Ag Notes
Harford County Newsletter

UNIVERSITY OF MARYLAND EXTENSION

April 2021

Please call ahead of time before visiting the Extension office.

University of Maryland Extension

Harford County Agricultural Center
Suite 600
3525 Conowingo Rd.
Street, MD 21154
(410) 638-3255
M—F 8:00 a.m.—4:30 p.m.

Extension.umd.edu/harford-county
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Andrew Kness
Ag Extension Educator
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INSIDE THIS ISSUE:

Hello, Harford County!

I hope everyone is doing well! As we begin to get more folks vaccinated and cases of COVID-19 continue to decline, the University of Maryland anticipates being able to fully re-open the county Extension offices over the next several months. Each county will be handled as-needed based on the current situation of COVID-19 in the county. For Harford County, faculty and staff will be in the office more frequently than before. To ensure someone is here to assist you, we still ask that you call ahead of time. The other agencies in the Harford County Agricultural Center are following the same procedure.

Just like COVID-19 invaded and overtook our lives last year, we have another invasion to lookout for this year—Brood X of the 17 year periodical cicada is set to emerge in the millions per square mile this summer, and we are right in the epicenter on this Brood's range!

There are seven different species of periodical cicadas (four with 13-year lifecycles and three with 17-year), as well as annual cicadas; however none of them compare in size to Brood X of the 17-year cicada. Populations can be as high as 1.5 million per square mile, which puts the total population of Brood X into the several trillions, nearly all of which will emerge this summer.

Cicadas (sometimes inaccurately called 'locusts', which are a form of grasshopper), emerge from the ground as immatures called nymphs. The nymphs spend 17 years under the ground, feeding on plant roots and root exudates. In the case of the 17-year cicada, when the time comes (17 years after they dropped to the ground) they burrow out of the ground and emerge. They will then find an appropriate plant or surface to climb up and perform their final molt/transformation into a full adult. Adult 17-year cicadas (pictured above) are dark brown to nearly black in color with orange accents and red eyes.

Adult 17-year periodical cicada female. Notice the scars on tree branch where the eggs were laid.

Once emerged and molted they will begin their mating rituals. Males call to attract females, which do not make any calls. The noise is often likened to a chainsaw or a two-stroke engine. Once they mate, the females will begin to lay eggs by using her ovipositor to slice into the bark of trees where she will deposit her eggs. Each female is capable of laying up to 400 eggs in 40 to 50 pockets in

the wood of several small branches of many types of trees. Some of the most susceptible trees recorded in 2004 included paperbark maple, oaks, maples, ornamental pears, and fruit trees. The type of branches preferred by females is about the width of a pencil. Egg laying occurs for about 30-45 days. Adult cicadas do not actually feed on plants—the damage to trees done by cicadas occurs from the oviposition scars created by the females.

Five to seven weeks after laying, the eggs will hatch. The tiny first instar nymphs will drop to the ground, burrow, then feed and grow until they are ready to emerge 17 years later.

If you have young trees, especially fruit trees or any high-value ornamentals, you can cover them with fine mesh netting to prevent the female cicada from laying eggs. Learn more about the periodical cicada in an upcoming Extension webinar on March 31 at 3 pm.

Until next time,

-Andy

Pesticide Disposal Program

Maryland Department of Agriculture press release

The Maryland Department of Agriculture's Pesticide Disposal Program is a free service for all current or retired farmers and producers, including orchardists, nurserymen, greenhouse operators, and Christmas tree growers.

The program will collect any product with a registration number from the U.S. Environmental Protection Agency (EPA) or U.S. Department of Agriculture (USDA), and any other material that can be identified as a pesticide. Any unknown material will be sampled and tested by MDA prior to collection to ensure safe and proper disposal.

To participate in the program, farmers are asked to fill out the registration form and submit to MDA's Pesticide Regulation Section. The application period runs from March 15 - Sept. 15, 2021. If you need a hard copy of the registration form, contact the Extension office.

