

Ag Notes

Harford County Newsletter

UNIVERSITY OF
MARYLAND
EXTENSION

May 2022

University of
Maryland Extension

Harford County
Agricultural Center

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M—F 8:00 a.m.—4:30 p.m.

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Hello, Harford County!

Unseasonably cool weather in March has extended into April and again into May. Air temperatures are reluctant to move much past 70°F, which has made for a somewhat slow start to our growing season. If you planted corn on April 18, it has only accumulated about 30 growing degree days (GDD), which is about a third of what's needed for germination (about 100-120 GDD are needed for corn germination). The 30-year average GDD accumulation from April 18 to now (May 2 as I write this) is 43. As you can see, we are slightly behind the normal. Seed will sit in cool soils for longer until it warms up, which can lead to potential stand reductions.

If you planted any early soybeans or corn, I would advise scouting those fields thoroughly once they emerge to determine emergence and population. Soybeans are particularly adapt to compensating for reduced stands; as a matter of fact, they can yield up to 90% of their potential all



The Extension office will be closed
on May 31 for Memorial Day.

the way down to as few as 60,000 plants per acre—so don't pull the trigger too quickly to replant soybeans.

Corn, however, does not compensate well for reduced or uneven stands. Corn stands less than 17,500 plants per acre will have a 15-20% or more reduction in yield. Given the current state of farming economics, you will want to pay careful attention to stands and carefully consider any re-plant decisions if you have to cross that bridge. Hopefully, temperatures will warm up and plants will jump out of the ground.

As we get into the growing season, I would like to once again remind you that Extension is here to help with our network of resources. Please contact me with any questions or problems you may have.

Until next time,
-Andy

Harford Ag Grants Open

Harford County Agriculture Grants will be open from **now through June 17**. Anyone can apply for this grant program but projects must support Harford County Agriculture. \$20,000 maximum award per applicant and matching funds only; county pays 75% and the applicant pays 25%. Grants are for reimbursements only (receipts required) and not for capital improvements or permanent structures.

Applications are handled online through the Harford County Government website, <https://www.harfordcountymd.gov/1655/Agriculture>. Questions about the program can be directed to Jason Gallion, (410) 638-3511 or jcgallion@harfordcountymd.gov.

All applications are due **June 17, 2022**.



Andrew Kness, Agriculture Extension Agent
University of Maryland Extension, Harford County

Although we have had a relatively cool spring, wheat will soon be flowering in a couple of weeks, which means the potential for head scab, or Fusarium head blight (FHB), will be here before we know it. Fusarium head blight is the most important disease affecting small grains in the mid-Atlantic. With the war in Ukraine triggering record-high wheat prices, you'll want to be sure to cash in on a potentially big crop.



A. Kness, Univ. of Maryland

Figure 1. Symptoms of Fusarium head blight on wheat.

Fusarium head blight is favored by extended periods of high moisture/relative humidity and moderately warm temperatures (59-86°F). These weather conditions during anthesis (flowering) are necessary for infection to occur.

Management of FHB should start at planting by selecting moderately resistant wheat varieties (there is no complete resistance to FHB in commercial wheat lines). As we near flowering in wheat, we need to pay attention to the weather conditions. If temperatures remain between 59-86°F and we have rain/high

humidity during flowering, the risk for FHB infection is high and you may consider applying a fungicide at anthesis to protect grain quality and yields. The Fusarium Risk Assessment Tool (www.wheatscab.psu.edu) can help predict the risk of FHB infection in wheat. Historically about 70% accurate, this tool aids in assessing FHB risk as wheat approaches flowering and fungicide application decisions are made.

The optimal fungicide application interval is between anthesis (Feeks 10.5.1) up to about 5 days after. Fungicide applications made outside of this window have a much lower probability of reducing vomitoxin (DON) concentration in the harvested grain. Although new products like Miravis Ace are labeled and even advertised to be applied earlier, **it is still best to wait for the main tillers to be at 10.5.1 or a few days beyond**, so that secondary tillers have a greater chance of being at 10.3-10.5.1.

