

Ag Notes

Harford County Newsletter

UNIVERSITY OF
MARYLAND
EXTENSION

October 2018

University of
Maryland Extension

Harford County
Agricultural Center

Suite 600

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M—F 8:00 a.m.—4:30 p.m.

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Hello, Harford County!



I can't believe it's October! The rain has still been badgering us, but eventually we will get all the crops in for 2018. Harvest is an exciting time of year on the farm—we get to see how we did, and most importantly, how we ended up financially. It is no secret that the agricultural economy is in a severe slump. The Farmers' share of the food dollar is at an all-time low (about 12 cents on the dollar), and it has been difficult to make a profit in farming. Families are faced with a tremendous amount of stress as they try to figure out the best plan of action for their business. I wanted to make you aware of some new resources to help folks navigate these stressful times.

The University of Maryland Extension announces the release of a new web page devoted to assisting farm families in dealing with stress management through difficult economic times.

"Farm Stress Management," released in conjunction with National Suicide Prevention week Sept. 9-15, is a set of interdisciplinary resources to help farmers navigate the numerous publications online and provide timely, science-based education and information to support prosperous farms and healthy farm families.

Farm families are feeling the stress of an inconsistent and unreliable economy; declining incomes, several years of low commodity prices, and increasing costs have all led to worsening debt issues. Farmers have been forced to parcel off their land, file for bankruptcy, and take secondary jobs off the farm to provide

supplemental income. Access to affordable and effective health insurance and care is one of the top concerns among farmers who are often self-employed. Providing health insurance, disability coverage, and planning for retirement and long-term future care have also proven problematic. In fact, in a USDA-funded study, 45% of farmers were concerned that they would have to sell some or all of their farm to address health-related costs.

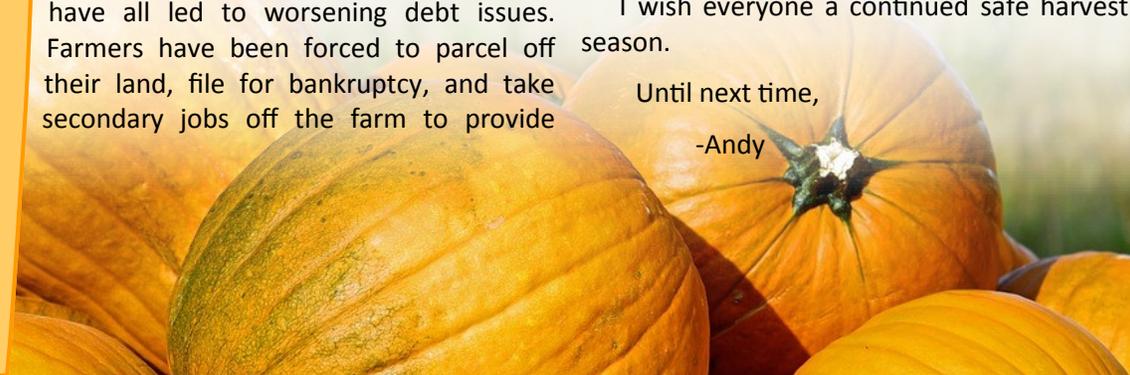
The new web pages offer resources to manage farm stress through a variety of subject areas including financial management, legal aid, mediation, stress and health management, and crisis resources for families dealing with depression, substance abuse, and mental health concerns. Farms have a special role in American society and are critical to our national and local economies. With world populations expected to increase to a predicted 9 billion by 2050, farmers become even more crucial for feeding our communities. Healthy farms and healthy farm families promote rural community growth, environmental stewardship and cultural legacies.

The new UME online resources can be found at: <https://extension.umd.edu/FarmStressManagement>. For more information, please contact Laura Wormuth, UME Communications Coordinator, at (301) 405-6869 or lwormuth@umd.edu.

I wish everyone a continued safe harvest season.

