WEEKLY CROP UPDATE



UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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Vegetable Crops

Vegetable Crop Insect Scouting

David Owens, Extension Entomologist, owensd@udel.edu

Asparagus

Asparagus is beginning to come out of the ground, and soon asparagus beetle will be emerging to lay eggs on spears. Examine 10 plants in 5-10 different spots in a field, best on a warm, sunny afternoon when beetles are going to be most active. A treatment may be justified if 10% of spears are infested with beetles or 1-2% have eggs. Labeled products for spears include malathion, permethrin, and carbaryl.

Legumes

Seedcorn maggot continue to be active, albeit at lower levels than they were. Remember, fields with incorporated organic matter and especially incorporated poultry manure are most attractive to flies. Stunting is evident on peas planted at the research station the week of March 8th. Be sure to assess early season stand for signs of injury. Most of the larvae from the early March planting are now pupating and will emerge as adults in about a week.

An Adventure with Specialty Melons Emmalea Ernest, Extension Fruit & Vegetable

Specialist; emmalea@udel.edu

In 2019 I tested 28 varieties of specialty melons for yield and quality characteristics. This trial included familiar types like honeydew, canary and galia melons, but also some less familiar types like Hami melons and sweet & sour melons. If you direct market through a farm stand or farmer's market, unique specialty melons can be a draw for customers. I did several tasting events with the melons from this trial and participants were intrigued by the unique flavors and appearances of familiar and unfamiliar specialty melons.

April 12, 2024



'Shiny Green' and 'New Moon' were the highest yielding honeydew melons and had the highest brix among the honeydews.



The top yielding canary melons were 'Halo', 'Camino Europa' and 'Camposol'. All three varieties produced high yields and had average brix of 12.0 or higher.



'Passport' and 'Visa' were not the highest yielding galia melons, but they were the only ones with average brix above 10.0.



'Bonny' and 'Melemon' are sweet & sour melons that had very high yields and a flavor that was appealing to many taste testers.



'Golden Aroma' is a Hami melon that had very high yields and unique flavor and texture. Golden Aroma has crisp orange flesh with a texture similar to an Asian pear. The flavor is sweet and creamy. This variety took longer to mature, with melons ripening in early and mid-August from a May 23 transplant.



'Flourish', 'Red Aroma' and 'Miracle' were nonslip netted melons with good yields, firm flesh, and very sweet flavor. These varieties also matured in early and mid-August. Flavor and appearance are similar to firm fleshed cantaloupes, but the melons do not slip when ripe and have better storage potential.

I also tested two Charentais type varieties, 'Aspire' and 'D'Artagnan'. Both failed to produce acceptable marketable yields because of excessive cracking; a common problem with Charentais melons in our climate.

Most of the galia and canary melon varieties mentioned here are available from multiple suppliers. 'Halo' canary and the honeydew, sweet & sour, Hami, and non-slip netted melon varieties are from <u>Known-You Seed</u>.

Fruit Crops

The NEWA Strawberry Disease Model for Botrytis and Anthracnose

Emmalea Ernest, Extension Fruit & Vegetable Specialist; emmalea@udel.edu

Gray Mold (Botrytis Fruit Rot) and Anthracnose Fruit Rot, two important diseases affecting strawberry fruit, are best managed with timely control during the flowering period. For Botrytis, most affected fruit are the result of infections that occurred during flowering. For Anthracnose, flowers can become infected and produce spores that later spread to nearby ripening fruit.

The <u>strawberry section</u> of the <u>Mid-Atlantic Commercial Vegetable Production Recommendations</u> includes fungicide recommendations for both diseases. Timing of fungicide sprays should be informed by weather conditions. <u>NEWA</u> offers a <u>Strawberry Diseases Model</u> for predicting risk of infection by Anthracnose and Botrytis based on <u>DEOS</u> weather stations in Delaware. This tool includes risk levels based on the 5-day weather forecast. I have compiled the NEWA Strawberry Diseases Risk Levels for seven Delaware locations in the table below. Risk of infection has been low, but there is a high risk for Botrytis infection and a moderate risk for Anthracnose infection on Friday, April 12.