After reviewing applications, an MDA inspector will schedule a site visit to verify information. Once the program has a complete inventory of materials that need to be disposed, MDA will contract a licensed hazardous waste hauler to collect the pesticide materials directly from the storage site and transport to an EPA-approved disposal facility. Pickups are expected to begin in October 2021.

MDA's Pesticide Disposal Program was first introduced in 1995, and was last conducted in 2011. The program has collected nearly 190,000 pounds of unusable or unwanted pesticide from 385 sites since its inception. Funding for the program comes from licensing, certification and registration fees collected from pesticide businesses, certified applicators, and pesticide manufacturers and registrants.

For more information on the program, please consult our Frequently Asked Questions document or contact the Pesticide Regulation Section at (410) 841-5710.

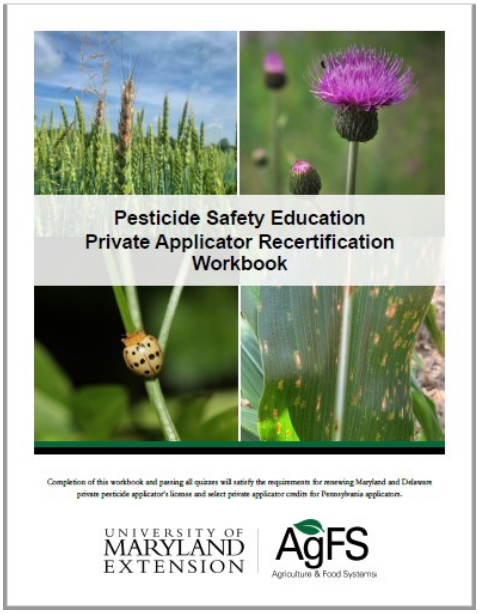
Pesticide Recertification Workbook

A team of Extension Agents from University of Maryland, University of Delaware, and Penn State University have produced a workbook for private applicators that do not have access to our virtual recertification materials.

This workbook is intended to give Maryland Private Pesticide Applicators the recertification training (4 credits) needed to renew the applicator's license. Topics covered in this workbook are MDA-approved and are equivalent to two hours of in-person training needed every three years to renew your private applicator's license. This workbook is also approved for three (3) Delaware credits and select Pennsylvania credits (contact 410-638-3255 for details).

In order to receive credit you must complete the entire workbook. At the end of this workbook you will answer a 30-question quiz and return it to the Baltimore County Extension Office.

To order your free workbook, please call the Extension Office at (410) 638-3255.



Dry Bulb Mite Found in Maryland Garlic

Jerry Brust, IPM Vegetable Specialist and Karen Rane, Plant Diagnostician
University of Maryland, College Park

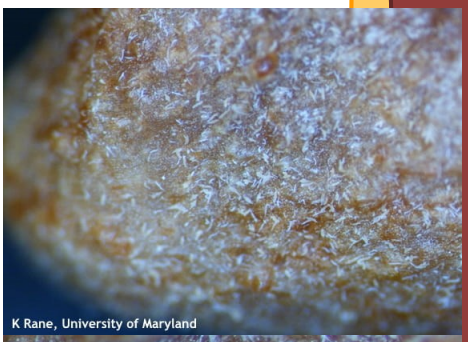
In December we received a sample of damaged garlic cloves from a grower on the Eastern Shore. The grower quite astutely thought it might be due to mites and he was correct. But it was not the garlic bulb mite (*Rhizoglyphus* spp) instead it was a mite that has not been recorded in Maryland until now, the dry bulb mite, *Aceria tulipae*. It is the most important eriophyid mite attacking bulbous plants such as garlic, onion and tulip. This pest is a microscopic (only 1/100 inch), white mite with a cylindrical shape that tapers away from the head-end where its four legs are located. The mites go through two larval phases during their development. A complete life cycle at 75-80°F takes just 8-10 days. All life stages of the mite can overwinter on infected garlic while in storage and all stages also can survive in the soil on wild and cultivated Allium species, including onion, garlic and leeks.