Until next time,

-Andy



Dairy producers, industry professionals, and government officials are invited to learn how dairy cattle genomics technology recently introduced at the University of Maryland dairy herd through a partnership with Zoetis, Inc., has been used to increase genetic progress. Victoria Baker, Zoetis, Inc., will discuss, "What are genomics?", review the results of genomic testing that has been done thus far on the herd, and how it can work for producer herds. During her presentation she will use an audit comparing before and after genomic testing, and demonstrate an analysis of the University's herd data, and how genomic testing has impacted the genetic progress in the herd.

Dr. Li Ma, dairy geneticist with the Department of Animal and Avian Sciences, will discuss genomic applications to health traits including the six health traits that have been newly added to the genomic evaluation of dairy cattle from the Council on Dairy Cattle Breeding. His presentation will draw on the largest dairy genomics database in the world, illustrating how genomic evaluations have been improved and have expanded our knowledge of genetic mechanism of cattle diseases.

After lunch, Paul Goeringer, Extension Legal Specialist, will discuss risk management programs available for Maryland dairy farmers. The talk will cover recent changes to the Margin Protection

Program and potential changes in the 2018 Farm Bill. Finally, he will highlight recent changes in the crop insurance program that allow for more

protections for dairy producers. After the presentation on risk management, participants will have an opportunity to view the dairy heifers that have been genomically tested. While observing the heifers, Victoria Baker will lead a discussion on the correlation between genomics and physical type traits.

The field day will be held at the Central Maryland Research and Education Center, Clarksville facility, located on 4240 Folly Quarter Road, Ellicott City, MD, on Wednesday, Oct. 10. Registration costs \$10 and begins at 9:30 a.m. The program commences at 10 a.m., includes a warm lunch, and adjourns at 2:30 p.m. For more information about the event, please visit our website: <https://ansc.umd.edu/extension/dairy-extension/dairy-field-day-cmrec>.

To register online, please go to: <http://umddairyfieldday.eventbrite.com>. 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 10

10 AM-2:30 PM

Central Maryland Research
& Education Center

Dairy Business Improvement & Planning Conference

The Dairy Business Improvement & Planning Conference provides a unique opportunity for participants to better understand the current state of the industry from industry experts, take a glimpse into the future, and learn how other producers found success by developing their own plan and taking action.

Sound business and management plans are essential elements of any successful dairy enterprise, especially one that intends to remain viable, profitable, and competitive well into the future.

Growth of a dairy business typically involves a significant investment. Is it feasible now or can the business be positioned to make it achievable in the future? Lower cost alternatives might include

improving cow health and performance, adopting new technologies, better use of labor, or diversification.

This event will provide the opportunity, information, and tools for participants to take a realistic look at their business, consider alternatives, and take steps to develop their own unique formula for success.

To view the program agenda and register, visit extension.psu.edu/dairy-business-improvement, or call Dan McFarland at (717) 840-7560. Registration closes October 24.

November 7-8

Holiday Inn

604 Station Rd.

Grantville, PA 17028



Beef Producers Short-Course

November 2-3

*Western MD Research
& Education Center
Keedysville, MD*

The University of Maryland Extension has designed a short-course to provide producers information and hands-on training in several areas of beef production. Whether you're just thinking of starting your own beef production operation or have been in the industry for years, this short-course will have something for all.

Class will meet from 1-6:00 PM on Friday, then a field day with hands-on learning will be on Saturday from 9-1:30 PM. Topic areas that will be covered include: determining operating costs, understanding EPD's, Veterinary Feed Directive, body condition scoring, forage sampling and storage, nutrient management, pasture and forages, as well as many others.

To participate, please submit a completed [application](#) and registration fee of **\$75 by October 30, 2018**. All educational materials, meals (dinner and lunch), and breaks are included. Forms are located [online](#), or contact Racheal or Matt listed below. Enrollment is limited to 30 participants. Contact Matt Morris, at (301) 600-3578 or via email mjmorris@umd.edu with any questions or concerns regarding the course. Contact Racheal Slattery, at (301) 405-1392 or via email rslatt@umd.edu with any questions or concerns regarding registration.

This course will also be offered January 25-26 at the Baltimore County Extension Office and registration will go live after November 3. Follow this [link](#) for more details.

