August 16 2017

Depending on which part of Maryland you grow strawberries, you may be as close as 2 weeks away (north and west locations) from planting if you grow using the annual plasticulture system. Other locations (south and east) may plant as late as the last week in September. Generally, the later in September you set your strawberry plugs in the field, the fewer runners are produced. Fewer runners produced in the fall means less dead plant material on the beds in the spring which could harbor disease inoculum.

If you are fumigating the beds with synthetic materials or one of the organic-type products, be sure to read the label and follow the plant-back restrictions. Always follow the label with regards to worker protection safety and have the necessary personal protection equipment on-hand.

Be sure to apply the necessary pre-bedding fertilizers based on recent soil test analysis. We’ve have always recommended that 60 lbs. of nitrogen per acre is an adequate amount to apply in the fall (70 or 80 lbs. if you are on sandy soils). Adding more nitrogen in the fall to help increase plant growth is not a good approach.

Always strive to make high, firm beds and apply the plastic so it is tight against the firmed soil. I’ve had good success in achieving this by running the bed shaper 2x’s. The first pass without the plastic or drip placement tube in place. I also leave the two rear covering disk in place. These disk throw additional soil at the base of the bed which during the second pass is used to make a higher bed. Also, it is nearly impossible to make a firm bed if the soil is dry. If you have the capacity to overhead irrigate, and it is dry, you may need to irrigate prior to attempting to press and shape the bed. If you do not have a lot of rows and you do not have overhead irrigation available, it may be possible to use drip tape to apply sufficient water directly on the row location prior to hilling and bed shaping. Of course, you will remove this drip tape prior to bed shaping.

Prior to planting, always have the drip system installed and ready to use. We should not rely on timely precipitation to occur. Until the strawberry roots exit the plug and begin growing in the native soil, the plugs are highly susceptible to quickly drying out!

If you have any questions about the annual plasticulture system or strawberry culture in general, don’t hesitate to contact me. mnewell@umd.edu or 410-827-7388.

Frequent Heavy Rains Equal Lots of Vegetable Disease Problems
By Jerry Brust
Extension IPM Vegetable Specialist
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I do not have to tell you that these frequent and heavy rains we have been having over the last 2-3 weeks have really increased the amount of foliar and at times soil diseases in our vegetable crops. In cucurbits foliar diseases such as Alternaria, gummy stem blight and an odd one Cercospora (fig 1) have been found causing moderate to severe defoliation in some fields that are heavy with fruit. The large fruit load puts a strain on the plant and when conditions are right-wet weather and warm temperatures-the fungal and bacterial diseases will flourish. Phytophthora sp also has been a problem in some cucurbit fields as this organism
moves best by swimming in water and a very wet or temporarily flooded field is just what it needs to move around and infect the crop causing a ‘melt down’ of the plant.

Fig. 1 Alternaria (larger tan/brown spots) and Cercospora leaf spots (arrows) on cantaloupe leaves and Gummy stem blight on a watermelon leaf (right).

Even though a grower has been diligent about applying their foliar fungicides and copper protectant sprays, under the kinds of weather conditions we have had we are still going to see plants become infected with foliar pathogens. One of these problem pathogens is Xanthomonas campestris pv. vesicatoria, which is the causal agent of bacterial spot in tomato (fig 2). However it is not that straight forward as there are at least 4 different species and four different races of this pest that can cause bacterial leaf spot. Preliminary work at North Carolina State University has shown that their bacterial leaf spot in many of their tomato fields has resistance to copper sprays. Based on what I have seen in some of our tomato fields I am sure we have similar problems. However, even if your bacterial spot is not resistant it still is going to spread and get worse in fields where it was already present after all the frequent rains that we have had. I know you have heard us in Extension say this before and repeatedly, but growers need to be sure to follow good sanitation and cultural practices in their vegetable fields, which will allow better disease management.

Fig. 2 Bacterial spot on tomato leaf.