Triazole (FRAC group 3) fungicides that are effective on FHB include Caramba (metconazole), Proline (prothioconazole), and Prosaro (prothioconazole + tebuconazole). Miravis Ace (propiconazole + pydiflumetofen) offers a triazole + SDHI, FRAC group 7. There are also two new products on the market, Spharex (metconazole [3] + prothioconazole [3]) and Prosaro Pro (prothioconazole [3] + tebuconazole [3] + fluopyram [7]). As a reminder, fungicides containing strobilurins (QoI's, FRAC 11) should not be used past heading because these fungicides can result in elevated levels of DON.

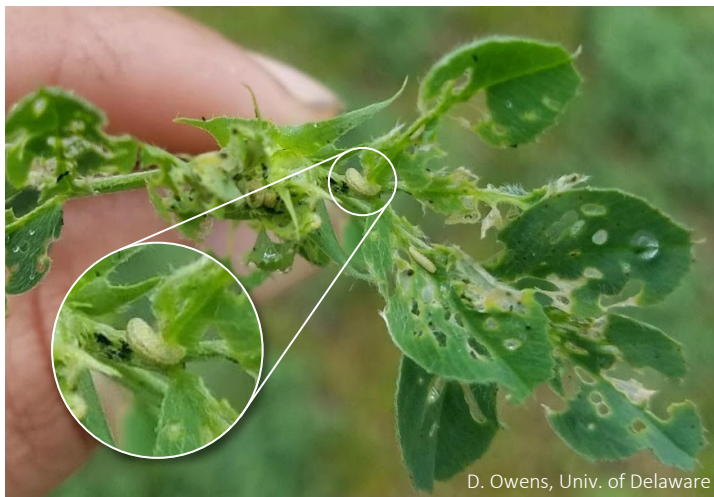
Flat fan nozzles pointed 90° down are great at covering foliage, but they do not provide as good of coverage on heads, which is the target for FHB management. Nozzles that are angled forward 30-45° down from horizontal (30 degrees is better than 45) or dual nozzles angled both forward and backward give better contact with the head and increase fungicide efficacy. For ground sprays, fungicides should be applied in at least 10 gallons of water per acre to achieve good coverage.



Scout For Alfalfa Weevils

David Owens, Entomology Extension Specialist
University of Delaware

If you have not yet scouted alfalfa for weevils, now is the time! Alfalfa weevil eggs began hatching earlier this year than usual, and we found active weevil larvae almost three weeks ago in Hebron and Greenwood (Figure 1). Alfalfa weevil adults fly into fields in the fall, mate, and begin laying eggs. In our area, fall weather is warm enough for weevils to mate and have enough time to lay a significant number of eggs before advancing cold weather causes them to seek overwintering shelter outside of the field. Weevils are not active below 48 °F. Once warmer weather returns in March, weevils will come out of overwintering habitat in woods and leaf litter and fly back to alfalfa to continue laying eggs. Egg laying scars on stems will appear as small round circular punches in the stem.



D. Owens, Univ. of Delaware

Figure 1. Alfalfa weevil larvae feeding on alfalfa.

There are three implications our warm fall weather has when comparing Delmarva alfalfa weevil activity to other states. First, we can have extremely early weevil hatch, and have heard rumor of weevil damage to alfalfa in December in some states. Second, it means that degree day models used in more northern and western regions might not be accurate enough and fields may need to be treated before the degree day targets have been reached! Third, it means we can have an extended spring activity period lasting 8 weeks or more.

To scout a field, select 30 stems by randomly walking to six locations and plucking stems from those locations. Take a few of the stems at a time and beat them vigorously against the side wall of a bucket to dislodge weevil larvae. Also measure the length of a few of those stems to get an average stem height. Penn State has a great alfalfa weevil control fact sheet with a dynamic threshold table based on stem height, value of the hay, and control costs. We incorporated the table into the UD Insect Control in Alfalfa document which can be found [here](#). Be advised that small weevil larvae often hide in the half folded terminal leaflets

and are not easy to dislodge. You may want to visually examine the terminals after shaking stems.