Packaging That Sells

*Ginger Myers, Marketing Specialist
University of Maryland Extension*

Packaging is more than just a way to get your product from A to B — it's also an incredibly valuable customer touchpoint. In today's age of "Social Media" moments and You Tube videos, your product packaging is an additional way to get extra marketing mileage for your "brand." A product's packaging communicates many things, from what the product can do for your customers to your company's values. It is important to take some time deciding exactly what you want to accomplish by packaging your item, because for most food products, almost a quarter of the cost per unit that is realized comes from the price paid for packaging.

While the primary function of packaging is often containment, how you package your product and how that packaging pairs up with your target customers values is emerging as an important product differentiation variable. For example, the emergence of packaged meals and direct to the customer's door delivery has weathered most of the model's growing pains. But how will these models differentiate themselves and attract new customers?

They have already tapped into their target audience's desire for convenience in their food preparation. Since they have identified their customer's key value points, they can start marketing to those as well. ButcherBox is a meat delivery service, which ships 100% grass-fed beef, free range organic chicken and heritage breed pork directly to their customer's door.

Vericool, makers of high-performing compostable insulation and recyclable thermal packaging, has announced a \$10M packaging partnership with ButcherBox to provide sustainable packaging to safely deliver their product to their environmentally conscientious customers.

Step 1. Know Your Product and Brand

There are many reasons why we package food for sale.

Primary Functions

- **Containment:** Containing or holding the product without necessarily protecting it is a very basic function of a package.
- **Protection:** Protecting the product from microorganisms, rodents, dust, external contaminants, humidity, and light is a crucial function. Protection is also the most important consideration in determining shelf life of food products.

From intentional tampering

From shock and vibration during handling and transportation.

Which of these applies to your product? Is your packaging part of your brand identification- your logo, package size or shape, how it's sealed, disposal of the packaging?

Does product and packaging stand out? Some experts think that the package design is more important than the product itself for attracting customers. People buy with their eyes. Does your packaging reflect the quality of your product and create a memorable link to make the product easier to find and purchase again?

Pass the five-year-old test. If you can describe your product to a five-year-old, send them into a store or into the farmers market to find it, and actually get it, your packaging creates an iconic connection. Consumers will come back week after week looking for it. The key to this stickiness is a distinctive brand mark. For example, you could tell a five-year-old, to get the salt pack with the girl in a yellow coat with an umbrella on it; she will come back with Morton Salt. Similarly, ask for the blue pack with the big black and white cookie splashed in milk, and he will return with a package of Oreos. See this [Forbes article](#) for more information.

Step 2. Know Your Customer

Your target market will greatly impact the type of experience your customer will expect on receiving your product.

Being focused on a market niche means that your first concern is not your product, itself, but how your product fits into the needs of the target market that you have chosen. When you are focused on the customer, you will want to learn how your target group relates to these issues. The customer's needs and wants, and how closely they align with the products and services you offer are the bases of your

marketing efforts.

Knowing that your customers like the reassurance of a shrink-wrapped lid on a bottle of BBQ sauce, or that they want 8," rather than 12," pies (as they become empty nesters) can make all the difference between an effective, or ineffective marketing strategy.

The process of framing a niche market takes a bit of work that will have to be re-addressed as your business develops; these questions must be asked regularly – with an openness to realize that the issues and responses will change.

Step 3. Consider Some Practical Variables

So, what are the tangible aspects of product packaging that you need to consider?

- **Durability:** Even the most beautiful package won't make a good impression on your customer if easily damaged. Consider your product and what kind of protection it might need. Is it breakable? You'll definitely want to include elements to protect your product either in the packaging itself or in a separate box.
- **Function:** Is your product perishable? If so, then your product packaging might need to include an airtight component.
- **Display and Carrying:** Does your product packaging allow it to display well on a store shelf or on your market table? Odd shaped packages can fall over or are hard display neatly. Does your packaging make it more difficult for your customer to carry or position in their shopping bag?



SOWING THE SEEDS OF SOCIAL MEDIA SUCCESS—STRATEGIC MARKET PLANNING

The marketing world is rapidly changing and so are the tools for interacting with your target market. Interactive marketing opportunities such as websites, blogs, e-mail campaigns, podcasts, e-commerce, and videos are taking the marketing world by storm. But with the time demands of running a successful business, how do you determine which of these tools match your marketing goals and your technical abilities?

