Agricultural Law Initiative

The Agriculture Law Education Project is a collaboration between state institutions in Maryland to identify and address the legal needs of Maryland farm families.

Information and fact sheets are available through the University of Maryland Extension website (https://extension.umd.edu/ale). Current publications include estate planning, agriculture leasing, and the new 2014 Legal Services Directory. The 2014 Legal Services Directory provides members list of the Special Committee on Agriculture Law. These members can provide services and/or information related to law and agricultural practices.

In addition, the Department of Agriculture and Resource Economics is keeping a Maryland Ag Law Blog (http://www.aglaw.umd.edu/). While information on this blog does not substitute legal advice, it may increase your understanding of issues with your operation.

Recent topics on the blog have included irrigation, drones, and ag labor laws. If you have any topics or questions you would like addressed, please contact your local extension office.

Branching Out

Branching Out, Maryland’s Forest Stewardship Education newsletter, is published four times per year by University of Maryland Extension. Branching Out provides educational information and current news and events, and is intended to reach anyone interested in forest stewardship including landowners and natural resource professionals.

The Spring 2014 edition included articles on Forest taxes, EPA regulations on new wood stoves and the Emerald Ash Borer. If you are interested in signing up for the newsletter, a link is provided below.

You may also choose to become a Maryland Woodland Steward this year. A three day, hands-on training session will occur October 2-5th. Deadline for applications is August 4th, and space is limited to 25 participants.

http://extension.umd.edu/woodland/subscribe-branching-out

UME Agriculture Contacts

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Planning and Management for Wheat Scab

We have made it through another season of winter wheat, but concerns about scab should not diminish. The effects of fusarium head blight (FHB) include bleached, shriveled and lightweight kernels, often identified as “tombstones” in wheat. These tombstones can contain a mycotoxin called DON, and is restricted for both animal and human consumption.

A combination of resistance to FHB and correctly timed fungicide application is recommended to reduce DON in wheat. If you still have the presence of tombstones in your fields, there are harvesting methods to reduce infected wheat from entering the storage bin. Nathan Kleczewski (Delaware Extension Plant Pathologist) recommends increasing combine fan speeds to help blow out diseased wheat. In a recent study from Ohio State1, increasing the combine shutter opening from 70 to 90mm (with a 1,375 rpm fan speed) increased test weights in wheat. Diseased kernels can lower test weights, also causing price discounts. Combined with the presence of DON (>2%), these price discounts could considerably lower profitability. If infected kernels do make it into storage bins, Purdue University recommends2 drying grains to 18% moisture to stop DON production. Further drying to 13% moisture should also prevent spoilage by fungi. Lighter kernels tend to accumulate in the center of grain bins and all attempts should be made to keep infected grains from mixing in.

Following harvesting, planning for the next season should begin. Since no one solution is effective by itself, integrated management is the best method to limit FHB damage. Reduced and no-till systems are great for soil health, but corn and wheat residue provide a home to FHB over the winter. To reduce the economic impacts of FHB, it is recommended to couple moderately resistant varieties of wheat with proper fungicide application and harvesting techniques. It has also been observed3 that FHB can travel up to 2500 feet from the source, so adjacent fields could be infected the following spring, no matter what your rotation is.

When choosing resistant varieties of wheat to plant this upcoming fall you can refer to the University of Maryland Crop reports on FHB resistance. They can be found on the Plant Science and Landscape Architecture Page under the extension tab. Contact your local extension office for more help with managing FHB.

http://www.psla.umd.edu/extension/md-crops


Maryland Farm and Harvest is online! Watch all of the episodes over the internet:

http://video.mpt.tv/program/maryland-farm-harvest/

Shows will be rebroadcast through August.

Tuesdays—7pm
Thursdays 11:30pm
Sundays—6am

NEW EPISODES: November 2014!
Mid-Atlantic Precision Ag Equipment Day

When: 8:30 AM – 3:30 PM, Wednesday, August 6, 2014
Where: Wye Research & Education Center 124 Wye Narrows Drive, Queenstown, MD 21658

FREE EVENT!!