	Based on Observed Weather						Based on Forecasted Weather					
	Apr	Apr	Apr	Apr	Apr	Apr	Apr	Apr	Apr	Apr	Apr	Apr
Location	5	6	7	8	9	10	11	12	13	14	15	16
Risk of Anthracnose Infection Low <0.15, Moderate ≥0.15 and <0.50, High ≥ 0.50												
Hockessin	0.04	0	0	0.13	0.04	0	0.04	0.32	0	0	0	0
Newark	0.04	0	0	0.09	0.04	0.03	0.04	0.37	0	0	0	0
Kenton	0.03	0	0	0.15	0.04	0	0.04	0.45	0	0	0	0
Harrington	0.03	0	0	0.05	0.03	0	0.04	0.42	0	0	0	0
Bridgeville	0.03	0	0	0.04	0.03	0	0.04	0.41	0	0	0	0
Georgetown	0.04	0	0	0.06	0.03	0	0.05	0.37	0	0	0	0
Delmar	0	0	0	0.07	0.03	0.03	0.04	0.36	0	0	0	0
Risk of Botrytis Infection Low <0.50, Moderate ≥ 0.50 and <0.70, High ≥ 0.70												
Hockessin	0.02	0	0	0.01	0.02	0	0.04	0.84	0	0	0	0
Newark	0.04	0	0	0.02	0.03	0.02	0.04	0.85	0	0	0	0
Kenton	0.02	0	0	0.01	0.02	0	0.03	0.86	0	0	0	0
Harrington	0.02	0	0	0.01	0.02	0	0.03	0.86	0	0	0	0
Bridgeville	0.02	0	0	0.01	0.02	0	0.03	0.86	0	0	0	0
Georgetown	0.03	0	0	0.01	0.02	0	0.03	0.85	0	0	0	0
Delmar	0	0	0	0.01	0.02	0.02	0.03	0.85	0	0	0	0

Strawberry Anthracnose and Botrytis Infection Risk from NEWA on April 11, 2024

When risk levels are low (green highlight) fungicides are not needed to control disease. When risk levels are moderate (orange highlight), fungicides should be applied if other factors are present that increase disease risk, such as susceptible varieties or a history of disease in the planting, AND fungicides have not been applied for 7-14 days. When risk levels are high (red highlight) apply a highly effective fungicide as soon as possible if no fungicides have been applied for 7-14 days.

You can get the most recent and relevant strawberry disease risk information by checking the <u>NEWA</u> <u>model</u> for the DEOS station closest to your field.

Agronomic Crops

Small Grains Disease Updates

Alyssa K. Betts, Extension Field Crops Pathologist; <u>akoehler@udel.edu</u>

The wet spring had us off to a bit of a slow start, but small grains are rapidly moving as we get some of these warm days. Barley is approaching heading and wheat is ranging from Feekes 7-9. Powdery mildew has been at low levels and with the warmer temperatures continuing, it is unlikely to become much of an issue. Fusarium Head Blight (FHB), caused by species of the fungus Fusarium, is typically the most important disease of small grains in our region. Last year we saw low disease pressure across the region, but with the wet spring we have been having we will want to keep a close eye on risk levels this spring. The weather over the next few weeks will determine how large our risk will be this year. The Fusarium Risk Assessment Tool (www.wheatscab.psu.edu), a forecasting model that uses current and predicted weather forecasts to predict FHB risk, is now live for the season (Figure 1). Historically about 70% accurate, this tool aids in assessing FHB risk as wheat approaches flowering and fungicide application decisions are made. The pathogen that causes FHB infects through the flower and rainfall 7 to 10 days prior to flowering favors spore production and increases risk of infection. Within the map you are able to look at predicted risk for the current day or 2, 4, or 6 days out. You can click to adjust anticipated susceptibility based on the hybrid planted. This is where fall decisions can play a big role in Fusarium management as risk will vary depending on how susceptible the crop is. If you would like to receive text and/or email alerts you can sign up at Scab Alerts.

