Hello, Harford County!

When you mention the month of October, most people think of the typical autumn things, like turning leaves, cool mornings, pumpkins, the harvest season and of course, Halloween. But did you know that Halloween has its roots in agriculture?

Last year, Americans spent $8.4 billion dollars on Halloween, and are expected to spend over $9 billion in 2017—that’s a lot of costumes and candy! What is now a huge celebration began as the ancient Celtic tradition of Samhain (pronounced sow-in).

While there is much debate on the exact evolution of Samhain into the modern holiday of Halloween, most agree that Samhain was a harvest festival, starting on the evening of October 31 into November 1. This festival celebrated the end of the harvest season and the beginning of winter.

During this festival, which was also the celebration of their New Year, the Celtic peoples would retrieve their cattle from summer pasture to slaughter the old and weak animals that would likely not make it through the harsh winter. And in the ages before refrigeration, would have a large feast before the meat would spoil.

The Celts also believed that during this festival, the world between the living and the dead would blur. As a result, the Celts would dress up in scary costumes in an attempt to fool the dead so that they would not take them into their world. In addition, they would also leave food and treats out for the dead, and in Ireland, people would carve turnips into lanterns.

As Christianity slowly took over much of the Celtic countries, the Samhain festival eventually evolved into our modern day traditions of Halloween. The tradition of dressing up in costume, offering food (candy) to the “dead” (those dressed in costume), and carving jack-o-lanterns still lives on strong today; all of which are a direct result of a fall harvest festival and a celebration of agriculture!

Speaking of agriculture—many of you may have met, known, or even worked closely with David Martin, the Baltimore County agriculture agent. After 29 years with University of Maryland Extension, serving farmers in Baltimore County and across the region, Dave is “hanging it up” as of September 30. During his career in Extension, Dave has developed countless programs, such as: the Northern Maryland Field Crops Day, Central Maryland Vegetable Meeting, Beginning Farmer’s Course, and the Baltimore County Rotational Grazing Site, that have greatly impacted farmers and agriculture in the region. While I have only had the opportunity to work with Dave a little over a year now, he has been an important mentor to me, and it didn’t take me long to see that he was a tremendous part of University of Maryland Extension. He will be greatly missed, but hopefully he will visit us on occasion! We wish Dave all the best in his retirement!

Until next time,

-Andy
Considerations for Proper Soil Sampling

Dr. Jarrod Miller, Extension Agronomist
University of Delaware

It’s the time of year to start planning soil sampling; but remember, all soil samples aren’t the same. Cropping system, soil type and past management contribute to how you should sample.

Consistently sampling the correct depth is key to good fertility recommendations. A depth of 8 inches is the typical recommendation for fields under tillage, since that much of the soil is often mixed together. To get a good idea of nutrient or lime needs for pastures, samples should be taken no deeper than 4 inches. The reason for this is stratification of nutrients and acidity. In pastures, only rainfall moves nutrients and lime into the soil profile, versus mixing that upper layer with tillage. Deeper samples may cause you to overestimate nutrient or lime needs for pastures. Michigan State University observed 228% more phosphate and 180% more potash at four versus seven inch samples. The deeper samples may cause you to add potash to pastures that don’t yet need it.

No-till fields can be similar to pastures when considering nutrient stratification, but a 8 inch fertility sample is still recommended. Sampling in no-till systems should be based more on nutrient placement. If you band fertilizer, be sure to avoid sampling those locations. Don’t avoid entirely; it still represents soil nutrient levels, but bands can skew your soil tests and cause you to under apply. One recommendation for dealing with bands, is for every one sample taken within a band, take another 8 samples x the distance (in feet) between the bands (http://www.cropnutrition.com/efu-soil-sampling).

Acidification from nitrogen fertilizers also creates sampling issues. Broadcast or surface applied N often only causes acidity in the upper few inches, so a deeper sample may not capture the lime needs at planting. For surface applied N in no-till fields, a sample from 2 inches to determine pH is best. Knifed or injected N will cause acidity deeper in the profile, typically about 2-3 inches above the knife depth. For those soils, samples should be taken deeper in the profile, and the typical 8 inch fertility sample may work fine for determining soil pH.

