Pythium*. Over the past week, we have seen plants with Pythium root rot scattered throughout the region. This disease damages the roots of seedlings, leading to symptoms such as stunting, yellowing, and even death. Symptomatic plants will display brown, rotted roots and mesocotyl (Figure 1). Over the past two-years, we have observed that seedlings surviving mild to moderate *Pythium* infections demonstrate reduced plant health and yield (Figure 2). Seed treatments with oomycete activity can provide some protection within 10-14 days after planting and can be helpful for improving seedling emergence and reducing pre-emergent damping off. Research is currently underway to examine how populations of *Pythium* can be quantified in the soil, and how these populations are related to management practices like irrigation and cover crop termination timing. We aim to study if these measurements can predict problematic fields before infection.

Figure 1. Corn seedling displaying symptoms of *Pythium* infection

Figure 2. *Pythium* infected plant (left) beside a healthy plant (right)

Small Grains Disease Update – *Alyssa Koehler, Extension Field Crops Pathologist*; akoehler@udel.edu

Symptoms of Fusarium Head Blight (FHB) have started to show up in barley and wheat (Figures 1 & 2). Although the season started at low risk, weather conditions shifted right at the start of flowering and have kept us at high risk over the past 2-3 weeks (Figure 3). Tips for scouting for FHB were shared in the update last week https://sites.udel.edu/weeklycropupdate/?p=20324. Over the next week, symptoms should be very visible to walk fields and assess the level of FHB present.

Figure 1. Wheat head with bleaching and orange sporulation due to Fusarium Head Blight

Figure 2. Barley heads with symptoms of FHB

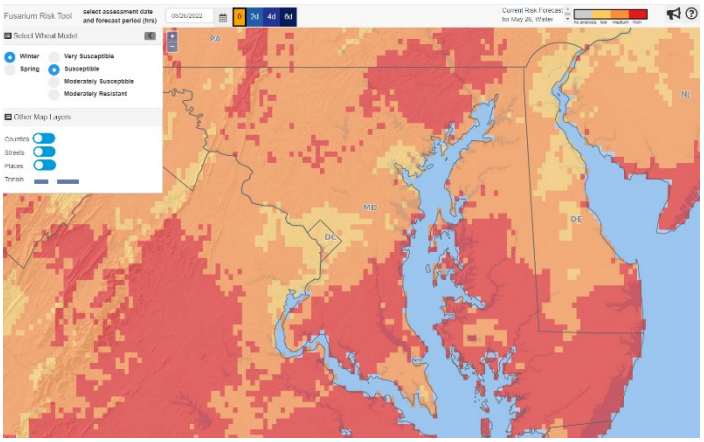


Figure 3. FHB Risk Model for May 26, 2022 (wheatscab.psu.edu)

Adjusting Fertilizer Recommendations in Times of High Input Cost

- *Amy L. Shober, Professor and Extension Specialist, Nutrient Management and Environmental Quality,* ashober@udel.edu; *Karen Gartley, UD Soil Testing Program Director,* kgartley@udel.edu, and *Jarrod O. Miller, Assistant Professor and Extension Specialist, Agronomy,* jarrod@udel.edu

With fertilizer prices approaching record highs, you may wonder if you can cut back on fertilizer applications without sacrificing yield. The short answer is yes! If your soil test is within the "optimum" or "excessive" range, skip the fertilizer. Your soils have adequate nutrient concentrations to support crop growth and the probability that fertilization will result in profitable yield response is very low. We feel very confident in the recommendation to skip fertilizers when soil test nutrients are >50 FIV, in part because we know that our predecessors effectively "padded" our agronomic critical level just to be safe.

For soils with soil test nutrients in the "medium" (i.e., 25-50 FIV) category, there is a moderate probability of crop response to additional fertilizer. We suggest that you can reduce P and K fertilizer applications to match crop removal. Estimate crop removal rates of nutrients by multiplying your realistic yield goal by the appropriate crop nutrient removal rate (Table 1).

Applying fertilizer at a crop removal application rate will significantly reduce the amount of fertilizer that you need to buy. For example, the UD broadcast recommendation for full-season soybean with a realistic yield goal of 65 bu/A is 110 lb P_2O_5/A and 160 lb K_2O/A at a soil test level of 30 FIV ("medium" soil test P and K). In contrast, estimated crop removal of P_2O_5 and K_2O at 65 bu/A is 47 (round to 50) and 80 lb/A, respectively. With potash (0-0-60) prices at approximately $875/ton, applying potash to a 65 bu/A soybean crop at crop removal rates represents a cost savings of $57/A.

