Hello, Harford County!

Can you believe the summer is already drawing to a close? For me, it seemed to fly by. Perhaps it was because of the atypically cool weather this season, or because of all the summertime happenings at the Extension office this year. In any case, I’m looking forward to the cool days, fall foliage, and a slew of new programs that I’ll be debuting right up through the holiday season.

One project I am wrapping up now, as you are likely aware, is a needs assessment survey that we conducted in July and August. The purpose of this survey was to collect information from our Extension clientele to help us better serve your needs. From this information, we hope to paint a picture of the size and types of farms you operate, the type of educational assistance you are interested in, and how we can best provide that educational assistance to you. We are currently compiling all the information from the 212 surveys that were returned and will be able to share the results of our findings later this month.

During the time we were administering the survey, I received a few calls of concern about the anonymity of survey responses. We used a numbering system in order to identify which surveys were returned, allowing us to send reminders and duplicate surveys only to those who had not yet responded. This approach saved over $150 in postage, as well as a good deal of paper and the time that would otherwise have been spent collating the additional mailings. Upon receipt of the surveys, the numbers were immediately stripped.

The integrity of my research and of my promise of anonymity are important to me and have been priority during the research process. Rest assured that your responses can in no way be linked with your personal information. As an extra step of security, individual responses are not being reported. All responses will be combined, and only this aggregate data will be reported.

Conducting this needs assessment survey has been a big project, and I am excited to begin analyzing the responses. It is my hope that the information gleaned will help me develop better programs for you locally and also communicate Harford County’s needs to University of Maryland Extension as an organizational whole. In times of limited funding and personnel, the guidance provided by this type of survey is integral in strategizing the use of resources we have in order to best benefit those we serve.

Sincerely,

Sara Bhaduri-Hauck
Ag Extension Educator
sbh@umd.edu
Food for Profit: A Workshop for Food Entrepreneurs

October 11, 2013
9:00 a.m.—4:00 p.m.
Harford County Extension Office in Forest Hill, MD

Have you ever been told that your favorite homemade bread, or salsa, is “good enough to sell?” Do you have additional fruit or vegetables from your farm or home garden that you would like to make into a commercial product?

Food for Profit is a one-day workshop designed to help you work through the maze of local and state regulations, food safety issues, and business management concepts that all must be considered in setting up a commercial food business. The workshop will take you step-by-step through the entrepreneurial process and provide you with the information and skills to assess if your idea will be something that will sell at a profit. By attending this class, you can learn how to evaluate the opportunities on paper before you look for funding or take action (saving money and time). Pre-payment and registration are required. The tuition cost of $40 per person includes all materials and lunch. Your reservation will be confirmed when your payment is received. To register, call the Harford County Extension Office at 410-638-3255 or e-mail Sara at sbh@umd.edu with your full name and phone number. Checks may be made payable to "Harford EAC" and mailed to the Harford County Extension office at PO Box 663, Forest Hill MD 21050. Checks and cash payments may also be dropped off at the Harford County Extension Office Monday through Friday, 8:00 a.m. - 4:30 p.m. For further information, contact Sara BhaduriHauck at sbh@umd.edu or 410-639-3255.

This session of Penn State Extension’s popular course is sponsored by University of Maryland Extension.

Criteria for Low Germination in Cover Crop Seed Stock

Source: Maryland Department of Agriculture (abridged)