When making an insecticide application, use higher water volume rates to ensure good coverage, especially into the terminals. Do not apply an insecticide a couple of days before or after a significant cold spell. Weevil larvae need to be active to come into contact with treated foliage. Keep good records of previous applications and be sure to scout fields after application. We can have new weevil hatch after a spray, justifying a second and sometimes even a third application prior to cutting. Our insecticide selection is very limited in alfalfa, and for this reason it is possible that besides environmental factors there can be some intrinsic factors in your local population that could render them less susceptible to a given insecticide if it has been used continuously for a long period of time. The most consistent active ingredient has been indoxacarb (Steward). It has a supplemental 2ee label for reduced rates, 4.0 to 11.3 fl oz per acre as opposed to the main label rate range of 6.7 to 11.3 fl oz. It also provided excellent residual control in last year's trial at the 6.7 fl oz rate. FMC advises lower rates should have about 8-14 days residual, higher rates up to 21 days. When making an application to alfalfa, industry recommends including a spreader sticker type adjuvant such as an organosilicone to improve coverage. As always, make sure to read the labels of all products applied or tank-mixed to make sure there are no mixing concerns. Please note that a high rate of Besiege is equivalent to a high rate of WarriorII in terms of lambda cyhalothrin active ingredient. The addition of chlorantraniliprole is not effective on alfalfa weevil.

Finally, be aware that pyrethroids can flare aphids. Dimethoate, while not consistent in its ability to suppress alfalfa weevil, is excellent on aphids, and you may see some advice regarding tank mixing the two active ingredients. While aphid outbreaks are unusual, they can happen. There are two newer products registered and are excellent on aphids: Sivanto and Sefina (see supplemental labels). Neither has alfalfa weevil efficacy but will just about zero out aphids should they be a concern. Otherwise, if you do experience an aphid outbreak, they are usually late enough that the field can be cut early.

Andrew Kness, Agriculture Extension Agent
University of Maryland Extension, Harford County

A weed is defined simply as a plant out of place or a plant that is deemed undesirable. For example, a corn plant is a weed in a soybean field, even though we generally do not consider corn as a weed. In pastures, weeds can be any plant other than what we are trying to maintain as a forage in our pasture. This document provides a brief overview of some principals of weed management in pastures.

Plant Competition

The most effective and cost-effective way to manage weeds is to prevent their encroachment in the first place. Weeds are generally opportunistic, meaning they will occupy bare spots in the soil where our desirable forages are absent. To reduce bare spots, maintain “happy” and healthy forages in your pastures. This includes:

- Soil testing. Test your soil at least once every three years to determine the chemical and physical properties of your soil. Pay particular attention to soil pH and fertility levels. You should maintain a soil pH between 6 and 7 to ensure optimum growth of your pasture forage species. Lime your soils if the pH drops below 6 by following rates determined from a soil test report or your Nutrient Management Plan. Maintain adequate levels of phosphorus and potassium (potash). We often find that pastures are not fertilized to optimum levels, which stresses the forages and encourages weed growth.
- Fertility. As mentioned above, ensure your pastures are fertilized to optimum levels per your soil test and Nutrient Management Plan. Predominantly grass pastures often require supplemental nitrogen to achieve sufficient growth. Consider applications in the early spring and late summer/fall to promote healthy and vigorous grass

forage growth, which will help to choke out weeds. Pastures that are mixes or predominantly legumes (such as clover, alfalfa, and trefoil) require less or no additional nitrogen fertilizer. Consult your Nutrient Management Plan for nitrogen recommendations.