Table 1. Average P_2O_5 and K_2O removal rates in grain of common agronomic crops grown in Delaware (Binford, 2008).

	Crop P_2O_5 Removal	Crop K_2O Removal
Crop	----------lb/bu----------	
Barley	0.35	0.24
Corn	0.33	0.21
Soybean	0.72	1.24
Wheat	0.42	0.21

For soils with soil test nutrients in the "low" (i.e., 0-25 FIV) categories, there is a high probability of crop response to additional fertilizer. We understand that you may feel uncomfortable applying crop removal rates. A 30% increase in fertilizer rate over crop removal for these "low" fertility soils will still save you money but better protect you from yield loss.

Here are some additional tips to get the most bang for your buck out of your fertilizer applications:

- Correct soil pH issues before fertilization. Keeping soils near the target pH for your crop ensures that nutrient availability is maximized across all nutrients. Applying lime at $30/ton is much more cost effective than applying high priced fertilizers, especially if those added nutrients sit in the soil in unavailable forms due to soil pH that is too low. Remember, only apply lime based on the results of an appropriate lime requirement test.

- Nutrients like P are easily fixed into forms that are not plant available when they come into contact with soils. Banding fertilizers for nutrients with a high fixation potential will greatly improve fertilizer use efficiency and will allow you to reduce rates over a broadcast application.

- Some nutrients, like K, are easily leached through Delaware's sandy soils. Applying only

what is needed for the current crop reduces the likelihood of excess nutrients that are highly leachable.

- Nitrogen application rates are not based on results of a soil test. Nitrogen management is tricky due to the potential for atmospheric losses and the biological nature of the N cycle. Use available tools (e.g., PSNT, chlorophyll meters, sensor-based applications) and make split applications to improve N use efficiency.

- Use an inoculant when planting leguminous crops like soybean to improve N fixation potential.

- Consider planting leguminous cover crops to increase N in the soil profile, but recognize that legumes will not fix N until flowering.

You might wonder why we feel comfortable reducing P and K rates so significantly during times of high input costs. This is because the University of Delaware nutrient recommendations for P and K were developed using a "build and maintain" approach (Figure 1). Essentially, following the UD recommendations for P and K results in fertilizer applications at rates that exceed crop need allowing you to "build" soil fertility when soil test concentrations fall below the agronomic critical level of 50 FIV (i.e., the point above which the probability plant response to fertilization is low). Once soil test concentrations are within the agronomic "optimum" range (i.e., 50-100 FIV), UD recommends fertilizing the soil with P and K at crop removal rates to "maintain" soil test concentrations within the "optimum" range. This "build and maintain" approach is most appropriate for building fertility on land that you own and in times of low input costs. However, this approach is not particularly appealing when farming rented land or in times when input costs are through the roof.

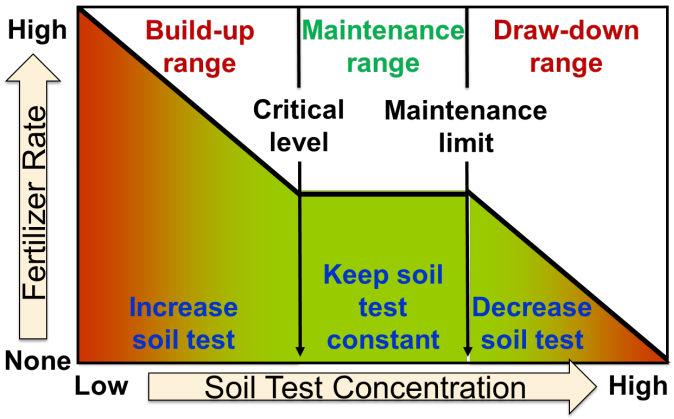


Figure 1. Under the "build and maintain" approach to soil fertility, fertilizer application rates are designed to increase (low or medium) or maintain (optimum) soil test concentrations. This results in fertilizer application rate recommendations that typically exceed crop need unless soils are in the "excessive" category. (Figure credit: B. Joern)

A "sufficiency" approach to fertilization is much more appealing when input costs are high or when farming rented land (Figure 2). With the sufficiency approach, you fertilize the crop only when the soil test nutrient concentrations are below the agronomic critical level (i.e., <50 FIV). With sufficiency fertilization, you are feeding the crop only and not adding more fertilizer than needed to "build" your soil fertility. As such, fertilizer application rates are much lower than what is listed in our standard nutrient recommendations.