The Maryland Department of Agriculture (MDA) will allow farmers to plant small grain seed stock with a germination rate that is less than the 80 percent required by the Cover Crop Program as long as an adequate cover crop stand is established. Since weather conditions this spring have impacted seed quality, MDA is allowing farmers to continue to use farm-grown seed for the Cover Crop Program as long as the crop achieves nutrient benefits for Maryland waterways and the Chesapeake Bay. MDA’s Cover Crop Program typically allows farmers to use seed they may have saved; however, all seed used is required to meet Maryland Seed Law and Regulatory Standards and have a minimum germination rate of 80 percent. In addition, certain planting methods must be used to plant the seed to ensure a good stand. The newly announced seed option would relax only the germination standard and the minimum seeding rate. All other seed quality criteria must be met. MDA will require farmers to achieve specific stand coverage at the time of fall certification. Soil conservation districts, which administer the program for MDA, will be checking fields that are planted with substandard seed to assure stand establishment meets density requirements. Farmers should consult with their local University of Maryland Extension (UME) staff for information on recommended seeding rates necessary to achieve the required stand.
Maryland’s Cover Crop Program is viewed as the most successful water quality improvement initiative in the Chesapeake Bay region. Low seed germination was widespread in 2008 as a result of the severe Fusarium outbreak in the region. Low seed germination is again an issue for 2013 as a result of sporadic Fusarium outbreaks in some areas and some pre-harvest sprouting caused by the rainy harvest experienced this year. The Program’s recommended seeding rates for cereals are: rye (112 lb or 2 bu/acre); wheat (120 lb or 2 bu/acre) and barley (120 lb or 2 ½ bu/acre). The question that many are asking is: How do I attain an acceptable stand when the germination of my seed lot is below the standard of 80%?

MDA is recommending that you contact your Extension office to get assistance regarding what an acceptable stand is. This article will hopefully help you adjust to low germination cereal cover crop seed.

University of Maryland Extension recommends that farmers planting cereals for commodity production use a seeds/ft² approach which allows compensation for seed lot size variation. The Maryland Cover Crop Program mandates volume rates (2 bu/a for rye and wheat; 2.5 bu/a for barley) when any of these species are planted as a cover crop. A two-year study that was funded by MGPUB compared cover crop performance of these three species when planted at volume and three seeds/ft² treatments. The results of that research are the basis for the following cover crop seeding rate recommendations for the cereal species. Examples of seeding rates for low germination seed lots for the three cereal species are provided in the Recommendations below.

Summary of Research Findings
- Two years of research indicated that the seeding rates for cereal species used as cover crops can be less than the volume rates described by the current Maryland Cover Crop Program regulations.
- This research indicated that seeding rates for the cover crop program should be defined as seeds/ft² because this method accounts for the variations in seed size that can occur among species and for different seed lots within a species.
- Regardless of species planted, when a seeds/ft² method is used, it is important to know both the seed size and germination of the seed lot to be used.
- Planting cereal cover crops at a seeds/ft² rate should result in cost-savings because a lesser amount of seed would be required. An exception would occur when seed size for the species used is exceptionally large.
- Amount of N uptake that will occur will vary by amount of residual N present at a location. Amount of N uptake will generally be greater for earlier planted cereal cover crops than for later planted cereal cover crops.

Recommendations
The following seeding rate recommendations require that cereal cover crops be planted using a tillage practice that incorporates the seed into the soil, i.e. planting with a grain drill or broadcasting seed followed by incorporation with either a vertical tillage implement or a disk. The goal is to establish as uniform a stand as possible.

- Rye cover crop should be planted at 30 - 35 viable (adjusted for seed lot germination) seeds/ft². Example: a rye seed lot with 85% germination would require 35 - 41 seeds/ft² to be planted. Low germination example: a rye seed lot with 75% germination would require 40 - 47 seeds/ft² to be planted.
- Wheat cover crop should be planted at 20 - 25 viable seeds/ft². Example: a wheat seed lot with 90% germination would require 22-28 seeds/ft² to be planted. Low germination example: a wheat seed lot with 70% germination would require 29-36 seeds/ft² to be planted.
- Barley cover crop should be planted at 24 - 30 viable seeds/ft². Example: a barley seed lot with 90% germination would require 27 - 33 seeds/ft² to be planted. Low germination example: a barley seed lot with 75% germination would require 32-40 seeds/ft² to be planted.
2013 Small Grains Variety Trial Results

The 2013 small grains variety trial is posted at www.mdcrops.umd.edu/wheat/index.cfm on the MDCROPS website. This report includes information on yield, test weight, heading, scab, and beards for 54 varieties of wheat as well as yield, test weight, heading, height, and lodging for 12 varieties of barley. Two- and three-year averages of grain yield and test-weight are reported for varieties that have been tested in the past.