This seminar seeks to offer training for those ready to expand their already existing Internet marketing plans to the next level. Seminar topics will include:

- Learn to define business vision and goals, brand voice and how to align them with social media marketing activities,
- Gain insight on the operation and application of major social networking platforms,
- Learn to create marketing action plans based on desired outcomes and how to integrate social media into the mix.
- Stay out of trouble by learning the legal parameters concerning postings, dealing with negative feedback, posting pictures, and online offerings.
- Hear from a panel of successful social media farm marketers.

November 13

9:00 AM-4:00 PM

Baltimore County

Extension Office

Registration is \$65 and can be completed [online](#), or by contacting Ginger Myers at (301) 432-2767x338.

Interpreting Salinity Test Results

*Neith Little, Urban Agriculture Extension Agent & Dr. Andrew Ristvey, Extension Specialist for Commercial Horticulture
University of Maryland Extension*

Salinity is an important consideration for management of healthy soil and growth media, particularly in high tunnels or hoop houses. Salinity measures the total amount of soluble salts (minerals) in the soil or growth media.

One of the benefits of growing in a high tunnel is that it protects your crops from excessive rain and keeps their leaves dry, which can reduce the spread of disease. However, soaking rains serve the beneficial purpose of leaching salt accumulated from fertilizers, compost and minerals in the irrigation water, down below the root zone. So over time a lack of soaking rains can result in a build-up of minerals in high tunnel soil, increasing soil salinity. You can sometimes visually see a build-up of these minerals as a white crust on the surface of your high tunnel soil.

Salinity is also an important measure of the quality of growth media (mixes of substrates such as peat, coir, compost, sand, vermiculate, etc.). Some composts can have a high salt content, so if you are mixing your own growth medium, or purchasing one, it's a good idea to make sure that the salinity of your mix is not too high.

What happens if the salinity is too high? Basically, too much salt makes it harder for your crops to pull water and nutrients into their roots, and at very high levels it can stunt root growth. This is the same thing people talk about when they say a high-nitrogen fertilizer can "burn" seedlings' roots.

How do you measure salinity? You may be able to visually see very high salinity as white crusting on soil, but how do you spot the problem before it gets that bad?

You can send a sample off to the lab, or use an Electrical Conductivity (EC) probe to measure salinity in soil and growth media. A simple probe costs about \$150, and measures both EC and pH.

Electrical Conductivity is a measure of how easy or difficult it is for electricity to pass or conduct through the material. In soil or growth media, it is a measurement of salts or minerals dissolved in solution (the soil water). The more salt in the soil, the higher the conductivity. The procedure to measure EC in your soil or growth media is very simple. Mix equal parts by weight of soil and distilled water, let it sit for at least 30 minutes, stir again and insert the probe.

A note about units. Electrical conductivity is reported in a variety of units, but presently the Siemens is the derived metric unit of electrical conductivity.

Electrical conductivity probes typically measure in mS/cm (milliSiemens per centimeter). You may also see salinity reported as $\mu\text{S}/\text{cm}$ (microSiemens per centimeter) or dS/m (desiSiemens per meter). Converting between units of Siemens is relatively simple, because while the units are different, the scale is the same. For instance, $1 \text{ mS}/\text{cm} = 1 \text{ dS}/\text{m}$ & $1 \text{ mS}/\text{cm} = 1000 \mu\text{S}/\text{cm}$

Occasionally old reports use the unit of mho for electrical conductivity. A mho is the reciprocal of ohm, the unit of resistance (and you thought chemists didn't have a sense of humor). $1 \text{ mho}/\text{m} = 1 \text{ mmho}/\text{cm} = 1 \text{ mS}/\text{cm} = 1 \text{ dS}/\text{cm} = 1000 \mu\text{S}/\text{cm}$.

In aquaponics and hydroponics, people sometimes use Total Dissolved Solids as an estimate of salinity, instead of electrical conductivity (EC). However, TDS measures all dissolved solids in water, not just salt, so electrical conductivity is a more accurate measure of salinity specifically.