Some good cultural controls include: Using pathogen-free seed and disease-free transplants including hot water treatments that can be used to kill bacteria on and in seed. Good sanitation practices including cleaning all equipment used in diseased fields, sanitation of equipment can be done safely and effectively using a power washer and a commercial sanitizer. Keep fields free from volunteers, weeds, and cull piles. Avoid working in fields when bacterial diseases are present and the fields are wet. Bury or remove crop debris at the end of the season and rotate with a non-host crop for at least 2-3 years.

Rain Check in Tomatoes
By Jerry Brust
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This has been a very wet period for most of us in the mid-Atlantic. Some fields have received repeated downpours of rain and have standing water while others have not gotten as much. But in almost all of the tomato fields I have found rain check (fig 1). Rain check is the many, tiny concentric cracks that form on the shoulder of the fruit that can expand over time (fig 1). The cracks feel rough to the touch, and affected areas can take on a leathery appearance and do not develop proper color as fruit ripens.

Fig. 1 Rain check on tomatoes. Tomatoes on left have milder symptoms compared with the ones on the right.

Damage will be most visible on exposed, mature green, and possibly breaker fruit after rains; but at times even small, immature green fruit can be affected. This problem is mostly observed on large, fresh-market tomatoes, rather than on smaller cultivars. The exact cause is not known, but appears to be related to exposure of the fruit to rain. The problem is more severe when heavy rains occur after a long dry period with high humidity. The rain might alter the fruit temperature or water uptake, which may impede the development of the shoulder epidermis. Cultivars can vary in their susceptibility to rain check. Those tomato cultivars that have good leaf coverage that protect the fruit and good epidermal characteristics seem to be more tolerant of rain check. Glossy fruit tends to have less of a problem with rain check than dull fruit.

I have mentioned this before about using a 30% shade cloth to reduce quality problems with tomato fruit, and in my studies this year not a single fruit under any of the shade canopies had a fruit with rain check while
the other uncovered tomatoes (same cultivars) had 10-20% rain check. If a grower has a cultivar that is prone to rain check they may want to pick-off any exposed green fruit as they harvest because unfortunately, the next few weeks look similar to the past few weeks as far as rainfall amounts. Also with all the rain we have had the foliar diseases are going to reduce the amount of foliage coverage, exposing fruit to even more sun and rain.

**Potato Late Blight Disease Advisory**
By Kate Everts,
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August 16, 2017

Late blight forecasts are being generated for eight locations across Maryland based on the Cornell Decision Support System (DSS). A preventative late blight fungicide application such as mancozeb or chlorothalonil, is recommended once 18 Disease Severity Values (DSVs) accumulate from 50% crop emergence. The 50% emergence date was estimated to be May 1 for Mechanicsville; May 7 at Hurlock, Owings, Clinton, Severn, Dickerson and Freeland; and May 14 in Oakland. (This is a little earlier than typical to account for our early spring.) Below is a chart showing the number of DSV accumulated since the last report (Daily DSV) and since 50% crop emergence (Total DSV) at the eight locations. All growers should be on a preventative fungicide program. Organic growers should apply an appropriate copper fungicide. Once threshold is reached, subsequent applications should be applied when an additional 7 severity values (DSV) are accumulated. Late blight has been reported this year in Accomack county, Virginia and in Michigan on potato, and in North Carolina and Ontario on tomato. For updates on where late blight is occurring in the USA, go to www.usablight.org. Any suspicious samples can be sent to the UM Plant Diagnostic Clinic or dropped off at your local Extension office. Growers opting not to use the forecast system should put the first late blight fungicide application on when the plants are 6 inches tall, and repeat every 7 days. There are numerous fungicides now labeled for late blight control. See the 2017 Commercial Vegetable Production Recommendations, Maryland

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**Fall is the Time to Start Managing Nematodes**
By Andrew Kness
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Nematodes are a highly successful and diverse group of roundworms that have adapted to nearly every terrestrial and aquatic ecosystem; in fact, they are the most numerous multicellular animal species on earth. One tablespoon of soil can contain thousands of nematodes of many different species, each contributing different ecosystem services. Many are free-living nematodes that feed on bacteria and fungi, others may feed on organic matter and contribute to the natural cycling of nutrients, and others may be plant-parasitic nematodes; which are the ones that can cause serious problems in production agriculture.