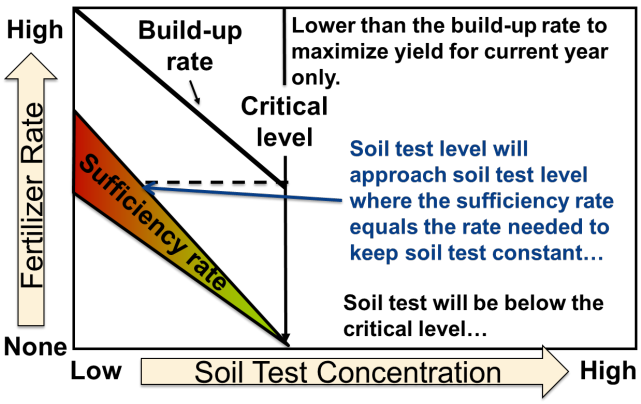


Figure 2. Under the "sufficiency" approach, fertilizer is applied only when soil test concentrations are below the agronomic critical level (i.e., 50 FIV for Delaware) and at rates designed to feed the crop and not the soil. (Figure credit: B. Joern)

Our nutrient recommendations for agronomic crops were developed decades ago based on the results of regional field trials in soils ranging from deficient to adequate for a given nutrient necessary to obtain meaningful soil test correlation and calibration. We have no record of field calibration trials from our region to develop "sufficiency level" fertilizer rates for P and K. (Note: Recommendations for Ca, Mg, and micronutrients are based on a sufficiency approach.) As such, we recommend basing P and K fertilizer rates on crop removal rates when soils test is below the agronomic critical level. We feel that rates based on crop removal better reflect rates that would be recommended under a "sufficiency" approach and will allow you to feed the crop and not the soil.

Over the past several decades, we have made adjustments to the UD nutrient recommendations using best scientific judgment. This has allowed us to expand nutrient recommendations to additional crops and to adjust inputs based on higher yield potentials that are possible due to improvements in genetics. While not ideal, this method of maintaining our recommendations has been necessary as funds for conducting soil test calibration and correlation trials has been hard to come by. More recently, UD researchers are participating in a national effort to develop the Fertilizer Recommendation Support Tool (FRST). The FRST online decision support tool will help farmers and crop consultants make science-based nutrient management decisions using data from local/regional field trials.

General

Does Your Farm Have a Short-Term Operating Plan?

– *Nate Bruce, Farm Business Management Specialist*, nsbruce@udel.edu

Most farming operations have primary decision makers in place that make timely decisions to guide the farming business. Anything can happen over the course of a farming season. Whether that involves injuries, illness, military deployment, or even death. It is important for others on the operation to know how to proceed if the key decision maker in the farming business can is unable to make decisions. Having a contingency plan in place is always a wise idea for any farming business. The University of Missouri Cooperative Extension developed a short-term operating plan to cover the "what-ifs" if such a situation occurred on the operation at the onset of the Covid outbreak. The plan is designed to assist an operation make it through a two-to-six-month period, or a typical farming season. Locating key information during a time of unexpected problems can often be difficult or stressful. This plan can help streamline this process and serve as a supplement to any farm business plan.

New Delaware Soil Health Website

The Delaware Soil Health Partnership has been hosting workshops, field days and other events focused on soil health management and local research since 2014. Now, the Delaware Soil Health Partnership has a new website where farmers and conservation partners can find information about upcoming events, locally relevant soil health research, recorded presentations from past events, and links to additional resources from around the region. At DelawareDigsHealthySoils.com, users can also join a mailing list to receive notifications when new events are added. The Delaware Soil Health Partnership is a collaborative effort between Delaware's Conservation Districts, USDA Natural Resources Conservation Service, the University of Delaware, Delaware State University, Delaware Department of Agriculture and the Delaware Department of Natural Resources and Environmental Control.