How do you interpret the results? At salinity above 2 mS/cm seedling germination starts to be inhibited and roots of larger plants may have difficulty accessing nutrients and water. Above 4 mS/cm roots are physically damaged and may die. This [factsheet](#) from Utah Extension explains it very well.

Irrigation water and high-tunnel soils. A farmer using high tunnels should also get a water quality test. Irrigation water can carry dissolved minerals which will accumulate in time, potentially increasing the salinity and pH of the soil in time. If salinity is a problem, the high-tunnel soil should be exposed to rainfall if possible, which can leach the minerals out of the root zone.

Conclusion. If you are growing in a high tunnel, or mixing your own growth media, measuring the salinity of your soil or substrate is a good idea. In a high tunnel, we recommend measuring salinity annually, so that you can monitor changes over time. If salinity measurements increase over time, or are above 2 mS/cm, it's time to assess why and what to do. Penn State Extension has a [helpful article](#) on next steps for salinity management in high tunnels.

FSNT and Fall Nutrient Management Planning

Patricia Hoopes, Nutrient Management Advisor
University of Maryland Extension, Harford County

Since October 2012, farmers have been required to test soil nitrate levels for fields where wheat and barley are grown for grain **before** they may apply a fall application of nitrogen. This test is referred to as the Fall Soil Nitrate Test (FSNT). The results of this test will determine how much, if any, nitrogen should be applied to the crop. Because nitrogen is not a stable element, and because we have had excessive rainfall, this is going to be a very interesting FSNT year.

There is a 6 step process:

1. Randomly collect 15-20 cores to a depth of 8 inches.
2. Put all soil cores in a plastic bucket and mix thoroughly.
3. Collect a sub-sample from the bucket (approximately 1 cup)
4. Spread sample on clean boxes and allow to dry.

5. Place soil in a soil test bag, labeling with field name or number.

6. Have the sample analyzed.

Lab analysis for soil nitrate can be done by your favorite soil lab, a private-sector nutrient management consultant who developed your nutrient management plan, or the University of Maryland Extension office in your county. Please coordinate with your advisor before delivering samples.

Note: More detailed directions and lab information are available at your local extension offices.

On a more personal note: I find nitrate testing interesting and a change of pace. I did work in a lab long ago and the strict timing and precision needed for accurate testing is a pleasant challenge. I look forward to providing this service for you. If you have questions or need further information feel free to contact me at the office.

Plan Ahead!

A reminder brought to you by the UMD Agricultural Nutrient Management Program

With preparation, it's easy to be in compliance with Maryland's Nutrient Management Law.

Producers need a plan if: grossing \$2,500 income or have greater than 8,000 lbs. live animal weight; their previous plan is expired; or subjects under "Plan Update Requirements" (e.g. planned crop, nutrient sources, acreage managed, number of animals) have changed.

Why should you start now?

- UME Advisors are currently more available to write plans; wait too long (e.g. January) and you might have to resort to a private planner
- Fall 2018 soil and manure analyses are good for the 2019 growing season.
- Guarantee you have a plan in hand before you apply nutrients, complying with MDA regulations.

What information do you need to provide? Planned crops for 2019; crops planted in 2018; soil tests (to be updated at least every 3 years); manure analysis (to be updated at least yearly); animal production information; yield records; maps of any new farms/

fields; operations with perennial fruits and fields requiring phosphorus risk assessment may require additional information and data collection. Individual advisors can advise in more detail what information is needed.

Who can write a Nutrient Management Plan? A certified Nutrient Management Consultant from your county extension office, or a private planner listed on MDA's website: https://mda.maryland.gov/resource_conservation/counties/NM_CONSULTANT_FOR_HIRE_DIRECTORY_2018.pdf

- Operators can become certified to write their own nutrient management plan for their operation.
- See the following links (updated continuously) for training and certification information; several trainings will be offered over the winter at multiple locations:
 - http://mda.maryland.gov/resource_conservation/Pages/nutrient_management_training_program.aspx
 - the 'Event Calendar' on the right side of <https://extension.umd.edu/anmp>

UMES Small Farm Conference

November 2-3

University of Maryland
Eastern Shore
Princess Anne, MD

The University of Maryland Eastern Shore Small Farm Conference will be held on November 2-3. Day 1 of the conference features up to three or four comprehensive, half-day workshops that encompass classroom instruction along with a hands-on activity or a field demonstration component. Topics can range from Soil Health and Vegetable Production to Direct Marketing and Home Food Preservation.

