

Ag Notes

Harford County Newsletter

UNIVERSITY OF
MARYLAND
EXTENSION

August 2018



University of
Maryland Extension

Harford County
Agricultural Center

Suite 600
3525 Conowingo Rd.
Street, MD 21154
(410) 638-3255

M—F 8:00 a.m.—4:30 p.m.

Extension.umd.edu/harford-county
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Hello, Harford County!

On July 19, several University of Maryland Extension faculty members attended the Maryland Department of Agriculture and Governor Larry Hogan's annual Buy Local cookout. The event showcases food prepared by chefs using all local ingredients grown right here in Maryland! This annual event kicks off [Maryland's Buy Local Challenge](#); a campaign that encourages Marylander's to buy local.

Maryland has over 12,000 farms; many of which sell products locally. These local sales are vital to the viability of these farms. One great resource that you can use to help you find local farm products is the marylandsbest.net website.

Additionally, be on the lookout for a new website/app specific to Harford County to help link consumers to farms selling local products.

Until next time,
-Andy



Pictured Left-Right: Chuck Schuster, Extension Agent, Montgomery County; Governor Larry Hogan; Andy Kness, Extension Agent, Harford County; Jon Moyle, Poultry Specialist; Neith Little, Extension Agent, Baltimore City; Erika Crowl, Extension Agent, Baltimore County; and Jenny Rhodes, Extension Agent, Queen Anne's County.



On-Farm Readiness Review Request

David Martin, Agriculture Extension Agent, Emeritus
University of Maryland Extension

The Food Safety Modernization Act (FSMA) is a law that was passed by Congress in 2010 and gave the U.S. Food and Drug Administration (FDA) a legislative mandate to require prevention-based controls across the food supply. The Produce Safety Rule (PSR) is one of many rules within FSMA and has the greatest impact on producers of fresh vegetables and fruits.

Since the PSR was published on November 27, 2015, many fruit and vegetable farmers have attended meetings and trainings to learn about what is needed to comply with the new regulations. As the PSR is a mandated federal regulatory program, enforcement through inspections will begin in the future depending on compliance dates. As the FDA works with the state departments of agriculture to implement the PSR they have adopted a philosophy of “educate before you regulate” to help growers meet the requirements of the federal rule.

The Maryland Department of Agriculture (MDA) entered into a cooperative agreement with the FDA so that the MDA (and not the FDA) will be conducting inspections, beginning in 2019, to verify compliance with the PSR. In fact, January 26, 2018 was the date for farms with over \$500,000 (3-year average) in produce sales to begin meeting the regulatory compliance requirements (with future dates for smaller farms). While many farms have taken steps to meet compliance deadlines, there are still questions about what needs to be done to be fully compliant and how the inspections will be structured.