Proper sampling can reduce error on your end. If pH or nutrient levels vary between years, consider whether you:
- Sampled a consistent depth
- Have a tillage, continuous no-till, or pasture system
- Where and how you applied your nitrogen (banded, broadcast, knifed, etc.)

Errors in sampling can easily cause under/over application of fertilizer or lime. If you have any questions about where you should sample in your system, contact your Extension Agent.

Mid-Winter Meeting

The Harford County Mid-Winter Agronomy meeting is scheduled for February 13, 2017 at the Deer Creek Overlook at the 4-H campground. As always, the program will satisfy continuing education credits for nutrient management and pesticide applicator training. Be on the lookout for registration and additional details to follow in the next few months.

Crop Management School

Registration is now open for the 2017 Mid-Atlantic Crop Management School held Nov. 14—16 in Ocean City, MD. The school offers a 2.5 day format with a variety of sessions. Individuals needing CCA training in soil and water, nutrient management, crop management, and pest management can create their own schedule by choosing from five program options offered each hour. Emphasis is placed on new and advanced information with group discussion and interaction encouraged. For more details, as well as registration and program information, click here or contact Andy at the Extension Office. Register by Oct 30 to receive the discounted rate of $285.
Fungicides for Ear Rots?

Dr. Nathan Kleczewski, Extension Field Crops Pathologist
University of Delaware

Increasing levels of ear rots in field corn are typically associated with wet weather in September. Ear rots are caused by several fungal pathogens, but most often we observe those that are caused by Gibberella, Aspergillus, Fusarium and Diplodia. The main issue associated with these ear rots (except Diplodia) is the production of mycotoxins, which can affect the safety and quality of grain used for feed and ethanol production. Thus, it is important to be able to identify which organisms you are encountering.

Gibberella ear rot is the same fungus that causes Fusarium head blight in small grains. The reason the name differs has to do with fungal reproduction and the types of spores produced. Gibberella infects through the silks and is typically observed at the tips of the ears and develops down the cob. The fungus produces a red to pink growth on and in between kernels, and can produce vomitoxin and zearelenone.

Aspergillus has a powdery, olive green appearance and typically occurs on damaged kernels. Aspergillus is more of an issue in dry seasons. Aflatoxins are produced by this fungus.

Fusarium ear rot can be caused by multiple species of Fusarium and is the most commonly occurring ear rot we encounter. A starburst appearance or streaks in kernels, as well as a white to pink growth in-between kernels is typically observed. Research we conducted with Virginia Tech indicated that this fungus and the fumonisins it can produce can be increased by stinkbug damage to the cob.

Hybrids with cobs prone to exposed ends as well as insect and bird damage can increase corn ear rots. General management of ear rots should focus on selecting hybrids with resistance or reduced susceptibility to commonly occurring ear rot fungi, rotating crops, sizing residue to enhance residue decomposition, and managing insects that can damage the cob. Fungicides can reduce some ear rots, but experimental results have not been consistent. For example, Anderson et al. (2017) studied the impacts of Quilt Xcel, Proline, and Headline applied at R1 on Gibberella ear rot and associated mycotoxins. The researchers inoculated corn with the fungal pathogen to ensure it would be present during the study. Their results showed that Gibberella ear rot consistently reduced yields, but fungicides did not consistently reduce mycotoxin content of the grain. This article and other references to similar studies can be viewed here.

For pictures of ear rots described above, see the entire article online: http://extension.udel.edu/weekleycropupdate/?p=11208

Dairy Field Day

You’re invited to attend the University of Maryland’s second annual dairy field day on October 18 at the Central Maryland Research and Education Center, Clarksville facility. Registration will begin at 9:30 AM with the program starting at 10 AM. Topics and demonstrations for this year’s field day include: small scale anaerobic digestion and manure management; lagoon safety; cover crop combinations for green chop feed; manure injection demonstration; and more! To register online, please go to: http://ansc.umd.edu/extension/dairy-extension/dairy-field-day-cmrec. Cost is $10 and includes lunch. If registering by check, please make payable to “University of Maryland” and send to: Racheal Slattery, University of Maryland, Department of Animal and Avian Sciences, 8127 Regents Drive, College Park, MD 20742.