We are currently at low risk on The Fusarium Risk Tool (Figure 1), but with the rain coming at the end of this week, we move to more of a medium risk in the 6-day outlook (Figure 2). In barley, flowering begins just before the spike emerges from the boot. While florets are not as susceptible, *Fusarium* can infect the glumes and produce deoxynivalenol (DON). DON accumulation is the primary concern, especially for malting barley acreage. If making a fungicide application to manage FHB in barley, the optimum stage to protect barley glumes is when the spike is fully emerged from the boot and florets are exposed (Figure 3). Work in North Carolina has shown that application up to 6 days after 100% emergence can reduce infected kernels and DON.



Figure 1: Fusarium Risk Assessment Tool screenshot of predicted risk for April 11, 2024 www.wheatscab.psu.edu



Figure 2: Fusarium Risk Assessment Tool screenshot of predicted risk for April 11, 2024 6 day outlook <u>www.wheatscab.psu.edu</u>



Figure 3: Stages of barley at or near spike emergence, with the two right spikes (100% emergence and 6 days after) at optimum stage for fungicide application.

Agronomic Crop Insect Scouting

David Owens, Extension Entomologist, owensd@udel.edu

Slugs

Slugs are very active right now. While there are no true thresholds for slugs in field crops, a common benchmark is 1-2 slugs per square foot is a level of interest that may (or may not) cause stand issues. I get concerned about fields at this level especially if they have adult gray garden slugs in them as there tends to be a significant number of eggs in the soil that tend to hatch at about the same time. The weather could turn though and be unfavorable to slugs when seeds start going in the ground. Remember, anything that promotes rapid seedling growth, moves residue away from the furrow, and promotes a closed seed slot is important to reducing slug injury potential.

Alfalfa

Continue scouting for alfalfa weevil. Although the majority of the early hatch larvae should be cycling out, overwintered adults emerge and continue laying eggs. In previous years, these 'spring' eggs have not resulted in as large a population as the overwintered eggs, but there is still potential for an above threshold population, particularly in fields that had high numbers and were treated with a pyrethroid only. Alfalfa weevil also tends to be less mature in northern areas of Delmarva.

Early Season Moth Activity

This week, we have not been able to check the majority of our traps in time for this edition of the WCU. Joanne Whalen reports 11 black cutworm moths in Sudlersville, MD (this is a low count and not unusual or concerning at this time) and 0 true armyworm. The week before, we had only a handful of armyworm moths in a couple of locations.

<u>Considerations for Soil-Applied Herbicides</u> Mark VanGessel, Extension Weed Specialist; <u>mjv@udel.edu</u>

Planting any summer crop without a preemergence herbicide is a real risky proposition. Preemergence herbicides should be used in almost all situations. But what type of preemergence herbicide program should you use? A number of factors go into this decision; but cost should not be your number one consideration. An inexpensive herbicide program that does not provide effective control for your situation is going to be expensive in the long run.

Effectiveness is the number one criteria. Consider what are your common and problem weeds and select the herbicide(s) accordingly. This does not mean that you need to select an expensive herbicide, but you want to be sure you have the right active ingredients for your needs. Is your postemergence herbicide program highly effective and are you confident you can get to this field in timely manner? If the answer is yes and yes, then you can factor this into your decision. Otherwise, you may need to include "a little extra insurance" with your preemergence herbicide.

When are you putting out your preemergence herbicides? Usually with conventionally tilled crops these herbicides are applied within a few days of planting, but with no-till these herbicides might be applied 2 to 3 weeks before planting. Some herbicides remain active longer than others, but all soil-applied herbicides are only effective for a matter of weeks (not months). If you want to get 5 to 6 weeks of residual control you need to select accordingly, just be aware that few herbicides will provide effective control for this long.

Speaking of herbicide longevity, what are you going to planting into the field this fall or next year? Is herbicide rotation going to be an issue for you?