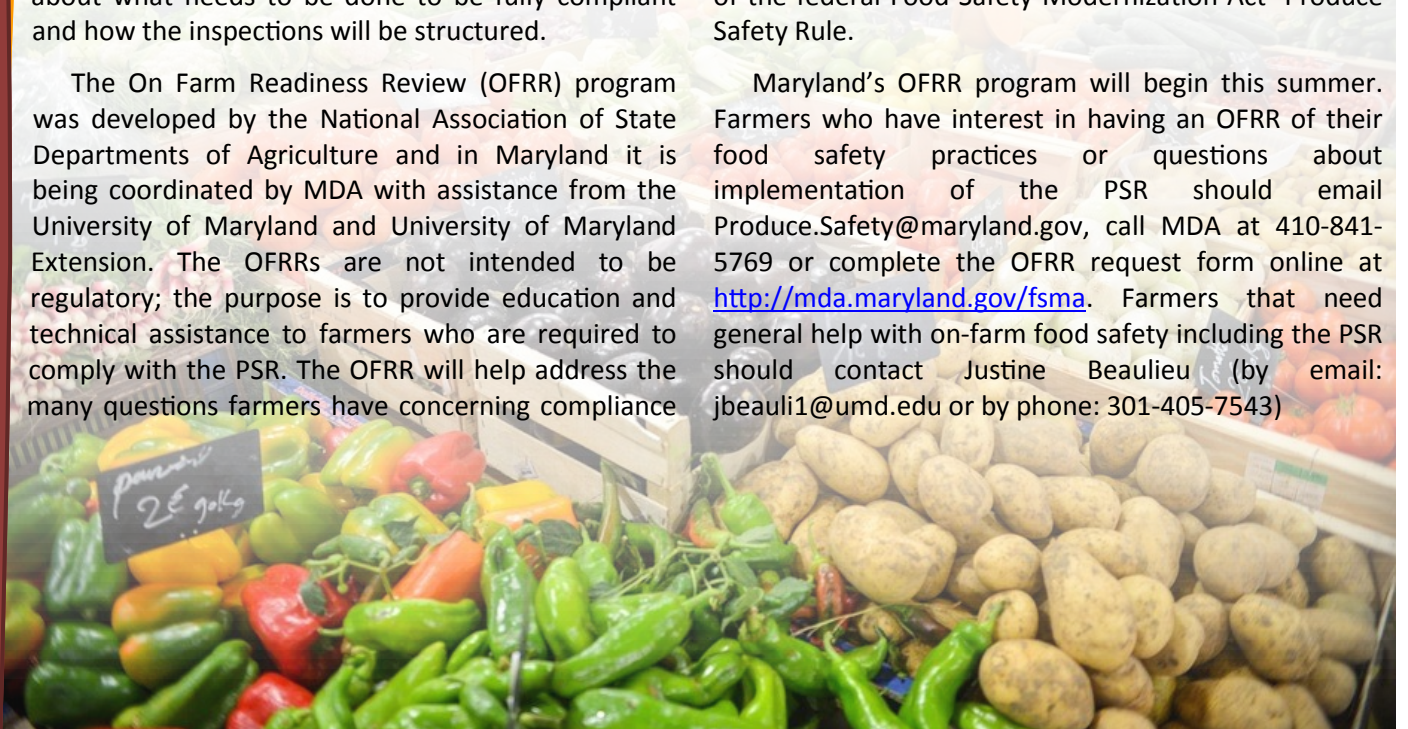
The On Farm Readiness Review (OFRR) program was developed by the National Association of State Departments of Agriculture and in Maryland it is being coordinated by MDA with assistance from the University of Maryland and University of Maryland Extension. The OFRRs are not intended to be regulatory; the purpose is to provide education and technical assistance to farmers who are required to comply with the PSR. The OFRR will help address the many questions farmers have concerning compliance

with the rule and assist farms with correcting non-compliant practices. The on-farm review is a discussion of PSR provisions and not an inspection nor an audit. Maryland farmers that have attended the one-day Produce Safety Alliance Grower Training have the option to request an OFRR of their farm. The on-farm review is voluntary and at no cost to the farmer. Farms that were required to be in compliance by January 2018 will be inspected first, starting in 2019, and will be given preference in scheduling an OFRR.

How does the OFRR work? First, the farmer contacts MDA to indicate interest in scheduling a review of their food safety practices and how their practices line up with the regulations. Next, a food safety team representative will contact the farmer to discuss eligibility and scheduling prior to finalizing a farm visit. Once the farm visit schedule is finalized, a team of 3 or 4 will visit the farm operation to discuss and observe farm practices that may include growing, harvesting, and postharvest activities on the farm. At the completion of the OFRR, the team will discuss their observations with the farm operator and provide resources to help the farmer in those areas.

Who is on the OFRR food safety team? The team will usually have three people: one from the MDA Food Quality Assurance Section, one from the University of Maryland and one from the University of Maryland Extension office. The purpose is to help the farm operator better understand and meet the requirements of the federal Food Safety Modernization Act- Produce Safety Rule.

Maryland’s OFRR program will begin this summer. Farmers who have interest in having an OFRR of their food safety practices or questions about implementation of the PSR should email Produce.Safety@maryland.gov, call MDA at 410-841-5769 or complete the OFRR request form online at <http://mda.maryland.gov/fsma>. Farmers that need general help with on-farm food safety including the PSR should contact Justine Beaulieu (by email: jbeauli1@umd.edu or by phone: 301-405-7543)



Sulfur and Vegetable Crops

*Gordon Johnson, Vegetable & Fruit Extension Specialist
University of Delaware*

With the recent heavy, leaching rains, we are seeing signs of sulfur deficiency in some vegetable crops. Sulfur is considered one of the secondary macronutrients that vegetable crops require for growth. Sulfur is a component of four amino acids and is therefore critical for protein formation. It is also a component of certain glycosides that give pungency to mustard family crops (greens, cole crops) and Allium crops (onions, garlic).