University of Maryland Extension, in cooperation with Virginia Tech, West Virginia University, Penn State, and University of Delaware, is proud to bring you the Fourth Annual Mid-Atlantic Precision Ag Equipment Day. The event will include the nation’s top experts on agricultural equipment and machinery engineering. New this year will be research information and a demonstration of Drones used for precision agriculture. Practical and informative advice will be given on sprayer and planter section control, variable rate seeding, economics and practical implementation of RTK and GPS, soil mapping, using technology for on-farm research and developing custom variable rate prescriptions, and much more. You will be able to sit in on informative sessions covering practical application of the latest technology in your operation. You will also have the opportunity to meet with the speakers throughout the day so that you can get your questions answered in an informal setting. In addition, agricultural equipment dealers from across the region will be in our sponsor midway showing off the latest technology and there will be an equipment demonstration area for you to see this equipment in action. The event is free for attendees, but we do ask that you register to help us plan for the event. Lunch will be provided and CCA and nutrient applicator credits will be available. If you are in agri-business and would like to reserve a booth there is still space available. Please contact Jennifer Rhodes (410) 758-0166 or jrhodes@umd.edu.

USDA Soil Health

Soil health is a new name for an old topic. If you have ever taken an intro soil science course in college, then you are aware of the basic functions of a soil. As our knowledge of soil processes and agronomy grows, we have become more aware of the importance of observing the soil as a whole system. This requires understanding soil biology, chemistry and physical properties. All soils are not made the same, and all production practices will require different soil properties to reach their maximum production. The new “Unlock the Secrets of the Soil” program from the USDA is a way to educate everyone on the many benefits of a healthy soil. As this program moves forward we will be adapting it to the Lower Shore, so that we can better understand how our soils function, and how to best use them agronomically. Below are some benefits from a health soil from the USDA Soil Health website.

What Soil Does
Healthy soil gives us clean air and water, bountiful crops and forests, productive grazing lands, diverse wildlife, and beautiful landscapes. Soil does all this by performing five essential functions:

- **Regulating water** - Soil helps control where rain, snowmelt, and irrigation water goes. Water and dissolved solutes flow over the land or into and through the soil.
- **Sustaining plant and animal life** - The diversity and productivity of living things depends on soil.
- **Filtering and buffering potential pollutants** - The minerals and microbes in soil are responsible for filtering, buffering, degrading, immobilizing, and detoxifying organic and inorganic materials, including industrial and municipal by-products and atmospheric deposits.
- **Cycling nutrients** - Carbon, nitrogen, phosphorus, and many other nutrients are stored, transformed, and cycled in the soil.
- **Physical stability and support** - Soil structure provides a medium for plant roots. Soils also provide support for human structures and protection for archeological treasures.
Agricultural Research Updates

Using radio waves to kill salmonella

One out of every 20,000 poultry eggs can be contaminated with salmonella. Although pasteurization processes can be used to kill salmonella, it may change the taste and texture of the egg. Researchers at the USDA Agricultural Research Service are patenting a technology that applies radio waves to heat the egg from the inside out, followed by a quick hot water bath to kill the pathogen. This process is 3x faster than current pasteurization and maintains egg quality.

Source: Agricultural Research Service

Foraging worms stealing your slug bait

In the Pacific Northwest it was determined that worms can remove up to half of the slug bait pellets applied in 2.5 days. Unfortunately these worms preferred the cheaper pellets to liquid and granular forms of the bait. This leads ARS scientists to recommend using more expensive bait to actually be effective on slugs. If you believe this may have occurred on the Lower Shore in your fields, please contact your local extension office.

Source: Agricultural Research Service

Looking to wheat’s wild ancestors

Stem rust fungus is a wheat disease currently spreading across Africa with the potential to threaten 90% of the world’s wheat. Scientists are looking to einkorn wheat, a wild ancestor, to find resistant genes before this fungus threatens the US cropping systems.

Source: Agricultural Research Service

High Speed Low Draft Anhydrous Ammonia Injection

Efficiency is important in agriculture, which includes application speeds in the field. For anhydrous ammonia (AA) injection, conventional till knife injection may increase fertilizer efficiency, but could slow application times. A new method is being tested using a coulter wheel to open the soil and place the AA, with an offset wheel to close the tract. This method allowed for shallower injection and greater speeds, but should be avoided where placed directly under corn rows. The technology is currently available on the John Deere 2510H nutrient applicator.


Maryland Corn Nitrogen Rate Study

Dr. Bob Kratochvil (University of Maryland), during a four year corn/nitrogen response study, observed that 1.1 to 1.2 lb Nitrogen/bushel yield goal may be a better estimate for optimum growth. The current estimate is only 1 lb N/bu.