Have you thought about resistance management? Do you have species that are prone to developing resistant populations? Are you rotating your herbicide mode of actions, so you are not relying on the same ones? Weeds are resistant to soilapplied herbicides as well as postemergence herbicides and so you need to think of a herbicide resistance management beyond a single application or single season to be sure you are not setting yourself up for problems down the road.

Do not think of your soil-applied herbicide in isolation, think of it as part of a program and select the herbicide(s) that best fit your situation. And what works for your neighbor may not work for you.

General

Guess the Pest "Puzzle Edition"

David Owens, Extension Entomologist, owensd@udel.edu

This year, we will be running 'Guess The Pest' with regularity, but we will break things up a bit with puzzles to solve. If you want to enter your solutions for an end of season scouting prize, you can email or text your solutions to <u>owensd@udel.edu</u>.

Our first puzzle of 2024 will focus more on early season insect pests. Have fun!



ACROSS

- 5 This type of beetle is a serious defoliator of alfalfa
- 6 Pests of no-till fields in cool, moist coniditons that shred leaves
- 7 These cucurbit specialists transmit bacterial wilt to cucumber and squash

DOWN

- 1 Pest of seedlings. Moths lay eggs in weedy field and larvae hide in soil
- 2 This used to be THE pest of corn, potato, pepper, and snap bean but is now very uncommon
- 3 These insects transmit barley dwarf virus
- 4 these small jumping insects can be very serious defoliators of eggplant
- 5 this seedling pest is orange and drills holes in seeds

Pest Portal Update

David Owens, Extension Entomologist, owensd@udel.edu

I've mentioned a few times previously that Syngenta maintains a free text alert notification system called Pest Patrol when regional specialists post a voice recording of interest. You can find out more and subscribe here: <u>https://www.syngenta-us.com/pest-patrol</u>. You can select a state or region of interest and select crops for which you are most interested in.

Pesticides and The Endangered Species Act: What You Need to Know

Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

The following description has been endorsed by the Weed Science Society of America, Entomological Society of America, and American Phytopathological Society.

1: What is the Endangered Species Act (ESA)?

The Endangered Species Act is a long-standing federal law, first passed in 1973, which requires government agencies to ensure any actions they take do not jeopardize a species that has been federally listed as endangered or threatened. When an agency has a proposed action that might affect a listed species or its habitat, they consult with one or both of the agencies that helps enforce the ESA, the <u>U.S. Fish and Wildlife</u> <u>Services</u> or the <u>National Marine Fisheries Service</u> (this is known as "*a consultation*" with "*the* <u>Services</u>"). The Services then may recommend changes to the project or action to protect listed species or habitats.

2: How does the ESA affect pesticide use?

The Environmental Protection Agency (EPA) <u>Office of Pesticide Programs (OPP)</u> is the federal agency that regulates pesticide use. Because the use of pesticides can affect animals and plants (or their habitat), pesticide registrations are considered "actions" that would trigger an endangered species consultation.

3: Why am I hearing about the ESA and pesticide use now?

Due to the complex nature of the process, the EPA has not fully completed the required endangered species consultations with the Services for pesticide registrations in the past, which has left many of those pesticides vulnerable to lawsuits. Courts have annulled pesticide registrations which has led to their removal from market. To make pesticide registrations more secure from litigation, ultimately all pesticide registrations will comply with the <u>Endangered Species Act</u>.

4: How will this affect the pesticide I use today?

Many pesticide labels **will likely have changes that could include**:

- Requirement to check the <u>EPA's</u> <u>Bulletins Live! Two</u> website and follow current ESA restrictions for the pesticide product in the bulletin.
- Measures to reduce spray drift.
- Measures to reduce runoff/erosion.
- Other measures to reduce pesticide exposure to listed species and their habitat.

In short, farmers and applicators should expect to see some new application requirements on their pesticide labels. But there is no need to panic. To date, no pesticide has ever been fully removed from the market based solely on endangered species risks, and that remains an unlikely scenario in the future.

5: Why does complying with the ESA matter?