October 18
9:30 AM—2:30 PM
Central MD Research & Education Center
4240 Folly Quarter Rd.
Ellicott City, MD

Dairy Field Day

Private applicator pesticide certification will be offered at the Harford County Extension Office on October 17. Call the office to sign up for the appropriate class (410) 638-3255:

New certification training*. 9-11 AM. | Recertification training 1-3 PM.
*must return on Oct. 24, 9-11 AM to take and pass the exam to become certified
Although the deadline to sign up for Maryland’s Cover Crop Program has passed, growers must now decide what to plant and when. To maximize their involvement in the Cover Crop Program, growers need to fully understand the changes to the Program. The Maryland Department of Agriculture (MDA) has sent growers information on the changes but in case you missed it, the following is a quick summary.

The types of crops which may be planted include: cereal grains (wheat/spelt, rye, barley, triticale, spring oats, ryegrass and canola/rape (brassica), forage radish and legumes (crimson clover, Austrian winter peas and hairy vetch) which must be planted with a cereal grain as part of a mix.

To create diversity, eligible cover crop species may be mixed at a rate of 50 percent of the recommended seeding rate for cereal grains (except spring oats) and 50 percent of the recommended seeding rate for radish or legumes. A new three species mix (small grains, legumes, forage radish) is now eligible for payment. This mix must contain a minimum of 50 percent cereal grains, 25 percent forage radish, and 25 percent legumes. The species with the earliest planting date determines the planting deadline.

While cereal grains should be planted by November 5, 2017, some species have earlier deadlines. Growers should consult their local soil conservation district office for a list of planting deadlines by species. Mixes containing legumes or forage radish must be planted by October 1, 2017 and the aerial planting deadline is October 7, 2017.

Early planting incentives are available if growers are able to plant by October 1 ($10.00-$20.00/acre) or by October 15, 2017 ($5.00-$10.00/acre) subject to a maximum payment per acre of $75.00.

Other changes to this year’s program: payment for harvested cover crops is not available this year and an incentive payment of $10/acre if rye is planted as the cover crop (no mixes).

All cover crops must be planted by November 5, 2017 and certified with the soil conservation district by November 13, 2017 to qualify for payment.

<table>
<thead>
<tr>
<th>Cover Crop</th>
<th>Seeding Rate Per Acre*</th>
<th>Maryland Planting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bushels</td>
<td>Pounds</td>
</tr>
<tr>
<td>Barley</td>
<td>2.50</td>
<td>120</td>
</tr>
<tr>
<td>Canola/Rape</td>
<td>0.16</td>
<td>8</td>
</tr>
<tr>
<td>Forage Radish</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Rye</td>
<td>2.00</td>
<td>112</td>
</tr>
<tr>
<td>Ryegrass</td>
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<td>20</td>
</tr>
<tr>
<td>Oats</td>
<td>3.00</td>
<td>96</td>
</tr>
<tr>
<td>Triticale</td>
<td>2.00</td>
<td>112</td>
</tr>
<tr>
<td>Wheat or Spelt</td>
<td>2.00</td>
<td>120</td>
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</tbody>
</table>

*Must be planted as part of a cereal grain mix*

<table>
<thead>
<tr>
<th>Cover Crop</th>
<th>Seeding Rate Per Acre</th>
<th>Maryland Planting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crimson Clover</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>Vetch</td>
<td>-</td>
<td>25</td>
</tr>
<tr>
<td>Winter Peas</td>
<td>-</td>
<td>60</td>
</tr>
</tbody>
</table>

*Aerial and aerial ground seeding rates must be increased by 25%*
Damage caused by pesticide drift has been in the news a lot over the past couple of years. With Monsanto releasing new varieties resistant to a new, less volatile formula of dicamba, many states have seen an increase in reports of drift damages. At the winter agronomy meetings, I discussed what type of liability an applicator might face if a neighbor complained of drift damage, but what should you do if you suspect drift damage in your fields? An injured producer should contact the state department of agriculture to investigate, begin developing evidence of the damage, and consider working with the applicator/neighbor to settle the damage or consider hiring an attorney to pursue a lawsuit in court. Understanding how to handle drift damage can help the injured producer understand his/her rights in this situation.