In the last 25 years, as industrial air pollution has been reduced (especially pollution from coal fired power plants) we have had less sulfur deposition from rainfall. Sulfur deficiencies are more common and sulfur additions in fertilizers or manures is being required for many crops to produce high yields.

Most of the sulfur in the upper part of the soil is held in organic matter. Upon mineralization, sulfur is found in the soil as the sulfate ion (SO_4^{2-}) which has two negative charges. The sulfate ion is subject to leaching, especially in sandy textured soils (loamy sands, sandy loams). It does accumulate in the subsoil but may not be available for shallow rooted vegetables.

Sulfur can be added by using sulfate containing fertilizers such as ammonium sulfate, potassium sulfate,

and K-mag (sulfate of potassium and magnesium). It is also a component of gypsum (calcium sulfate). In liquid solutions, ammonium thiosulfate is often used as the sulfur source. Sulfur is also found in manures and composts. For example, broiler litter has about 12-15 lbs of sulfur per ton.

In vegetable crops, sulfur removal is generally in the 10-20 lb/A range. Mustard family crops (cole crops such as cabbage and broccoli, mustard and turnip greens, radishes) remove between 30 and 40 lbs/A of sulfur. Research in our region has shown response to added sulfur for sweet corn and for watermelons. In Florida research it was shown that adding 25 pounds of sulfur per acre boosted yields by 1.7 tons per acre in tomatoes. Similar results were found with strawberries.

Our general recommendations are to apply 20-30 lbs of sulfur per acre on sandy soils for most vegetable crops. Remember to take credit for any sulfur being added with fertilizer sources such as ammonium sulfate (24% sulfur). One vegetable where we want to limit sulfur is with sweet onions. Because sulfur increases onion pungency, and sweet onions are sold based on their low pungency, we limit sulfur applications to this crop.

2018 Organic Vegetable Field Day

August 15

5-8:30 PM

Upper Marlboro Research &
Education Center
2005 Largo Rd.
Upper Marlboro, MD

You're invited to attend the 2018 organic vegetable field day in Upper Marlboro on August 15. Dinner will be served at 5:00 with tours starting at 5:45 PM. Anyone interested in organic vegetable production should attend. Faculty from University of Maryland will be on hand to speak about various topics, including:

- use and value of cover crops in a fertility program
- weed control and management
- companion planting for pest management
- cucumber beetle control
- and more!

For questions regarding the program, contact Jerry Brust: jbrust@umd.edu.

Invasive Asian Longhorned Tick

Megan Fritz, Veterinary Entomologist, and Racheal Slattery, Extension Beef and Dairy Program Coordinator
University of Maryland

The Asian longhorned tick, *Haemaphysalis longicornis*, is an invasive tick that was recently discovered in the mid-Atlantic. The longhorned tick is a major pest of cattle in its native range of East Asia, where populations grow rapidly under warm, humid conditions. The longhorned tick was first discovered in Hunterdon County, New Jersey in 2017, although the tick has likely been present in the United States since 2013. New infestations have already been discovered in Virginia, West Virginia, and Arkansas in 2018.

Adult longhorned ticks are 0.1 inches long and dark brown in color. They commonly attach themselves to the faces, ears, brisket, and groin of cattle, sheep, and goats. Cattle production losses associated with high tick burdens include milk yield losses of up to 25%, 30% reduction in conception rates in breeding cattle, and reduced weight gain in calves. Other economically important risks for cattle production associated with the longhorned tick include hide damage, disease transmission, and death in cases of severe infestation. Theileriosis, babesiosis, ehrlichiosis, and anaplasmosis are all diseases of cattle that can be transmitted by the longhorned tick.