- Overseed thin spots. Heavily grazed or trampled pastures can be rejuvenated by overseeding. Overseeding prevents weeds from establishing in bare spots. Be sure to overseed with an appropriate forage species.
- Select properly adapted forage species. Not all forages are the same. It is important to select a forage species that will persist and survive in the environment and soil type of your pasture. Consult your county agriculture agent or forage specialist for more information.
- Do not over-graze pastures. Overgrazing (leaving less than 3 inches height of pasture) will stress your pasture forages and thus reduce their ability to compete with weeds. Always maintain pastures at least 3 inches, and allow the forages to rest before re-grazing (regrowth to 8-18 inches).

Mechanical Control

Inevitably, weeds will move into your pasture. However, being proactive with the steps outlined above, as well as mechanical control methods, will help you stay ahead of major problems. The main objective is to remove weeds before they set hard seed in order to reduce weed pressure. Mechanical controls include:

- Mowing. During periods of excess forage production (usually spring), it may be necessary to mow or make hay from your pasture. This will keep your pasture forages from over-maturing (which reduces feed quality and nutritional value of the forage), as well

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Invasive Spiders Falling From The Sky?!

Paula Shrewsbury, Turf and Ornamental Entomology Extension Specialist
University of Maryland, College Park

Editor's note: You have probably seen several news stories and headlines concerning the movement of a non-native spider that will, "soon colonize Maryland." This is not exactly the case, and is another prime example of poor journalism that's just designed to grab your attention. Here's an article that has factual information concerning the joro spider and it's potential range expansion.

Do we need to worry about an invasion by the jorō spider in our region?

The non-native jorō spider, *Trichonephila clavata*, is a large, orb-weaving spider that is native to Japan and eastern Asia. It was first detected in the U.S. in 2014 in Georgia, and has since spread across Georgia and into South and North Carolina, Tennessee, and parts of Oklahoma. Several orb-weaving spiders are known for their relatively huge size and the large webs that they build. For example, in this region we commonly see the [black and yellow garden spider](#), *Argiope aurantia*, and its web.



Figure 2. Native, black and yellow garden spider. Image: Ronald F. Billings, Texas A&M Forest Service, Bugwood.org.

The jorō spider is a beautiful spider, with females about 3-4" in size (bodies ~1", legs about 3") (males are much smaller) and amazing body colors of bright yellow, red, and blue with black and yellow legs (see images). It builds large, flat webs that are a diameter of 3' or more, often stretched between tree and/or shrub branches in urban landscapes, parks, and natural areas. The silk is yellow in color and described as having a gold sheen when the sunlight hits it. In the area of Georgia where the jorō spider is most abundant, webs are reported to be 1 web every ~16' on some wooded trails. The

University of Georgia Extension has noted a steady increase in the population of the jorō spider based on the number of questions they have received since 2014.

Recent research out of University of Georgia (by A. Davis and B. Frick, 2022) has brought a lot of media attention to the jorō spider. Researchers compared the joro spider to a related species in the same genus, the golden silk spider, *T. clavipes*. The [golden silk spider](#) is another non-

native, large orb-weaving spider, but it has been in the U.S. for 160+ years and is now naturalized throughout much of the southern U.S. It is believed that the golden silk has not spread from the southern areas due to temperature



Figure 1. Female joro spider. Image: Wikimedia.org.

limitations (ex. freezing). The golden silk spider is a tropical spider native to Central and South America. Given that these two related species overlap in their U.S. range, and they have been here for very different lengths of time, it was a great system for the researchers to compare the biology and physiology of the two spiders to predict the range potential of the jorō spider. If their physiologies were similar (they compared females), then the jorō spider would likely be limited to the south like the golden silk spider. The research found that compared to the golden silk spider, the jorō spider completes its life cycle faster; its metabolism was twice as high, it has a 77% higher heart rate when exposed to low temperatures, and when placed in freezing temperatures for 2 minutes, the jorō spider survival was higher. In addition, the jorō spider can mate and reproduce more quickly than the golden silk spider.