By starting to fully comply with the ESA, **EPA anticipates that this will give farmers and applicators more stable, reliable access to the pesticides they need.** Furthermore, the ESA has been successful at bringing back some species Americans care about - such as the bald eagle or the Eggert sunflower - and restoring them to healthy populations, which has benefited the natural and cultivated ecosystems that agriculture (and society) rely on.

More on Endangered Species and Pesticide Use

Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

As mentioned in the previous article, future pesticide labels will likely require management strategies (mitigations) to prevent pesticide drift and runoff/erosion from treated fields. There is an opportunity to share your thoughts and experiences on potential mitigation measures with members of the Association of American Pesticide Control Officials AAPCO <u>https://aapco.org/</u> which represents the state pesticide lead agencies.

Subject: Roundtable to Discuss the Implementation of Mitigation Measures Related to Endangered Species and Pesticides

What: Please join a group of state pesticide program officials and University of Maryland Extension (UME) staff for a roundtable discussion to share ideas and insights related to the proposed use of land management and soil conservation measures for pesticide mitigation.

When: Tuesday, April 16, 2024, 3:30-4:30 pm. The roundtable will be part of the pesticide regulatory group's field trip and visit to the Chesapeake Farms. You are welcome to join the tour of Chesapeake Farms (1:30-3:30pm). Where: Chesapeake Farms, 7319 Remington Dr, Chestertown, MD 21620

To register use this

link: https://go.umd.edu/chesapeakefarmvisit

If you have any questions, please reach out to Dwayne Joseph (<u>dwaynej@umd.edu</u>) or Jenny Rhodes (<u>jrhodes@umd.edu</u>).

Announcements

Webinar on Drones for Weed Management Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

GROW (Get Rid of Weeds) is hosting a webinar on use of drones for weed control. The webinar will include folks who are using this technology on-farm, it will address where this technology is currently working well, and what might be coming soon to the marketplace. The webinar will be moderated by Dr. Steve Li from Auburn (a leader in this area) and speakers include Tyler Mudd, farmer, and drone operator, from Monroe City, MO and Rick Jordan, operations manager, CNY Drone Services, NY.

The webinar is **April 15, 2024 at 2pm ET.** Zoom link is Zoom Link:

https://virginiatech.zoom.us/j/83630495271?pw d=TzBsbWN4Tld6R1hWWGdnekNlMWw3QT09 Passcode: 819778

Delaware Grain Marketing Club Meeting Wednesday, April 17th, 2024 6:00-8:00 p.m. University of Delaware Paradee Center 69 Transportation Road, Dover, DE

The Delaware Grain Marketing Club will have its second quarter meeting of 2024 on April 17th at the Kent County Extension Office. Topics will include a grain market outlook, production issues to watch for in 2024, and strategies to keep up with market prices during the season. Dinner will be provided.

To register, please contact Lisa Collins.

E: <u>lcollins@udel.edu</u>

P: 302-831-3402

Please contact Nate Bruce <u>nsbruce@udel.edu</u> with any questions.

Correspondence with UD Nutrient Management Program

Amy Shober, Extension Nutrient Management and Environmental Quality Specialist; ashober@udel.edu

The UD Nutrient Management program recently bid a fond farewell to Hilary Gibson, as she has left UD to pursue a new opportunity. Hilary has been the main point of contact for several years related to nutrient management certification and continuing education guestions. As such, we wanted to make our clientele aware that the Nutrient Management Program Coordinator position is currently vacant, and we are currently working to refill this position. In the meantime, please send all email inquiries related to nutrient management to nutientmanagement@udel.edu. We also ask that you bear with us in the near future as you may experience slight delays while we are short staffed. We will do our best to respond to emails and enter accrued credits in a timely fashion.

<u>Qualified individuals interested in potential</u> <u>employment with the UD Nutrient Management</u> program can view the position description here.