Paraquat Purchase and Use Required Registrant Training Reminder

- *Kerry Richards, Pesticide Safety Education Coordinator;* kerryr@udel.edu

Changes in the labels of products containing paraquat as an active ingredient have included changes in training requirements for applicators. In addition to being a certified pesticide applicator, to purchase or use paraquat products applicators must also complete specific

registrant training. **The training must be retaken every three years.** Training must be completed prior to using products with the new labeling which includes additional changes and use restrictions. The training provides important information about paraquat's toxicity, new label requirements, restrictions, and the consequences of misuse. The free training can be taken on-line at Paraquat - NPSEC

Additional information about the required training and significant changes in the Paraquat labels can be found at https://www.epa.gov/pesticide-worker-safety/paraquat-dichloride-training-certified-applicators and Paraquat Dichloride | US EPA

Physical Activity Benefits

- *Hannah Sherman, Community Health Intern, Sarah Goldring, Extension Agent,* sbercaw@udel.edu, *Gina Crist, Extension Community Health Specialist,* gcrist@udel.edu

Physical Activity is one of the best things people can do to improve their health. It is vital for healthy aging and can reduce the burden of chronic diseases and prevent early death. Physical activity helps you reduce stress/anxiety, function better mentally and physically, and sleep better. Active people generally live longer and are at less risk for serious health problems like heart disease, type 2 diabetes, obesity, and some cancers. For people with chronic diseases, physical activity can help manage these conditions and complications. Below is a chart with the benefits of adding physical activity into your lifestyle. Make sure to check out next week's post on physical activity recommendations for different ages.

Benefits of Physical Activity
For Children
• Reduces risk of depression • Improves aerobic fitness • Improves muscular fitness • Improves bone health • Promotes favorable body composition • Improves attention and some measures of academic performance (with school physical activity programs)
For Adults
• Lowers risk of high blood pressure • Lowers risk of stroke • Improves aerobic fitness • Improves mental health • Improves cognitive function • Reduces arthritis symptoms • Prevents weight gain

Source: https://www.cdc.gov/physicalactivity/index.html

Announcements

Webinar Series: Exploring the Elements and Interconnectedness of Our DE/MD Peninsula Food System

Mondays, stating April 11 12:00-1:00 pm EST
Online

Speakers from across a variety of food related sectors will offer presentations designed to increase knowledge about the make-up and workings of our DE/MD regional food system.

The health, heritage, economy, and culture of communities across the DE/MD region are all directly related to the production, distribution, preparation, and access to safe and healthy food. What are the connections that make up the regional "food system"? What are the links between how food is produced, processed, distributed, and sold across the region? How does our food system actually work?

Please CLICK HERE to Register

June 6
How Agricultural Production and Consumer Markets are Intertwined
Nate Bruce, Farm Business Management Agent, University of Delaware Cooperative Extension and Laurie Wolinski, Extension Agent - Agribusiness Risk Management, University of Delaware Cooperative Extension

June 13
Will Climate Change Impact our Regional Food System?
Jenn Volk, Associate Director of Cooperative Extension & Extension Specialist - Environmental Quality, University of Delaware Cooperative Extension and Emmalea Ernest, Scientist - Vegetables & Fruits, University of Delaware Cooperative Extension

TBD
Grazing, Food Production, and the Environment
Susan Garey, Kent County Extension Director & Extension Agent Animal Science and State 4-H Animal Science Program Coordinator, University of Delaware Cooperative Extension

Vegetative Buffers Demo Day

Friday, June 10, 2022 11:00 a.m. to 1:00 p.m.
Lower Eastern Shore Research and Education Center
27664 Nanticoke Road
Salisbury MD, 21801

We are inviting poultry growers out to see vegetative BMPs (best management practices). This event is an opportunity for poultry growers to come see what they can do to save time and money while supporting pollinators.

By using native plants, Delmarva poultry growers can:

- capture dust
- shade chicken houses
- deter Canada geese
- absorb excess nutrients before they reach local waterways
- reduce maintenance costs & time

Project Funding and Nutrient Management Credits available.

Tasty lunch provided.

Register at:
www.NanticokeRiver.org/Chicken

or call the Delmarva Chicken Assn.
302-856-9037 ex. 106

Spreader and Sprayer Calibration for Turfgrass Managers

Tuesday, June 7, 2022 9:00 AM - 6:00 PM
Paradee Center
69 Transportation Circle, Dover, DE 19901

A hands-on spreader and sprayer calibration event is scheduled to be held at the Kent County Extension Office on June 7th. John Emerson from University of Delaware's Cooperative Extension will be there to walk you through and demonstrate the proper calibration protocols for your sprayer and/or spreader. We will have a test course set up for the calibration of hose-end sprayers, backpack sprayers, and rotary spreaders (ride-on OR walk-behind). If you have new employees, or veteran employees who would like a refresher, this would be a great opportunity to get them hands-on experience in sprayer and spreader calibration training while obtaining Pesticide and Nutrient Management CEC requirements.