Bermudagrass for High Animal Use Areas

Maintaining vegetation on high use areas not only provides forage but also protects the soil, recycles nutrients, and reduces sediment and nutrient runoff. Bermudagrass is a sustainable and aesthetically-pleasing alternative to un-vegetated or hardened high use areas for livestock. Dr. Les Vough and the NRCS National Plant Materials Center will host this training to discuss durability, palatability, and nutrition of Bermudagrass; variety selection; establishment including soil fertility requirements, seeding versus sprigging, soil preparation, and weed control; and management including when and how much to graze and interseeding cool-season species. The event will also include a tour of established plantings. The training will be held light rain or shine and is free to attend; participants must provide their own lunches. This course will provide 4.5 continuing education units for Certified Conservation Planners. To RSVP, please contact R. Jay Ugiansky by September 27 at 301-504-8743 or rjay.ugiansky@md.usda.gov.

October 8, 2013
9:00 a.m.—4:00 p.m.
Howard County Fairgrounds
West Friendship, MD

Westminster Livestock Auction’s 1st Fall Roundup

October 5, 2013
8:00 a.m.—3:00 p.m.
1117 Old New Windsor Pike
Westminster, MD

Join the Westminster Livestock Auction for a flea market style roundup featuring all types of vendors – livestock and poultry, produce and flowers, feed and supplies, livestock fencing, livestock housing, food and drink, crafts, collectibles, flea vendors, and more! Vendors will be provided with a 15’ by 15’ area and may set up a table and tent or sell directly from their truck or trailer; cost is $10 per space. Pens will be available inside the livestock facility for those bringing animals for sale; cost is $15.00 per 8’ by 10’ area that includes bedding. Health requirements apply to animals; call for more details. Set up will begin at 6:00 a.m., and the market will open to the public at 8:00 a.m. The roundup is open to all, but dogs are not permitted. A charity auction will be held at 1:00 p.m. to benefit youth charities of Carroll County; donations are being accepted for the auction. To reserve your vendor space, or for answers to your questions, contact Earl Gouker at 443-506-5243 or 410-848-9820.
Horse Owners: There’s an App for That!

As hay prices soar, new mobile apps developed at University of Minnesota Extension can help horse owners more precisely determine how much hay to purchase and feed their animals. “Horses have evolved from work animals to recreational animals, with many leading leisurely lifestyles of limited exercise and access to lush pasture and grain. The recent shortage of hay, and the spike in hay prices, have forced many horse owners to re-evaluate their feeding strategies,” said

Trailering Horses: Beyond the Basics

This seminar will focus on correctly matching a horse trailer with a properly sized vehicle, vehicle specifications that are best suited to towing horse trailers, Department of Transportation regulations that may affect you and how to comply with them, maintenance procedures to keep your truck and trailer in safe condition, and safety considerations and horse care during extended transport. Registration is $5 per person and includes printed materials and refreshments. Space is limited so advanced registration is required by September 6. To register, contact Sara at 410-638-3255 or sbh@umd.edu with your name and phone number. Note: there was a date misprint in the August issue; the correct date is Tuesday, September 10.

Eastern Equine Encephalitis Confirmed in MD Horse

A case of Eastern equine encephalitis (EEE) has been confirmed in a horse in Worcester County. The horse tested positive for EEE which, like West Nile virus, is spread by mosquitoes. Officials remind Marylanders to take precautions to protect themselves and their families from mosquito bites to prevent mosquito-borne diseases.

EEE is spread by the bite of an infected mosquito and can cause a swelling of the brain (encephalitis). The disease is rare in humans, but can occur when an infected mosquito bites a person. EEE disease occurs primarily in areas close to swamps and marshes with high mosquito populations. The last confirmed human case in Maryland was in 1989, and prior to that there were two cases in 1982. The last confirmed case in a horse in Maryland was in 2009 in Wicomico County.

Although EEE occurs in humans less frequently than West Nile virus (WNV), it can be more serious. Only a subset of people infected with either virus develop neurological illness, however of those who develop neurological illness, approximately one-third of all EEE-infected persons may die compared to fewer than 10 percent who die following WNV neurological illness. EEE survivors can have long-term damage to the nervous system.