In a majority of states, the state’s department of agriculture governs pesticide applications in the state. In Maryland, the Maryland Department of Agriculture governs pesticide applications in the state. Immediately report the drift damage to the department of agriculture to begin an investigating the potential violation. The state will investigate the potential drift incident, interviewing the applicator, witnesses, and other parties, collect samples, review records, and collect other evidence. If the state finds a violation has occurred, then the state can impose fines against the applicator. These fines will not be the same damages paid to the injured producer for crop damage. These fines will go directly to the state. It is important to note; this process can take time and can be frustrating to the injured producer.

What else can you do besides contacting the appropriate state agency? Begin to document the damage. Take photos that demonstrate the damage and take samples of damaged crops and damaged other plant life. If you know the date, the application took place, document the weather conditions on that date (such as temperature, wind speed, and wind direction). Ask neighboring landowners if they witnessed any recent applications in the area. The more documentation an injured producer has will assist down the road.

Once the injured producer has an idea who caused the drift, the producer may want to consider trying to deal with the issue outside of court. Working outside of court may help you preserve relationships with neighbors. One way to do this might be stopping by to talk with the neighbor about the drift damage. Another option, for those in Maryland, would be to contact the Maryland Department of Agriculture’s Agricultural Conflict Resolution Service (ACReS) program. ACReS is a USDA-certified agricultural mediation program. Mediation is an alternative process to settling disputes outside of court, potentially saving money in legal expenses, be settled efficiently, and preserving relationships with neighbors.

The injured producer can also consider contacting an attorney to file a civil lawsuit in court. Any damages awarded in court would go to compensate the injured producer for the drift damage. The documentation developed early on would be useful to the injured producer when going to court. If the injured producer takes this option, the producer should discuss options with an attorney. It is important to note, as the state’s investigation of a violation going to court can be a long process.

When faced with potential drift damage, an injured producer should contact the respective state department of agriculture to report the damage, begin developing documentation to show the damage, consider working outside of court with the applicator, and consider contacting an attorney to file a civil lawsuit.

The 2017 Agriculture and Environmental Law Conference will be held on November 17 at the Doubletree Hotel in Annapolis. Topics include: Hot Legal Issues in Agriculture; Legal Resources for Improving Soil Health; Antibiotics and Livestock; Conservation and the 2018 Farm Bill; Organics: Certified, Transitional, Livestock, Oh My! Register online by November 10. General registration is $40, students are free.
It’s officially fall, and in the Nutrient Management field that means it’s time to look forward.

Most Nutrient Management Plans are good for a single year (unless otherwise specified), since manure and soil analyses expire, crops change and animal numbers change. This is the time of year to replace expiring analyses and consider future crop and management changes.

A good rule of thumb is to make sure all analyses are updated in the fall and then make an appointment with your advisor. This will ensure that you will have your plan in hand prior to spring planting.

The farmers that have followed this advice and developed a plan during fall and winter have left my office very happy. It is a relief to have the paperwork out of the way before spring so you’re free to do what you really love! Call to schedule an appointment.

A Fall Soil Nitrate Test (FSNT) May Save You Money!

Are you growing winter wheat or barley for grain?

Research on these grain crops discovered that when an adequate amount of nitrate is in the soil, additional fall applications of nitrogen do not improve yields.

Based on this information, regulations effective October 2012 required farmers to test the soil nitrate concentration before they apply nitrogen in the fall to winter wheat and barley grain fields.

The fall soil nitrate test (FSNT) measures the concentration of nitrate (a form of nitrogen) in the soil. This will either document the need to apply additional nitrogen, or prove to you that adequate nitrate is in the soil. Recommendations are given when there is a need for additional nitrogen.