Since the jorō spider has the potential to move northward to our region, do we need to be concerned. The short answer is probably not. While these findings support the jorō spider could withstand northern U.S. winters, there are still a lot to learn about how successful it would survive northern winters. Although in the midst of a warming world, other southern species have expanded their range to northern latitudes and higher elevations. Also to date, the jorō spider does not appear to effect local food webs or ecosystems (ex. out competing native spider species), but we will have to wait and see. They may be food for birds or other predators, but at this time, there appears to be no predators or natural enemies keeping the jorō spider in check, so again we will have to wait and see how large their populations get. On the upside, jorō spiders are predators and consume other insects.

They have been observed consuming a brown marmorated stink bug in Georgia. Perhaps other invasive species, such as spotted lanternfly in addition to the brown marmorated stink bug, that the jorō spider co-evolved with back in their native range, will be consumed by the jorō spider.

Some people ask are the jorō spiders poisonous? Can they hurt me or my pets? Even though the female jorō spider is large with startling colors (often an indicator of danger in the insect world), the jorō is harmless to humans and pets. Their fangs are too short to break skin, and like many orb weavers, they are what are referred to as passive hunters. They wait for prey to get caught in their webs and then attack them.

What can you do about the jorō spider? At this time, ⁶ there is not a lot you can do. First, they are not in the mid-Atlantic region yet. It will likely be several years before they arrive, if at all, unless they are assisted by humans unknowingly moving them with materials or vehicles arriving from the south. Second, there is no data to suggest they would cause damage or be threatening, so you do not need to do anything about them. Like with other large web weaving spiders, if their webs are in a location that disrupts your work or recreation, you could remove the web and relocate the spider in a different location. Other than that, we will just learn to live with them like we do other large spiders you encounter.

[Click here for a video of the jorō spider](#) in Georgia (by University of Georgia, College of Agriculture).

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as knock back germinating weeds. If you notice weeds starting to flower and/or set seed heads, *mow them before they set hard seed*. Common pasture weeds in our region typically flower in the spring and fall. If you only have small patches of flowering weeds, you can spot-mow these areas. Staying ahead of weeds by mowing is an important management strategy.

- Pulling and hoeing. If you routinely scout your pastures, you can stay ahead of heavy weed infestations and spot-treat newly emerging weeds. This can be achieved through pulling, hoeing, or spot sprays with an herbicide, or even spot mowing.

Chemical Control

Chemical control through herbicide application can be an important management strategy in pastures. Application timing is critical to achieve good control with herbicides. As a rule of thumb, herbicides only work on *actively growing* plants. Winter annual weeds (such as chickweed and henbit) are cool-season plants that grow in the spring and fall; therefore, herbicide applications should be targeted in spring and fall. Summer annual weeds (such as foxtail and crabgrass) are warm-season plants and grow during the heat of the summer. Herbicides need to be applied in spring as these plants are germinating to manage these weeds. Chemical control of perennial weeds (such as thistle and milkweed) are best achieved in the fall when these plants are flowering. For specific herbicide recommendations and proper timing, consult the Mid-Atlantic Field Crop Weed Management Guide, or contact your extension agent. *Always read and follow the herbicide label*. Addition chemical control management principals include:

- Pre-emerge vs. post emerge. Herbicides can be applied either before the weed germinates (pre-emerge) or after (post emerge), depending on the chemistry of the herbicide and the weed species you are trying to manage. In general, chemical control of summer annual grasses, such as foxtail and crabgrass, is achieved with a pre-emerge herbicide application in the spring as the soil temperatures reach 50 degrees and rising. Post emerge herbicides manage weeds that have already germinated and are actively growing. These are typically timed in either spring or fall, depending on the weed you are targeting.
- Selective vs. non-selective. Selective herbicides are effective on only certain plants, while non-selective herbicides target all plants. In pastures, herbicides containing 2,4-D and Dicamba are selective herbicides. They are effective against most broad-leaf (dicot) plant species and leave grasses (monocots) unharmed. Herbicides such as glyphosate and paraquat are non-selective, and will kill most all plant species. These are generally used as spot treatments or burn-down treatments before seeding new pastures.
- There are limited chemical options for organic weed control. There are some vinegar-citric acid herbicides approved for use on organic pastures; however, efficacy is limited and best control is achieved when applied to very small weeds. Producer's wishing to avoid herbicides need to rely heavily on mowing, hoeing, weeding, tillage, grazing management, overseeding, and proper soil fertility to control weeds. Use of propane torches to spot-treat weeds is also an option.