*We encourage you to bring your company's equipment so we can calibrate it together. Although, there will be sufficient equipment provided to illustrate proper calibration methods.

There will be (9) 1-hour slots available from 9am-6pm with one person or group per hour with a maximum of 3 people per group. For example, a "group" would be 1-3 individuals from one particular business/operation. Once an hour-slot is taken it will no longer be available, so reserve your spot as soon as possible.

Register online at: https://www.pcsreg.com/spring

Cost: $10.00

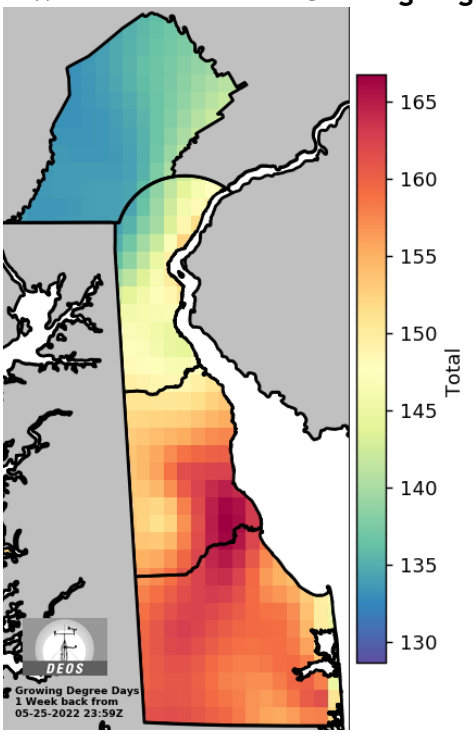
Approved for the Following Continuing Education Credits:
1.0 DE Nutrient Management
1.0 MD Professional Fertilizer Applicators (PFA)
2.0 Maryland Pesticide – Core
1.0 DE Pesticide Credits - Private, 1A (ag plant), and 03 (ornamental and turf)

If there is rain, a make-up session will be rescheduled at a later date

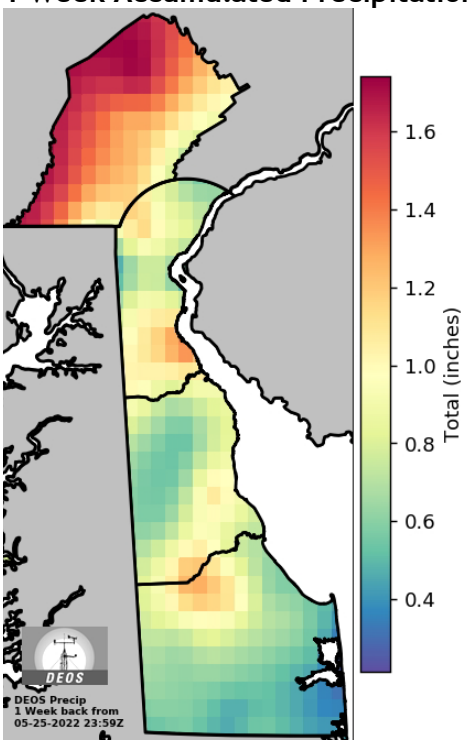
If you have any questions about the sessions, contact the Hilary Gibson at 302-735-8137 or nutrient-management@udel.edu