Mites can be found on the foliage of Alliums where they are mainly located in the central veins or midribs of the leaves. Once the plant leaves die, the mites move to the bulbs in the ground. The mite is then found between the layers of the bulb when in storage and will feed using their very short pincer-like mouthparts to prick the plant tissue often making brown very small pits in cloves (Fig. 1). Dry bulb mites will feed on healthy green plant tissues while bulb mites *Rhizoglyphus* spp, feed primarily on decaying tissue, thus making the dry bulb mites much more of a problem for garlic and onion growers. Light infestations of this mite are very difficult to detect and is the reason infested bulbs can be used as seed in a field.

Figure 1 (top). Feeding damage on garlic clove by dry bulb mites. Figure 2 (bottom). Figure 2. Garlic clove with brown areas (left side) showing dry bulb mite feeding damage with a white 'dust'

Figures 2, 3 and 4 do an excellent job of showing how hard it is to actually detect even a very large population of dry bulb mites on a garlic clove. Figure 2 shows the clove under low magnification with large areas of feeding damage (browning tissue) with a whitish 'dust' to the left in the picture (you cannot see any mites yet), magnifying this further you can see in Figure 3 the white 'dust' now can be seen as tiny white thread-like shapes and Figure 4 under greater magnification shows hundreds of these cylindrical or thread-like shapes—all being dry bulb mites. Most of the mites on this bulb were dead most probably due to the drying process of the bulb.

Most, but not all management tactics involve cultural controls. The first is to rotate out of a field that is known to have the mite for at least 3-4 years making sure there are no volunteer or wild Allium species left in the field during the rotation. Be sure to plant clean seed, as infested cloves are the most frequent source of infection in the field. Flood irrigation or even heavy winter rains can reduce these mite populations. Soaking seed stock for 24 hours immediately before planting in a 2% soap (do not use a detergent) and 2% mineral oil water bath will greatly reduce mite populations in the field. Light or moderate infestations are usually controlled via the normal drying process prior to storage. Dusting bulbs with sulfur prior to planting has reduced populations in the field. Be sure to control any wild Allium species in the field before and after planting. In storage the mites' feeding can cause the cloves to desiccate and shrivel. Dry bulb mite feeding may also open the bulb up to soft rot bacteria resulting in rotting bulbs. Although hot water treatment of the seed garlic at 130°F for 10–20 minutes can give you good control of the mites it will more than likely damage the bulbs and reduce germination. So be careful with this last recommendation and use only as a last option.



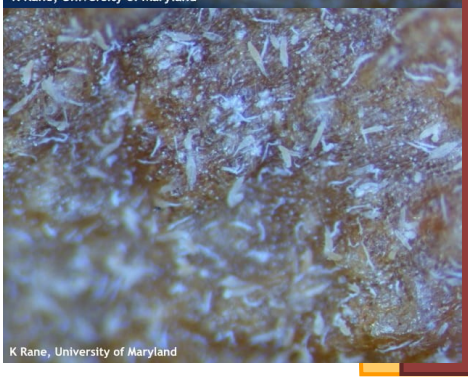


Figure 3 (top). Area of garlic clove with heavy mite feeding under greater magnification showing tiny white thread-like objects. Figure 4 (bottom). Greater magnification of Fig. 2 showing 100s of dry bulb mite bodies.

2021 Strawberry IPM Guide

This is a comprehensive guide from pre-plant considerations through specific phenological based disease and insect management, as well as weed and vertebrate pest management. The guide also contains information on resources like websites, Apps, and on-line diagnostic tools. It concentrates on plasticulture production but also has a section on matted-row weed management. And, of course, much of the basic pest management and pesticide efficacy is applicable for matted-row.

It is now available online for **FREE** PDF download through the Southern Region Small Fruit Center at: https://smallfruits.org/files/2020/12/2021-Strawberry-IPM-Guide.pdf.

If you would like a hard copy, please contact the Extension office.