Typical symptoms of EEE in humans include fever, headache, mental confusion, nausea, vomiting, muscle aches, joint pain, and sometimes seizures and coma. Individuals reporting these symptoms should be referred to their health care provider. Symptoms usually occur four to 10 days after exposure to a mosquito carrying the virus. There is neither a specific treatment nor a vaccine available for use in humans infected with EEE virus.

In horses, EEE is a serious disease that can be fatal; however, well vaccinated horses are generally safe from the disease. The Maryland Department of Agriculture (MDA) encourages all horse owners to consult with their veterinarian to discuss the best vaccination program for their horse and its circumstances. The horse in Worcester County had not been vaccinated. Infected horses show a range of clinical signs that often progress over two to three days, including depression, altered mental status, circling, problems with balance, weakness, aimless wandering, impaired vision, walking (gait) abnormalities, head pressing, paralysis, convulsions and death. Horses that survive serious disease often have permanent nervous system deficits.

By University of Minnesota Extension (abridged)
The MD Department of Agriculture confirmed with the Farm Service Agency that farmers who wish to enroll in CREP as a means of satisfying the new MDA nutrient management setback requirement would be eligible to do so. An exception to this ruling would be for individuals that are in an enforcement situation. Farmers who have been officially informed by MDA the status of non-compliance with the setback regulation are not eligible for CREP. MDA will be mailing a postcard with additional information about this CREP option to all producers with a Nutrient Management Plan. For complete eligibility requirements for your farm, contact the Harford County Farm Service Agency at 410-838-3950.

Krishona Martinson, U of M Extension equine specialist. Two mobile apps for use with iPhones and iPads have been developed for the horse industry by a group led by Martinson. Android versions are in development.

With the “Hay Price Calculator” app, horse owners enter bale weight and price to calculate price per ton. “Horse owners are one of the few groups of livestock owners that buy hay by the bale. Buying by the bale can make it difficult to compare prices between and within bale types,” Martinson said. “A $4 small square bale that weighs 35 pounds actually costs more per ton than a $5 bale that weighs 50 pounds, for example.” Calculations for small square bales, large square bales, and round bales can be made, allowing the buyer to purchase the most economical hay. Hay buyers must know the bale weight, and the app does not take nutritive value into account. “Ideally, the app will be used to compare prices of hay with similar forage nutritive values,” said Martinson. The Hay Price Calculator app retails for $0.99 and can be found at z.umn.edu/itunesHorseHay.

Veterinarians and professionals have long expressed concern over increasing rates of equine obesity. The “Healthy Horse” app helps horse owners and professionals estimate their horse’s body weight. The results can help owners, veterinarians, and other equine professionals make decisions if a horse is identified as being ideal, over-, or under-weight. Researchers collected data on nearly 700 horses to develop the app. “Determining a horse’s body weight is critical for weight and feeding management, and for administering medication,” said Molly McCue, University of Minnesota associate professor in the College of Veterinary Medicine, one of the app developers. The Healthy Horse app allows horse owners and professionals to estimate the body weight of various adult horses – Arabians, ponies, stock-type, saddle-type, and miniatures – by entering height, body length, and neck and girth circumference. The Healthy Horse app retails for $1.99 and can be found at z.umn.edu/itunesHealthHorse.

The Maryland Department of Agriculture’s State Soil Conservation Committee has appointed Andrea Rigdon of Rigdon Farms to the Board of Supervisors for the Harford Soil Conservation District. Andrea is the first female to be appointed Supervisor in Harford County. She has served as an Associate Supervisor since March of 2005. The appointment fills a terms that expires October 17, 2016. Rigdon Farms is a diverse farming operation of row crops, small grains, hay, straw, seasonal produce and fall ornamentals. As an owner/operator, Andrea is involved with all aspects of the farm including the conservation efforts and message. Her position as a Supervisor will broaden that message to a new level within Harford County and for the State of Maryland.
Preventing Fires in Baled Hay and Straw

Most hay fires occur within the first six weeks after baling. Understanding the causes of fires in stored hay and learning how to reduce fire hazards will protect your feed supply and could prevent the loss of time and money associated with a fire.