Source: Maryland Grain Producer Utilization Board 2013-2014 Annual Report

Evaluating Soil Phosphorus Trends Over Time

Dr. Josh McGrath (University of Maryland) evaluated 50 fields in Maryland and observed that nutrient management policy is having its intended impact. They also observed that after manure applications ceases, soil phosphorus decreases very slowly over time. Questions raised by the study included whether the Mehlich 3 soil test is the best method to predict environmental risk and whether after 15 years of no phosphorus application, whether the measured soil phosphorus is available for offsite transport or crop uptake.

Source: Maryland Grain Producer Utilization Board 2013-2014 Annual Report
Worcester County Extension Open House

To celebrate the 100 year anniversary of Extension, the Worcester County Extension office will be holding an open house during the Blessing of the Combines. Come discover how University of Maryland Extension still serves the farming, 4-H, health, and home gardening communities!

DATE: August 2, 2014  
Time: 10:00 a.m.—2:00 p.m.  
Where: 305 Bank Street, Snow Hill, MD  
*Light refreshments will be available*

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New Grower Training

The University of Maryland Extension has created a one day workshop for new poultry farmers on Delmarva focusing on poultry farm management. Registration is $30 and includes continental breakfast, lunch, and materials.

*Please register by July 18th at:*
[https://poultryfarmmanagement2.eventbrite.com/](https://poultryfarmmanagement2.eventbrite.com/) OR contact Sheila Oscar at 410-742-1178 or Shelia Shorter at 410-758-0166.

**July 25th, 8:30 a.m. to 3:00 p.m.**  
Caroline-Dorchester Fairgrounds 4-H Park  
Denton, MD

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Wicomico Nutrient Management

The Wicomico Nutrient Management position is advertised here: [https://ejobs.umd.edu/postings/27143](https://ejobs.umd.edu/postings/27143) If you need a nutrient management plan completed in Wicomico County, you may contact Maegan Perdue at the Somerset County Office (410-651-1350).

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Hay and Straw Directory

The Maryland Hay and Straw Directory is available on the Maryland Department of Agriculture Website.

[http://mda.maryland.gov/maryland_products/Pages/hay_straw.aspx](http://mda.maryland.gov/maryland_products/Pages/hay_straw.aspx)

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Maryland Agriculture Census Data

*Source: Maryland Department of Agriculture (USDA-NASS 2012 Census)*

<table>
<thead>
<tr>
<th>Statewide</th>
<th>2012</th>
<th>2007</th>
<th>2012 Counties with largest production (in million $)</th>
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</thead>
<tbody>
<tr>
<td>Number of farms</td>
<td>12,256</td>
<td>12,834</td>
<td>1. Caroline ($257.9)</td>
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<tr>
<td>Average farm size (acres)</td>
<td>166</td>
<td>160</td>
<td>2. Wicomico ($236.3)</td>
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<tr>
<td>Average farmer age</td>
<td>59</td>
<td>57.3</td>
<td>3. Somerset ($219.0)</td>
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<tr>
<td>% Female operators</td>
<td>18.7</td>
<td>17.3</td>
<td>4. Worcester ($199.3)</td>
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<tr>
<td>% farms with Internet</td>
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<td>61.3</td>
<td>5. Dorchester ($187.1)</td>
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<tr>
<td>Average net income</td>
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<td>$32,161</td>
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<tr>
<td># Farms with &lt; $10,000 in sales</td>
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<td>7,505</td>
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<tr>
<td># Farms &gt; $1 million in sales</td>
<td>566</td>
<td>439</td>
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EXTENSION EVENTS

7/8   Mid Season Twilight Tour - Wye Research Center, Queenstown
7/10  Eastern Shore Potato Field Workshop, Hurlock
7/25  New Poultry Grower Training - Caroline-Dorchester Fairgrounds
8/2   Worcester County Open House - Extension Office, Snow Hill
8/6   Mid-Atlantic Precision Ag Equipment Day - Wye Research Center
8/12  Lower Shore Farm Bill Workshop - TBA

OTHER EVENTS

6/24—7/15 Cover Crop Signup – Soil Conservation District Office
7/24  Commodity Classic - Wye Research Center, Queenstown
7/25-27 Somerset County Fair - Fairgrounds, Princess Anne
7/31-8/2 Great Pocomoke Fair - Pocomoke City
8/9-11  Worcester County Fair - Byrd Park, Snow Hill
8/15-17 Wicomico County Farm and Home Show, Winterplace Park, Salisbury

Want to receive this newsletter electronically? E-mail jjerod@umd.edu and type LES AG Newsletter into the subject line.