Harford County Farm Bureau Scholarships



The **Harford County Farm Bureau Scholarship** is available to applicants whose families are members of Harford County Farm Bureau. The applicant must be accepted or enrolled in a full-time accredited 2 or 4-year college, university, or technical school, and the applicant's chosen curriculum must be in an approved program in agriculture or an agriculturally related field.

The **Harford County 4-H Memorial Scholarship** is available to graduating high school seniors who have been a member of Harford County 4-H for a minimum of 2 years. The applicant must be accepted or enrolled in a full-time accredited 2 or 4-year college, university, or technical school. It is not necessary for the applicant's chosen curriculum to be agriculturally related. This scholarship was established to memorialize several Harford County

4-H members who lost their lives at a young age because of accidents or health issues. Funds for this scholarship come from donations and from the sale of 4-H livestock projects which are sold at the Harford County Farm Fair.

There is one scholarship application form, which can be used for either or both scholarships. To obtain an electronic copy, please contact the Farm Bureau office at harfordfb@gmail.com.

The completed application and all requested information should be sent to: Harford County Farm Bureau, 3525 Conowingo Road, Suite 200, Street, MD 21154-1900. **Applications must be postmarked by or delivered to the Farm Bureau office at the Harford County Agricultural Center by Wednesday, May 25, 2022.**

May is Mental Health Awareness Month

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Mental Health Awareness Month has been observed in the United States since 1949. It is a month dedicated to the awareness and impact mental health can have on the physical, emotional, and mental well-being of children, families, and communities.

The University of Maryland Extension Farm Stress Management Team was created to work with farmers, farm families and the agricultural industry to provide education and outreach on topics related to mental and physical wellness. The program's goals are to raise awareness, provide training, and build resources. With the support from a North East SARE grant and a partnership with USDA NIFA and Maryland Department of Agriculture, the team has expanded activities and resources.

Program Announcements:

- Information and resource lists in the areas of stress

management, financial wellness, and legal issues at www.go.umd.edu/farmfamily

- Join our newsletter www.go.umd.edu/fscontact
- Six free therapy sessions. In person or Teletherapy. We will help you to set up your appointment, connect with the provider, and access your session. Complete the request form at www.go.umd.edu/qYB
- Farm Stress Training for Ag Service Providers – Next session May 24, 2022, Comfort Inn, Bowie MD. Register at <https://fstraining524.eventbrite.com>

Information and training sessions will continue to be developed as this program grows. Please visit the website or join the newsletter to get updates on the program. For more information please reach out to the UME Farm Stress Program Coordinator, Ryan Salsman, rsalsman@umd.edu, (240) 623-6731.

Andrew Kness

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facebook.com/HarfordAg

Back-issues can be found at: <https://extension.umd.edu/locations/harford-county/agriculture-and-nutrient-management>



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Great resources are just a click away!

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Harford County Newsletter

Dates to remember

07-08 May. [Maryland Sheep & Wool Festival](#). Howard County Fairgrounds. \$5/day; under 18 is free. Register [online](#).

11 May. Women in Ag Webinar: Selecting and Purchasing Hay. 12 noon. Free. Register [online](#).

14-15 May. [Maryland Beef Producer's Short Course: Series I](#). 9-2 PM. Wye Angus, Queenstown. \$75. Register [online](#) or contact Racheal Slattery (301) 405-1392.

25 May. [Getting Started with Rotational Grazing](#). 6-8 PM. Equine Rotational Grazing Demo Site, Ellicott City. Free. Register [online](#) or call (301) 405-1547.



Do you have noxious or invasive weeds on your property?

Harford County's Weed Control Program can help you manage them.

Call Randy Faber at (410) 638-3018 or (240) 755-9280.

May 2022