Job Posting: Research Associate - Vegetable Crops

The University of Delaware Extension Vegetable and Fruit Program, based at the Carvel Research & Education Center in Georgetown, Delaware, conducts applied research and provides Extension support to Delaware's vegetable and fruit growers. This full-time position will support a grant funded research project in the area of lima bean breeding and genetics and vegetable variety trials. Funding is in place for 3 years with continued funding support anticipated. The Research Associate will work under the supervision of the Extension Vegetable and Fruit Specialist.

Responsibilities:

Manage greenhouse and field production of lima bean breeding lines and experimental populations. Assist with yield trials and drone-based phenotyping of lima bean breeding lines and experimental populations.

Provide supervision and direction to seasonal employees.

Organize trial seed acquisition, inventory, and distribution.

Assist with establishment, maintenance and data collection of applied vegetable and fruit research plots.

Qualifications:

Bachelor's degree in horticulture, plant science, plant breeding, or related field and two years' related experience, or equivalent combination of education and experience.

Must have or obtain Delaware Pesticide Applicator Certification.

Experience with field and greenhouse production.

Familiarity with statistical analysis and software is preferred, along with Microsoft Word, Excel, or equivalent program.

Experience with UAV systems, remote sensing and image analysis preferred. Hires will be expected to obtain a FAA - 107 Remote Pilot Certificate.

Additional information at:

<u>https://careers.udel.edu/cw/en-</u> us/job/500920/research-associate-ii-vegetablecrops

Farmer Stress, Stigma and Mental Wellbeing Survey Maria Pippidis, Extension Educator;

pippidis@udel.edu

Farmers & ranchers, farm workers, foresters, aquaculture, marine producers, and others who live in Delaware communities and those who work in agriculture related industries are invited to participate in a short survey about stress and mental health. We want to hear from you. Participation in this project is anonymous and is entirely voluntary. You may skip any question that you do not wish to answer, and you may discontinue at any time. West Virginia University Extension is taking the lead on this regional survey. Please consider participating in this important Northeast region study.



Participants who complete the survey are <u>eligible to be entered in a drawing for a Gift</u> <u>Card</u>. One person will be selected randomly from each state in the Northeast region to receive a \$50 Amazon gift card.

For more information and to participate, follow the QR code or enter one of the anonymous links below. The survey is open through April 2024 and the Gift card drawing in May.

The study is trying to understand access and barriers to mental health resources in agriculture. You can use the QR code or go to this website: <u>https://bit.ly/Cultivemos</u>

This survey is funded through FRSAN - Northeast (Farm and Ranch Stress Assistance Network) and is being conducted by the Extension systems within this region.

If you are looking for resources in Delaware about this topic, please google Delaware Got Your Back or go to

https://www.udel.edu/academics/colleges/canr /cooperative-extension/nutrition-wellness/gotyour-back/

Are you a Corn Farmer? We Want to Pay You to Earn 1 DE Nutrient Management Credit!

Farmers in DE who grow corn and are interested in learning more about in-season nitrogen modeling tools can participate in a 30-minute, farmer-friendly computer simulation. All participants are paid for participation (up to \$150 in a gift card) and earn 1 DE Nutrient Management Credit (1 MD credit also available) for using N model outputs to make management decisions on a virtual farm. Responses are anonymous and personal information will not be shared outside the project team. If you are interested, please fill out this <u>form</u> and you will be sent instructions by email to participate.

UD Nutrient Management is Hiring a Program Coordinator

Are you interested in working with UD Cooperative Extension and the Nutrient Management Program? We are currently looking to hire a **Program Coordinator**.

As a reminder, we ask that you send all emails related to nutrient management education, certification, or continuing education to <u>nutient-management@udel.edu</u> while we work to fill the Program Coordinator position. Please bear with us in the near future as you may experience slight delays while we are short staffed. We will do our best to respond or enter credits in a timely fashion.

Weather Summary

1 Week Accumulated Growing Degree Days



1 Month Accumulated Growing Degree Days



1 Week Accumulated Precipitation



1 Month Accumulated Precipitation



Weekly Crop Update is compiled and edited by Emmalea Ernest, Extension Fruit & Vegetable Specialist and Drew Harris - Kent Co. Ag Agent

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