Plant-parasitic nematodes have highly specialized, needle-like mouthparts that they use to feed on plants. While some nematodes feed on leaves (foliar nematodes), most plant-parasitic nematodes feed on plant roots. These nematodes find susceptible hosts by following chemicals exuded by the roots. In many cases, these chemicals also trigger their eggs to hatch. Once they find the roots, they begin to feed. Different species have different feeding habits. For example, some nematodes, like the sting nematode (*Belonolaimus longicaudatus*), are ectoparasites, meaning that they feed and complete their lifecycle outside of the plant root. Others, like the root-knot nematode (*Meloidogyne incognita*), are endoparasites, feeding and completing their lifecycle inside the root. Regardless of their feeding behavior, plant-parasitic nematodes disrupt the flow of water and nutrients into the plant and can cause severe root deformities and stunting, leading to decreased plant vigor, water stress, nutrient deficiencies, and overall poor growth and yield reduction.

If left unchecked, plant-parasitic nematode populations can increase to the point where production of susceptible crops is nearly impossible. If you suspect nematodes to be a problem in a field, the first step to proper management is to identify the culprit. In some cases this can be easy. For example, if you dig up symptomatic tomato plants and notice large galls on the roots, then you know you have root-knot nematode. However, diagnosing a nematode problem is not always that easy; and suppose you’re farming new ground and want to determine if nematodes are a potential problem? Fall is the time to sample and begin taking action against nematodes.

In general, sampling soon after the crop has been harvested in the fall is the best time to sample for.
nematodes. To take a sample, use a soil probe and sample 6-8 inches deep in between plants in the row. Take 20-25 samples across the field and mix all the cores together in a clean plastic bucket. After mixing thoroughly, place one pint of soil (I use two scoops of an 8 oz. yogurt cup) in a plastic bag and seal it. The sample can be kept in the refrigerator until you’re ready to ship it to a lab for testing. Do not let the sample dry out or get hot (i.e. don’t leave it in your hot truck all day); nematodes need to be alive in order to enumerate their populations in your soil. Remember, your test results will only be as good as your sample.

For our region, Virginia Tech is the closest lab to send samples. Mail samples (keep cool) and appropriate form to: Nematode Assay Laboratory, 115 Price Hall, 170 Drillfield Drive, Blacksburg, VA 24061-0331. For forms and more information, visit their website or call your Extension office for assistance.

Once you get your results, you can begin weighing your management options, which will vary depending on the nematode species present and your cropping system. As a rough guide, here are some management options that are generally applicable to managing most species of plant-parasitic nematodes; however, you should do more research and/or consult with your local Extension Agent to discuss management options for your specific situation.

- **Crop rotation** to non-host crops is typically one of the first steps taken when nematodes are identified as a problem. This can be an effective management strategy if populations aren’t too high. Rotation out of host crops for at least 1-2 years is recommended. Crop rotation may also include leaving a field fallow.

- **Planting resistant varieties.** Resistant varieties may not always be available, especially in specialty crops. Also, nematodes can overcome resistance genes due to their high fecundity, so check to make sure the resistance gene is still effective.

- **Sanitation** should be high on the list of priorities, regardless if nematodes are a problem. Properly cleaning your tools and equipment before moving to a new field or a new area of the farm can prevent the spread of nematodes, diseases and weeds. This also includes purchasing certified, clean seed.

- **Fumigation** is often the most effective way to manage nematodes, but it can be expensive and therefore often limited to high-value crops. An alternative to synthetic chemical fumigation is biofumigation using brassicas (mustard and rapeseed). Some cultivars (such as Caliente 199) have been bred specifically for fumigation purposes. If done properly, this method is highly effective at knocking back populations of nematodes and other soilborne diseases. However, if done incorrectly, this method can actually increase some nematode populations, so do your research before attempting biofumigation.