Ag Land Preservation Program

Megan Guilfoyle, Maryland Department of Agriculture

The Maryland Agricultural Land Preservation Foundation (MALPF) is now accepting easement applications for the FY22 cycle. Eligible Maryland farmers who are interested in preserving their land as an agricultural easement should apply with their county preservation program office as soon as possible.

"Maryland's beauty, history, and character is woven into its nearly 2 million acres of farmland," said Secretary Joe Bartenfelder. "Preserving our precious agricultural land in such a highly-developed and populated area is crucial to sustaining the viability of our state's agriculture industry. As the past year has shown all of us, our local food systems are instrumental in meeting the needs of Marylanders. By keeping land in agriculture, we are enabling farmers to continue farming and ensuring people around the state are provided for."

MALPF was established by the Maryland General Assembly in 1977 and is part of the Maryland Department of Agriculture (MDA). MALPF purchases agricultural preservation easements from farmers that forever restrict development on prime farmland and woodland.

Since its inception, MALPF has preserved 2,467 farms and 333,474 acres of farmland for a total investment of $811,536,219. MALPF is one of the most successful programs of its kind in the country.

Maryland farmers interested in applying for a MALPF easement should be sure they meet the following eligibility requirements.

- Size: The minimum easement size is 50 contiguous acres.
- Productivity: The land must either be currently used for producing food or fiber or has the capability to do so. Woodland management and harvesting operations are eligible to join this program.
- Location: Land that lies within the boundaries of a 10 -year water and sewer service area plan is generally ineligible unless it has extraordinary productive capability and is of significant size.
- Development Rights: A property must have at least one unused development right associated with the property to sell an easement.

For more information on eligibility criteria, visit MALPF's website: mda.maryland.gov/malpf. MALPF is jointly administered by counties and the state. Counties may impose additional or more stringent requirements than the state.

Applications must be submitted to county preservation programs as soon as possible. Deadlines for submission vary by county. After county review, qualifying applications will be submitted to MALPF by July 1, 2021, for easement consideration. Farmers will be notified if their application has been accepted or not by MALPF via mail.

For more details, please contact MALPF via phone at (410) 841-5860 or email at mda.malpf@maryland.gov. Visit MALPF's website for more information on the program.

Our Harford County Land Preservation administrator is Bill Amoss: wdamoss@harfordcountymd.gov.

What To Do With Thinning Alfalfa Stands?

Jeff Semler, Principal Agriculture Agent
University of Maryland Extension, Washington County

It's the time of year when our alfalfa fields are just waking from winter slumber, or at least we hope they are. We are hopeful that a combination of favorable moisture and thoughtful management will have fields greening up with a strong stand.

Unwelcome are brownfields or something close to it. Fortunately, this doesn't happen often. Yet, when it does, the decision of what's to follow is painful but an easy one to make — time to put this field out of its misery and plant something else.

Of course, there is another possibility between dead and alive; the thin, marginal alfalfa stand. Perhaps a better outcome than the dead field but certainly more agonizing from a decision-making standpoint. These are the fields that have been uniformly thinned or have areas of dead plants and the other regions of productive plants.

On a typical alfalfa and corn silage-based dairy farm, the marginal alfalfa field generally offers four alternatives:

1. Keep the field for the duration of the season and accept the reduced yield.
2. Take just the first cutting and then plant a short-season corn hybrid for silage.
3. Terminate the field early and plant a full-season silage corn.
4. Interseed the field with non-alfalfa species such as red clover, cool-season grass, which can also be followed with a warm-season annual.

Two corn options

By planting corn for silage early, you give up all alfalfa production on the field for the current year, but you ensure maximum silage yields from early planting and using a full-season hybrid. Still, this choice may not seem too appealing if you need the alfalfa in the short run or if it's a relatively new stand and you want to capture more return on the establishment investment.

By waiting to take the first cutting before planting corn, you get some alfalfa production to fill a short-term need; however, this is done at the expense of potential reduced corn silage yield. Receiving adequate moisture and controlling weeds after the corn is planted are the keys to success.