Longhorned ticks can be found throughout the spring and summer months, and thrive in tall grasses under wet, humid conditions. There are multiple blood-feeding life stages (Fig. 1), and the different stages can be found at different times throughout the spring and summer months. Nymphs typically seek cattle and other warm-blooded hosts in the early spring, adults are found on hosts mid-summer, and larvae are found in late summer. All life stages can be found on cattle, but nymphs and adults are most likely to feed on cattle hosts.

The best way to protect your cattle from ticks and tick-borne disease is to use an integrative approach to management. Like many other tick species, the longhorned tick spends most of its life off of a host animal on the ground, and it is susceptible to dry conditions. Following proper pasture management reduces suitable habitat for ticks and risk of infestation. This includes clipping pastures and fence lines, and controlling broadleaf weeds. Cleanup of brush and woody debris from pasture edges also reduces habitat for wild animals, like mice, rabbits, squirrels and raccoons, which can carry ticks into your pasture.

Early detection of ticks is key to preventing ill-effects of



Figure 1. Invasive longhorned tick. Engorged and partially engorged females, and an engorged larva (left to right). Image: J. Occi, 2017.

infestation. Cattle should be examined for ticks regularly throughout the course of the season. When ticks are detected, rotational grazing can limit tick population growth over the course of a summer season. Calves are most susceptible to tick feeding, so reducing their contact with dense pasture reduces tick burden and risk of tick-borne infection. Whole animal insecticide treatments, like Permethrin™ II and Ultra Boss™, can be used to prevent new tick attachment, but are less effective at eliminating ticks that are already attached. Sprays and pour-on treatments cannot be used alone for comprehensive livestock protection. An integrative approach to tick management, which combines pasture management with good husbandry and chemical prophylaxis is crucial for livestock protection.

If you find ticks on your animal and you are concerned:

1. Collect a few of the ticks by tweezing them from the skin of your animal. Grasp the tick close to the skin of the animal using a pair of blunt-ended tweezers, then gently pulling on them at a 45 degree angle. Once removed, immediately stick them to a piece of masking tape, and place them into a Ziploc bag with a moist paper towel. Tick collections can be taken to your local University of Maryland Extension office or shipped directly to:

Dr. Megan Fritz
4291 Field House Dr.
Plant Sciences Building Rm. 4112
College Park, MD 20742
2. Call University of Maryland Medical and Veterinary Entomologist, Megan Fritz, at (301) 405-3945.
3. Call your local veterinarian and alert them to your tick infestation. Many veterinarians in the state of Maryland are working with the Maryland Department of Agriculture to address stakeholder concerns regarding the longhorned tick.

Foot Rot Within Your Herd

Erika Crowl, Agriculture Extension Agent Associate
University of Maryland Extension, Baltimore County

In the beginning of this month, we were all hoping to get a little rain. The ground was getting too dry and hard. Well, our wish was granted but the rain we needed is now too much. In the next few weeks, livestock producers may be experiencing foot rot within their herds.

When livestock are pastured on wet ground or kept in damp areas, their hooves soften allowing them to become more susceptible to organisms that can cause foot rot. Foot rot is a sub-acute or acute necrotic infectious disease that is caused by the interaction of two anaerobic bacterium, *Fusobacterium necrophorum* and *Bacteroides nodosus*. This disease will not only cause lameness, but you may experience decreased weight gain and/or milk production. *F. necrophorum* lives within the ruminant digestive tract and in wet weather it may interact with another bacteria, *Corynebacterium pyogenes*, to produce an infection between the animal's toes. This infection allows for the invasion of *B. nodosus*, which, when met with *F. necrophorum*, produces what we know as foot rot. The bacteria that causes foot rot is spread from the infected animal to the ground, where it can be picked up by the non-infected animal. The organism will only survive 10-14 days within its carrier, but it will continue to re-infect the herd unless the animal is either culled or the disease

is eradicated.