Causes of Fires in Baled Hay or Straw.

Moisture content is the main factor that causes hay and straw to spontaneously combust. Hay fires are more common than straw fires, for reasons involving the type of forage, the moisture content in the stored forage, and heat production. After forages are cut, respiration of plant fibers (burning of plant sugars to produce energy) continues in plant cells, causing the release of a small amount of heat. When the forages are cut, field dried, and baled at the recommended moisture level (20% or less), plant cell respiration slows and eventually ends.

When forages are baled at moisture levels of greater than 20%, the right environment is provided for the growth and multiplication of mesophilic (warm temperature) bacteria found in forage crops. Mesophilic bacteria release heat within the bale and cause the internal bale temperature to rise between 130ºF and 140ºF. At this temperature range, bacteria die and bale temperature decreases.

Fire risk is greater for hay than for straw because a hay bale’s interior temperature does not cool after the first initial heating cycle. The respiratory heat created by the mesophilic bacteria provides a breeding ground for thermophilic (heat loving) bacteria. Basically, the higher the moisture content, the longer a bale will remain at a higher temperature. For example, a bale with 30% moisture content may have higher interior bale temperature for up to 40 days. When thermophilic bacteria are present, they multiply and produce heat, which can raise interior bale temperature to over 170°F. At these temperatures, spontaneous combustion can occur.

Additional factors that contribute to the risk of hay fires include the volume of the mow or bale stack, bale density, and ventilation or air flow around the stacked bales. Bales with a lower density that are stacked lower and have good air flow and ventilation have a lower risk of overheating.

Decreasing the Risk of Fire

The best way to reduce the risk of a hay fire is to bale hay at a moisture content of 20% or less because at this moisture level, microbial activity decreases. There are several ways of reducing moisture content in baled hay:

- **Baling under appropriate conditions:** Weather plays a critical role in achieving the appropriate moisture level in baled hay. The recommended weather conditions for haymaking are a slight wind and a humidity level of 50% or less. Because hay has a higher moisture content in the morning, it is recommended that you bale later in the day.
- **Using specialized equipment:** Use specialized haying equipment designed to increase drying rates. Such equipment includes tedders, windrow inverters, hay rakes, and conditioning equipment.
- **Using hay preservatives:** Hay preservatives, such as liquid propionic acid, applied to the hay during baling inhibit or reduce the growth of bacteria in hay with a high moisture content.

Another way to reduce the risk of a hay fire is to ensure that stored hay remains dry. When storing hay inside, make sure the barn or storage area is weathertight and has proper drainage to prevent water from entering the barn. When storing hay outside, cover the hay with plastic or another type of waterproof material. If you are unable to cover the bales, arrange the bales so that air can circulate between them to promote drying. Bales can be protected from ground moisture by storing them on a bed of gravel or lifting them off the ground on used tires, poles, or pallets.

Monitoring the Temperature of Stored Hay

If you are concerned that hay may have been baled at too high a moisture content, monitor the internal bale temperature twice daily for the first six weeks after baling. For safety reasons, you must work with a partner when checking the temperature of stacked bales. One of you stands atop the bales to measure the internal temperature while the other observes. The person testing the hay should wear a harness and a...
Nutrient Management Testing Available for Fall

By Patricia Hoopes, Nutrient Management Advisor

The Extension Office is available to conduct several fall tests to assist with your nutrient management planning needs. If you are interested in having one or more of these tests conducted, call Tricia Hoopes at the Extension Office at 410-638-3255. Fact Sheets about each of these tests are also available at the Extension Office and online at extension.umd.edu/anmp.

• **Fall Soil Nitrate Test:** This test will determine the concentration of nitrate in the soil to evaluate whether a fall nitrogen application is needed at the time of planting wheat or barley. This test must be completed prior to applying nutrients to a fall planting of wheat or barley. Soil samples are needed to test for nitrate levels. Testing can be done by a lab or by the Nutrient Management Advisor.

• **Corn Silage Yield Test:** This test will determine a silage yield estimate in tons/acre. This test should be done in late August or September just prior to harvest. The moisture should be between 65-70%. Corn should be in full dent and the stalks should still be green. Test area includes 5 randomly selected areas of a field. Row spacing, weight of stalks, number of stalks sampled and number of stalks in a given area are used to calculate a yield estimate.