Strengthening the stand

Interseeding other forage species into a marginal alfalfa stand is a strategy that has been done with regularity for many years. As most alfalfa growers know, autotoxicity makes it nearly impossible to seed alfalfa back into alfalfa successfully.

When considering interseeding options, you must decide if you want fast or permanent forage. In the latter case, a cool-season grass such as orchardgrass or novel endophyte tall fescue works well. Of course, additional forage yield won't be realized until later in the growing season.

Perennial forage is the right choice for younger alfalfa stands where you want to extend the life of a currently marginal alfalfa stand. Some producers do this regularly after two or three years, even when alfalfa winterkill isn't an issue. Another biennial option is to use red clover, but realize it is slow to dry if you plan to bale hay.

For fast forage that is high quality, annual or Italian ryegrass is pretty hard to beat. It is easily interseeded and grows rapidly. As a one-year fix, Italian ryegrass checks all the boxes as long as adequate precipitation is received throughout the summer.

Another option to consider is to interseed oats early and follow it with warm-season annuals such as sudangrass or millet after first cutting. Once established, these annuals can be cut on an alfalfa schedule. They complement alfalfa well, bringing an energy component to the protein in the alfalfa.

Continually monitor alfalfa growth

As the season progresses, you will need to consider what is next for the stand. If the stand is still worth a little kick in the pants, no-till a winter cereal such as rye or triticale after the early fall harvest. Then chop it next spring and follow with corn to take advantage of the residual nitrogen from the alfalfa stand.

If forage is short, another option is to plant forage oats into the stand in late summer for a late fall harvest. If you want to double down plant spring oats with triticale, you will have both a late fall and spring forage harvest. You will need to rotate out of the exhausted stand with corn or a sorghum species by this time.

The right thing to do varies with each year and each farm situation. The problem is that the best choice is almost always dependent on future weather conditions that can never be predicted at the time of the decision.

Farm Bureau & 4-H Memorial 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 Friday, May 21, 2021.

If you have questions, please contact the Farm Buearu Office at harfordfb@gmail.com or (410) 836-7773.

Farmers Needed for On-Farm Nitrogen Trials

Nicole Fiorellino, Extension Agronomist
University of Maryland, College Park

The University of Maryland and University of Delaware are looking for farmers throughout both states to participate in a research project evaluating decision making surrounding adoption of nitrogen management tools (commercially available N models, drone imagery, PSNT). We will implement a field trial in the 2021 growing season that contains six nitrogen rates applied to corn in four replicates in strips (~15 ft wide by 300 ft long, but size is variable depending on equipment) requiring about 2.5 total acres.

Participants will be trained on the use of various nitrogen management tools and will be paid for their participation in the trial (W9 submission to UMD required for payment) pending eligibility to receive EQIP funding. Participants must have the ability to apply prescribed nitrogen rates and record yield at harvest using a calibrated yield monitor. We require participants to participate in a pre-season interview (in April 2021), a one-on-one post-harvest debrief session, and a focus group in November or December, all likely taking place virtually due to COVID restrictions. Farmers who have not previously partnered with Extension on research projects are encouraged to participate. If interested, please contact Dr. Nicole Fiorellino at University of Maryland at nfiorell@umd.edu and Dr. Amy Shober at University of Delaware at ashober@udel.edu.

The project title, "A solutions-based evaluation of barriers to farmer adoption of in-season nitrogen decision support tools", is funded through Natural Resource Conservation Service Conservation Innovation Grant On-Farm Conservation Innovation Trials grant program awarded to University of Maryland, University of Delaware, and Pennsylvania State University in 2020.

Friends School of Harford

Beth Babikow, Friends School of Harford

Friends School of Harford at Falls Creek Farm is a 66 + acre farm, 2704 Conowingo Rd, Bel Air MD 21015. We intend to be a teaching farm complimenting existing resources in Harford County, and demonstrating a variety of best farming and stewardship of the land practices. Our model is based on farms in the *Farm-Based Education Network. On Feb 10, 2020 the FSH Board adopted this mission:*

FSH at Falls Creek Farm provides agriculture based, inter-generational instruction and related activities where participants build skills for healthy, environmentally conscious lives, and to be good stewards of the land.