A field can be tested by collecting 15-20 soil cores at 8 inches deep throughout the field, mixing the soils and collecting a sub-sample of about 1 cup. This sample can be tested in a soil lab for a nominal fee or at one of the University of Maryland Extension offices by a Nutrient Management Advisor. The University of Maryland Extension Advisors do not charge for this service.

It is suggested that this study be done 2 weeks prior to planting.

Call your University of Maryland Extension office today for more information about the Fall Soil Nitrate Test (FSNT), a list of soil labs, or to schedule a FSNT for your soil samples.
Below are three different grant opportunities that you and your farm may qualify for funding. I have provided a very brief overview of each grant. If you would like more information, please follow the links provided, or call me and I will gladly print the information for you (410-638-3255).

**Harford County Ag Grants.** Anyone may apply, but projects must support Harford County Agriculture. $20,000 max per award, matching funds only (county pays 75%, applicant 25%) and grants are reimbursements only (receipts required). Not for permanent structures or capital improvements. Applications available online October 2nd at harfordfarms.com and must be submitted by November 30, 2017. Contact Jason Gallion for more information: jcgallion@harfordcountymd.gov, (410) 638-3511.

**Northeast SARE Farmer Grants.** Farmer Grants are for commercial producers who have an innovative idea they want to test using a field trial, on-farm demonstration, marketing initiative, or other technique. A technical advisor—often an extension agent, crop consultant, or other service professional—must also be involved. Projects should seek results other farmers can use, and all projects must have the potential to add to our knowledge about effective sustainable practices. Deadline is December 5, 2017. Visit http://www.nesare.org/Grants/Get-a-Grant/Farmer-Grant for details and applications.

**USDA Rural Business-Cooperative Service Grants.** The Value Added Producer Grant (VAPG) program helps agricultural producers enter into value-added activities related to the processing and/or marketing of new products. The goals of this program are to generate new products, create and expand marketing opportunities, and increase producer income. Applicants may receive priority if they are a beginning farmer or rancher, a socially-disadvantaged farmer or rancher, a small or medium-sized farm or ranch structured as a family farm, a farmer or rancher cooperative, or are proposing a mid-tier value chain. Grants are awarded through a national competition. Application deadline is January 18, 2018. For more information, visit https://www.rd.usda.gov/programs-services/value-added-producer-grants.

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**Grant Opportunities**

Fall is a busy time, but we hope you will mark your calendars and make time to attend the University of Maryland, College of Agriculture and Natural Resources (AGNR) Open House. The 2017 event will be held on Saturday, October 14, from 10:00 a.m. to 3:00 p.m., at the Central Maryland Research and Education Center, Clarksville Facility at 4240 Folly Quarter Road, Ellicott City, in Howard County, Maryland. It’s free and open to the public.

Come to our Open House at the farm and learn how our Academic, Research, and Extension programs benefit you. See the cows and calves, participate in birdwatching, see the beautiful butterflies, watch chicks hatch out of their eggs, check out the backyard poultry, take a hay wagon farm tour, visit the educational and interactive displays and exhibits on everything from nutrition to rural enterprise development, participate in the numerous hands-on activities, purchase some food from one of the student organization food tents, talk with an AGNR representative, and get your plant questions answered by a Master Gardener!

There is something for everyone to see and do at the AGNR Open House! We will see you at the farm - rain or shine!

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Back-issues of this publication can be found at: https://extension.umd.edu/news/newsletters/657

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Dates to remember

11 Oct. Women In Ag Webinar, Urban Soil Quality. 12 PM. Register online.


18 Oct. Dairy Field Day. 9:30-2:30 PM. Central Maryland Research & Education Center, Ellicott City. $10. Register online or mail checks to address on page 3.


Call (410) 386-2760 to register.


25 Oct. Women In Ag Webinar, Selling Your Farm Eggs to Retail Outlets. 12 PM. Register online.


14-16 Nov.—Mid-Atlantic Crop Management School. Ocean City, MD. Register online or call the Extension Office. $285 prior to October 30; $375 after October 30 and before November 6.

17 Nov.—Ag & Environmental Law Conference. 8-3 PM. Doubletree Hotel, Annapolis. $40. Register online.