On Day 2, participants have the opportunity to select three out of the nine different seminars offered under the following educational tracks: Alternative Agriculture, Farm Business and Marketing, and New & Beginning Farmer (added in 2013). In addition, participants have the opportunity to network and visit with agricultural vendors and exhibitors including USDA agencies, the Maryland Department of Agriculture, agricultural businesses and various non-profit organizations that support agriculture.

Follow this [link](#) to register, or contact Berran Rogers: broger@umes.edu, (410) 651-6693.

Register Now

The **2018 Mid-Atlantic Crop Management School** will be held at the **Princess Royale in Ocean City, MD on November 13-15, 2018. Registration is now open. Register [online](#)** to save your spot!

The Mid-Atlantic Crop Management School offers a 2 1/2 day format with a variety of breakout sessions. Individuals needing training in soil and water, nutrient management, crop management and pest management can create their own schedule by choosing from 5 program options offered each hour. Emphasis is placed on new and advanced information with group discussion and interaction encouraged.

Food For Profit Class

October 30

9:00 AM-4:00 PM

Chesapeake Culinary Center
Denton, MD

Are you a food entrepreneur? Do you want to create and market a specialty food in Maryland? 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 course will be held at the Chesapeake Culinary Center, 512 Franklin St., Denton, MD 21629 from 9:00 a.m. to 4:00 p.m. This session of Penn State Extension's popular course has been specifically adapted to Maryland's food production regulations, food entrepreneurial resources, and marketing opportunities.

Registration is \$55 per person, which includes all materials and lunch. Follow the online [link](#) or call (301) 432-2767 ext. 301. to obtain a mail-in registration form. For further information about workshop content or require special assistance to participate in this program, please contact Ginger S. Myers, University of Maryland Extension Specialist at gsmyers@umd.edu, (301) 432-2767 ext.338. Pre-payment and registration are required for this workshop. Registration deadline is Monday, October 22, 2018.

Great resources are just a click away!

Andrew Kness

Andrew Kness
Extension Agent,
Agriculture and
Natural Resources



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UNIVERSITY OF
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EXTENSION

Ag Notes

Harford County Newsletter

Dates to remember

5 Oct. Pesticide Applicator Training. **Baltimore County** Extension Office, Cockeysville, MD. Call (410) 887-8090.

9 Oct. New Pesticide Applicator Training. 9-11 AM. **Harford County** Extension Office, Street, MD. \$7. Call (410) 638-3255.

10 Oct. Dairy Field Day. 10-2:30 PM. Central MD Research & Education Center, Clarksville, MD. \$10. Register [online](#) or call the Extension Office.

10 Oct. Women in Agriculture Webinar: Smart Choice Health Insurance Basics. 12PM. Register [online](#).

16 Oct. Private Applicator Recertification Training. 1-3 PM. **Harford County** Extension Office, Street, MD. Free. Call (410) 638-3255.

24. Oct. Women in Agriculture Webinar: Preparing Your Marketing Efforts for the Holidays. 12 PM. Register [online](#).

30 Oct. Food For Profit. 9-4 PM. Chesapeake Culinary Center, Denton, MD. \$55. Register [online](#) or call (301) 432-2767.

2-3 Nov. UMES Small Farm Conference. Princess Anne, MD. Register [online](#).

2-3 Nov. Beef Producers Short-Course. Western MD Research & Education Center, Keedysville, MD. \$75. Register [online](#) or call (301) 405-1392.

7-8 Nov. Dairy Business Improvement Conference. Grantville, PA. \$249. Register [online](#) or call (717) 840-7560.

13 Nov. Social Media Marketing Seminar. Baltimore County Extension Office, Cockeysville, MD. \$65. Register [online](#).

13-15 Nov. Mid-Atlantic Crop Management School. Register [online](#).

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