• **Corn Grain Yield Test:** This test will determine a corn grain yield estimate in bushels/acre. The corn grain yield should be estimated as close to harvest time as possible. Test area includes 5 randomly selected areas. Row spacing, corn ear sample collecting, grain percent moisture, and grain weight are used to calculate a yield estimate.

• **Corn Stalk Nitrate Test:** This is an end-of-season test to determine the nitrogen levels in the corn stalk. The goal is to evaluate the nitrogen application rate. This test is good for manure and/or fertilizer applications. The test results are most helpful when results are collected over several years and compared. For corn silage, samples should be collected just before harvest. For corn grain, samples should be collected one to three weeks after 80% of the kernels on most ears are at black layer, typically late August to late October. Corn stalk samples are collected, and a lab evaluation is needed to determine nitrogen levels.

• **Hay Fire Hazards:** The following three hazards exist from hay fires:
  - **Flare-Ups:** When the internal hay bale temperature is between 150°F and 170°F, the potential exists for spontaneous combustion, and the hay should be moved to allow it to cool. If the temperature is at the higher end of the range, moving the hay could expose it to oxygen and cause flare-ups. Contact your local fire department and have charged water hoses available.
  - **Burned-Out Cavities:** These cavities form when temperatures deep within stored hay reached high temperature levels and the hay has burned. A person can become trapped in a burned-out cavity if he or she is walking over the top of the hay pile. Due to the risk of a person falling into a burned-out cavity, at least two people should investigate a hay mow.
  - **Toxic Gas:** Toxic gases such as carbon monoxide can be released by smoldering and burning hay. Chemically-treated hay may emit additional toxic gas vapors. A trained fire-rescue worker with a self-contained breathing apparatus (SCBA) should be called to assist at the scene in either situation.
Twilight Market at Jarrett’s Field

Grab a blanket and come celebrate the season of the sunflowers with a twilight farmer’s market to benefit Harford County Public Library and the Jarrettsville Lion’s Club. The event will feature fresh organic veggies and delicious local meats, cheeses, baked goods, ice cream, and stunning flower bouquets; WOLO Food Truck and other local food vendors, including beer and wine tastings; J. Thomas photography for family photos; and live music. Vendor space is available for $40 ($20 for non-profits) and free for farmers wishing to participate; confirm your participation by September 9 by sending an e-mail to fahimi@hcplonline.org.

New Fact Sheet on Right-to-Farm Law

Maryland’s Right-to-Farm Law is designed to protect agricultural operations with an affirmative defense to nuisance suits. How much do you know about the RTF law? Check out a new publication from the University of Maryland Center for Agricultural and Natural Resource Policy to learn more: visit extension.umd.edu/grainmarketing/right-farm and choose the link called “Understanding Agricultural Liability: Maryland’s Right-to-Farm Law”.

AGNR Open House

October 5, 2013
10:00 a.m.—3:00 p.m.
Central Maryland Research and Education Center
4240 Folly Quarter Road
Elicott City, MD

We’re closer than you think! Spend a day on the farm with us at the College of Agriculture and Natural Resources open house. The event will include hay wagon farm tours, birdwatching and butterflies, Master Gardener plant clinic, hatching chicks and backyard poultry, educational and research displays, food, hands-on activities for all ages, and a chance to visit horses, cows, calves, and turtles. Admission is free! Rain or shine. For more information, visit agrn.umd.edu/openhouse or call 301-596-9330.

4-H Ice Cream Fundraiser

September 5, 2015
5:00 p.m.—9:00 p.m.
Jarrettsville Creamery
1747 Jarrettsville Road
Jarrettsville, MD

Do you love ice cream? Why not treat yourself while supporting the Easy Riders 4-H Club? 10% of all sales during the time stated—including meals, ice cream, candies, and items in their country store—will go directly to the club. It’s the tastiest way to support 4-H!

Great resources are just a click away!

sbh@umd.edu
Extension.umd.edu/Harford-county
facebook.com/HarfordAg

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