Control of foot rot within your herd is based on good management practices. Several practices are: **1) Hoof Trimming:** This will reduce the number of cracks where bacteria can hide, removes infected area, and exposes bacteria to air. **2) Foot Baths:** Two common foot baths solution used are Zinc Sulfate or Copper Sulfate. Zinc Sulfate tends to be the most effective and least toxic especially to sheep. **3) Antibiotics:** Feeding low levels of Chlortetracycline (CTC). CTC is a broad spectrum antibiotic that may reduce liver abscesses within the animal. *F. necrophorum* is a major bacteria in liver abscesses and foot rot. Before using you should read the label and withdrawal time. **4) Zinc Supplementation:** Zinc plays a major role in maintaining skin and hoof health. Adequate dietary zinc may help minimize foot rot and other lameness. **5) Vaccination:** Vaccines are approved for use in cattle and sheep to control foot rot. Your local veterinarian will be able to best assist you with the vaccination.

Eradication of foot rot can be difficult, time consuming, and have a negative economic impact on the farm. Studies show that no single treatment is effective, but a combination of treatments that fit your operation are effective.

4R Technology Field Day



4R TECHNOLOGY FIELD DAY

Register at <https://technology-field-day-tickets.eventbrite.com/>

August 15, 2018
Queenstown, MD

DELAWARE MARYLAND 4R Alliance

UNIVERSITY OF MARYLAND EXTENSION
Solutions in your community

The Delaware-Maryland 4R Alliance and University of Maryland Extension invite growers and agribusiness professionals to join them for their 4R Technology Field Day on **August 15, 2018** at the **Wye Research and Education Center in Queenstown, Maryland**. The event will be showcasing application of the 4Rs (right source, right rate, right time, and right place) on the Delmarva. Demonstrations will include phosphorus placements, drones and mapping, options for nitrogen management and conservation practices and water quality monitoring. There will also be a panel of local farmers discussing how they have been successful in implementing 4R nutrient management practices in their operations.

Registration will begin at **8:30 am** and the program will be from **9:30 – 2:30**. Lunch will be provided as well as Nutrient Management and Certified Crop Advisor credits. We ask that you register so we can get an accurate count. To register please visit: technology-field-day-tickets.eventbrite.com.

For more information, contact Danielle Bauer, 443-262-8491, danielle.mdag@gmail.com.

Urban Farmer Field School

University of Maryland Extension will host five farmer field school workshops to help urban farmers develop their agricultural enterprises for success. Held at farms across Prince George's County and Baltimore City, each Urban Farmer Field School in the series will cover a different topic and provide participants with the opportunity to learn in a hands-on setting, and set goals for improving the financial viability of their urban farms.

The series, developed as part of a grant from the Northeast Extension Risk Management Education Center, funded through the USDA National Institute of Food and Agriculture (NIFA), will help current and aspiring commercial urban farmers in the Baltimore and Washington D.C. metro regions move from crisis-management to proactive risk management.

"Many urban farmers become overwhelmed by the daily challenges of farming, spending their time seeking short-term financial solutions to keep their urban farms afloat," said Neith Little, urban agriculture Extension educator in Baltimore. "We want to help urban farmers use risk management strategies to move from survival mode to a more proactive understanding of what their farms need to thrive."

In June, UMD Extension hosted focus groups in both Baltimore City and Prince George's Co. to collect feedback on current challenges, needs, and

opportunities for growth in urban agriculture in the region. The feedback determined the content of the farmer field schools, as well as a future guidebook, to assist urban farmers.

"Achieving economic viability is an urgent concern for urban farmers," said Mariya Strauss, executive director of the Farm Alliance of Baltimore, a grassroots membership group of 16 urban farms in the city. "They face unique challenges such as having less land than rural farms do, and sometimes they struggle even to keep the little land they do have. The Urban Farmer Field School project will help them with business planning and other key pieces to support them in these unique struggles."

The Urban Farmer Field School series begins in August. Topics include marketing, self-care, business structure, insurance, and production techniques such as irrigation. Workshops are three hours, include light refreshments, and require a \$10 investment. For more information and to register, please visit go.umd.edu/UFFS.

The Urban Farmer Field School series is organized by UMD Extension, with support from the Northeast Extension Risk Management Education Center funded through the USDA National Institute of Food and Agriculture (NIFA), EcoCity Farms, Farm Alliance of Baltimore, Prince George's County Soil Conservation District, MidAtlantic Farm Credit, The Greener Garden Urban Farm, and Real Food Farm.