The 2016 USDA Soil Conservation Map divided Falls Creek into: 4.6 acres Farmstead; 40.5 acres Farmland; 11.7 acres Forest Woodland; 5.8 acres natural area adjacent to Forested Woodland.

To quote Tim Hushon of The Mill, " The outdoors is our campus." To best utilize the land as a teaching resource we are creating a land use plan, modeled on the Horn Farm Land Management Plan. In February 2021, we collected land use ideas from three volunteer teams. Team participants in addition to FSH Board members are: Farm Land : Andy Kness, Bob Hegarty, George Mayo, Greg Murrell, Tim Hushon, Harry Sanders, Sarah Ryder, and Rob Weaver. Farm Stead: Sharon Hood, Sarah Rider, Talia Rodwin, Rob Weaver. Forested Woodland: Kelsey Brooks, Brooke Derr, Pat Grimes, Bob Hegarty, Frank Lopez, Mark MacDonald and Rob Weaver.

We submitted a request to Andrew Amoruso, DNR Forester and Rob Weaver, District Conservationist, to prepare a Forestry Management Plan. We asked that the opportunity be created for several North Harford Agricultural students and Science and Math Academy students to participate. Students at North Harford have a list of independent study projects that could be accomplished on the farm. We are seeking grant funding to install above-ground cisterns to collect rainwater from the bank barn roofs to water crops in demonstration plots.

Falls Creek Farm was once part of two large tracks of land called Wheeler's and Clark's Contrivance 1716 and Thomas' Beginning 1723.The Michael Martin family were the last farm owners to farm the land. Gloria Michael sold the land to Harford County in 2005. Harford County deeded the land to Friends School of Harford in 2015. The farm is named after the two Quaker Meetings in Harford County: Deer Creek in Darlington, Little Falls in Fallston. Quakers have long been involved in farming and land stewardship. Quaker John Bartram is considered by many to be the first American botanist.

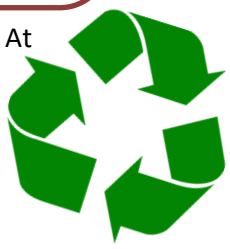
We are an all-volunteer organization. We need volunteer expertise in regenerative agriculture, grant sourcing, fund raising and website content. Friends School of Harford Board Members: Beth Babikow, Andrew Chabalowski, Bill Clark, Peggy Eppig, Bill Harlan, Deborah Kissinger, Nina Lamba, Aimee O'Neill, Alice Pons and Ed Steere. Our email address is friendsschoolofharford@gmail.com. Photos of the farm are on our website www.friendsschoolofharford.org.

Ag Plastic Recycling

Ag Plastic Collection will resume the first week of April 2021 at the Scarboro Landfill in Street. At this time there are no totes available to fill. Totes should be available in middle to late April.

Mulch- We have plenty of mulch available. Come on in.

Contact Wendy Doring for questions or more information, wdoring@menv.com or (410) 638-3417.



Great resources are just a click away!

Andrew Kness
Extension Agent,
Agriculture and
Natural Resources

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Dates to remember

30 Mar-27 Apr. Spring Equine Webinar Series. 5:00 PM. Free. Register online: https://extension.umd.edu/events/series/6583.

14 Apr. UMD Institute of Applied Agriculture (IAA) Virtual Open House. 4-5:30 PM. Free. Register online.

28 Apr. Women in Ag Webinar: Does Your Deworming Program Need a Tune-Up? Best Practices for Deworming Cattle. Online, 12 noon. Free. Register online.

Check out these additional online resources from

Maryland Grain	Ag Law Initiative
Agronomy News Blog	Women in Ag
Nutrient Management	Plant Diagnostic Lab
Extension Website	

April 2021