Weather Summary

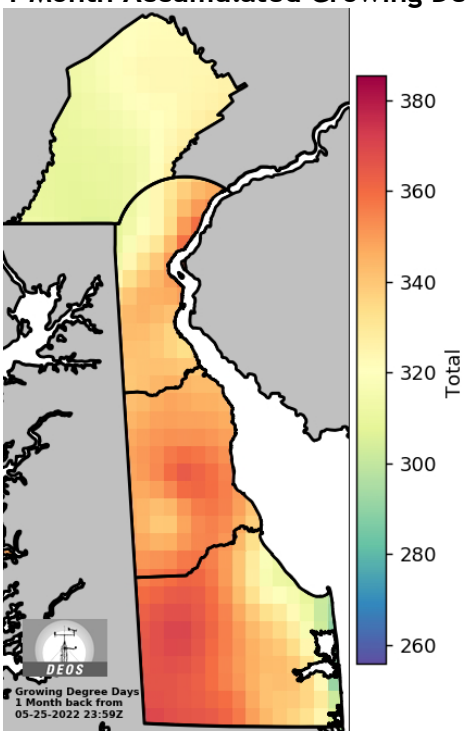
1 Week Accumulated Growing Degree Days



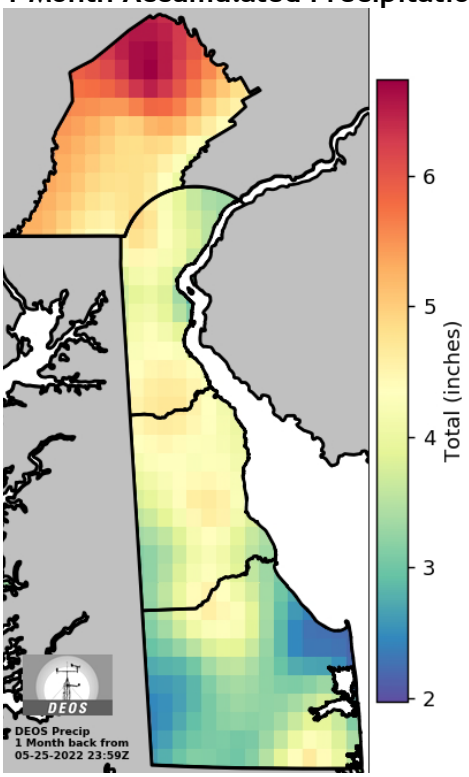
1 Week Accumulated Precipitation



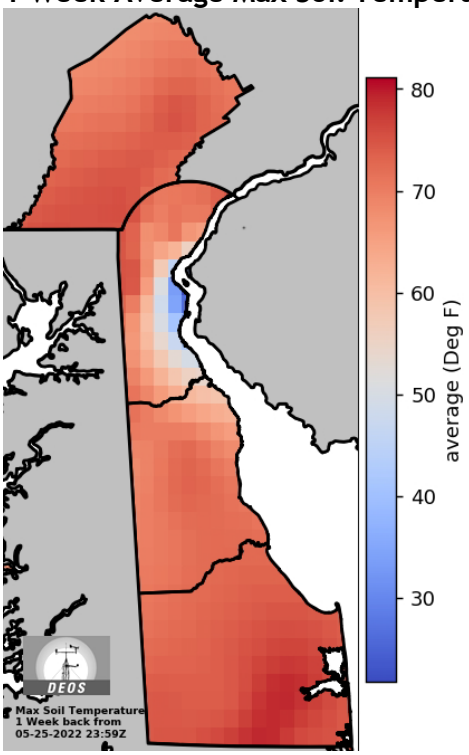
1 Month Accumulated Growing Degree Days



1 Month Accumulated Precipitation



1 Week Average Max Soil Temperature



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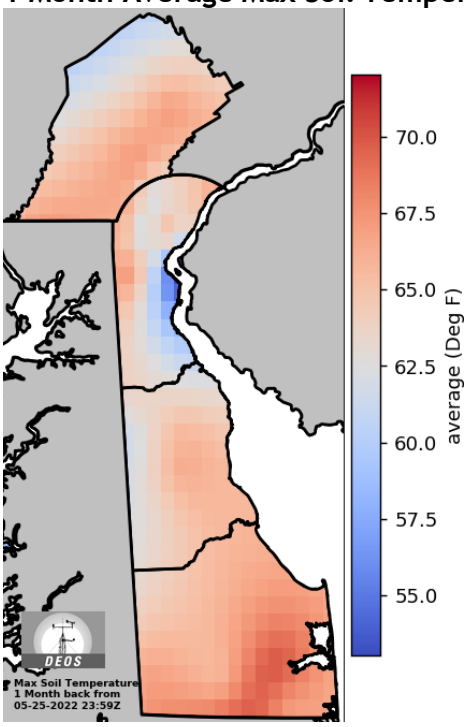

These weather maps are generated from DEOS weather station data and are part of a new Ag Weather website that is under development. Your feedback is welcome!
Thanks!! Emmalea (emmalea@udel.edu)

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

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