Clean Water³ Conference: Reduce, Remediate, Recycle

Are you curious about the pros and cons of recycling runoff water from an agricultural operation? Do you want to learn from a national team of experts about how to reduce, remediate, and reuse that water on your ornamental crops? Then this one day conference is for you!

Co-sponsored by the Maryland Nursery, Greenhouse, and Landscape Association and University of Maryland Extension. Participants will obtain 6 Nutrient Management CEU's from MDA and 6 Certified Crop Advisor Credits. This conference includes a catered lunch. Registration is \$30 for MNLGA members, Non-Members-\$45, Walk-ins-\$60. Register [online](#) or contact John Lea-Cox (jlc@umd.edu) for more information. A full program agenda and list of topics and presentations can be found [online](#).

August 6

8-4:15 PM

*Edward St. John Teaching
& Learning Center
4131 Campus Drive
College Park, MD*



Do you have noxious or invasive weeds on your property?

Harford County's Weed Control Program can help you manage them.

Call Randy Faber at (410) 638-3018 or (240) 755-9280.

Harford County Pesticide Container Recycling

Harford County - Street

LOCATION	DATES	TIME
Scarboro Landfill,	June 1	9:00 - 3:00
3241 Scarboro Road	July 6	9:00 - 3:00
	August 3	9:00 - 3:00
	September 7	9:00 - 3:00



Harford County - White Hall

LOCATION

The Mill of Black Horse
4551 Norrisville Road

Facility will be accepting clean, empty containers from June 1 through September 30, during normal business hours. Containers will be collected from their current customers, only. Call 410-329-6010 or 410-692-2200 for hours of operation and drop-off instructions.

The Mill Crop Showcase

The Mill's annual Crop Showcase will take place on August 29 at Clear Meadow Farm. Visit with over 35 vendors from 8-noon and take wagon tours of demo plots beginning at 8 AM. This year's topics include: nitrogen stabilizer studies, starter fertilizer, and soybean population studies. Lunch will be provided by Big Bob's BBQ. RSVP to 800-993-3300 by August 22.

August 29

8:00 AM

Clear Meadow Farm
3116 Troyer Rd.
White Hall, MD

Nitrogen Stabilizer Studies

Over 35 Vendors

Starter Fertilizer Tests

Wagon Tours

Soybean Population Studies



Lunch will be provided by Big Bob's BBQ. RSVP to 800-993-3300 by 8/22.

Great resources are just a click away!

Andrew Kness

Andrew Kness
Extension Agent,
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Ag Notes

Harford County Newsletter

Dates to remember

6 Aug. Clean Water³ Conference. 8-4:15 PM. College Park, MD. \$30-\$60. Register [online](#).

7 Aug. Ag Night at Ripken Stadium. 6 PM. Ripken Stadium, Aberdeen, MD. \$15. Tickets available [online](#).

8 Aug. Field Crop & Vegetable Twilight Tour. 4-9 PM. Central Maryland Research & Education Center, Upper Marlboro, MD. Free. Register [online](#) or call (410) 222-3906.

8 Aug. Women in Ag Webinar: Understanding Credit & Credit Scores. 12 PM. Free. Register [online](#).

11 Aug. Peach Canning Workshop. 11-2 PM. Harford County Extension Office, Street, MD. \$20. Register [online](#) or call Shauna Henley (410) 887-8090.

13 Aug-24 Sept. Urban Farmer Field School. 5:30-8:30 PM.

Various locations. More information available [online](#) or contact Neith Little (nglittl@umd.edu or 410-856-1850).

15 Aug. 4R Technology Field Day. 8:30-2:30 PM. Wye Research & Education Center, Queenstown, MD. Free. Register [online](#).

22 Aug. Women in Ag Webinar: Resource Stewardship Evaluation Tool. 12 PM. Free. Register [online](#).

29 Aug. The Mill Crop Showcase. 8 AM. Clear Meadow Farm, White Hall, MD. Free. Call 800-993-3300 by August 22 to register.

23 Aug-3 Sept. [Maryland State Fair](#).

13 Sept. Maryland Crop Insurance Workshop. 8:30-3:30 PM. Comfort Inn, Bowie, MD. Free. Register [online](#) or contact Paul Goeringer (301) 405-3541.

August 2018