- **Soil solarization** can sterilize the top 8-12 inches of soil and kill plant-parasitic nematodes. This method needs to be done during the hottest part of the summer, as temperatures need to exceed 130 °F for at least 5 minutes under the plastic. This is a temporary solution and is only viable for shallow-rooted annual crops.

- **Seed treatments** can offer short-term protection against some nematode species. Seed treatments are typically more common on field crops such as corn and beans and less common for vegetables. Seed treatments protect the root for a couple of weeks during germination and will wear off quickly as the season progresses.

If you experienced, or suspect that you experienced, nematode problems this growing season, fall is the time to start managing the issue. Having a grasp on the exact problem will allow you to better manage the issue and save you time and money in the long run. Contact your local Extension Agent for assistance. You may also contact me with any questions.

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**Keep Apples**

**Free From Fruit Rot This Season:**

**Pre and Post-Harvest**

By Kari Peter

Assistant Professor and Research Associate

Tree Fruit Pathology

Penn State Fruit Research and Extension Center

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**Keep Apples Free From Fruit Rot This Season:**

**Pre- and Post-harvest Summary:** Management considerations are discussed for mitigating pome fruit rots before and after harvesting.

After seeing the apple fruit rot issues coming out of the cold storages last season, I’ve been doing my best being a very broken record (since winter) preaching the need for keeping fruit protected until harvest. What happened last year? During the 2016 harvest, folks may have applied their last fungicide sprays late August or early September, only to be caught off guard by the high volume of rain we received during the month of September. Whatever had been applied prior to that rain was most likely washed off. Consequently, the fruit were going into the cold storages were vulnerable. It is very important to monitor your area for rainfall: If more than 2 inches of rain falls and you have already applied fungicides, another application will be needed to keep...
the rots at bay since there is a good chance the protection will have washed off. Moral of the story: you’re at Mother Nature’s mercy for when that final fungicide spray might be applied. Some nuggets of wisdom to keep in mind:

Not only a headache in the field, but the fungi causing fruit rots can be quite stealth since spores will land on the fruit and cause symptoms only after the fruit have been in storage. This is especially significant if your apples are headed for a packinghouse or even fresh market.

I highly encourage growers to use Merivon (or Pristine) (FRAC Groups 7 + 11; 0 day PHI) or Luna Sensation (FRAC Groups 7 + 11; 14 day PHI) as their last one or two sprays prior to harvest since these products do show efficacy keeping rots in check while in storage. This recommendation is both for fresh market and juicing apples: the packhouses and processors will thank you! There are a couple of sprays up to that point and the following are additional options for control (be mindful of the maximum limit for sprays for each product/FRAC Group):

- Flint (FRAC Group 11; 14 day PHI)
- Sovran (FRAC Group 11; 30 day PHI)
- Indar (FRAC Group 3; 14 day PHI)
- Topsin M (FRAC Group 1; 1 day PHI)
- Captain (FRAC Group M4; 0 day PHI - used alone or tank mixed with a single mode of action product)
- Ziram (FRAC Group M3; 14 day PHI)
- Serenade Opti (biofungicide - *B. subtilus*; 0 PHI)

We evaluated Serenade Opti the last few seasons for summer disease control at 16 oz/A as the last two cover sprays, with a conventional program up to these sprays. We observed minimal fruit rot diseases in the field and storage, at least on Golden Delicious. These results may vary with other cultivars, depending on their susceptibility to certain rot diseases, as well as severity of disease conditions.

**Resources:**

Follow [PSU TreeFruit Doctor on Twitter](https://twitter.com/drtreefruit) for the latest up-to-the-second alerts!

For commercial growers:

For more resources, visit the [Penn State Tree Fruit Production website](https://extension.psu.edu/tree-fruit-production). For specific recommendations for disease management, visit [The Disease Control Toolbox via the Tree Fruit Production website](https://extension.psu.edu/tree-fruit-production).

When controlling for disease, weather and tree growth conditions need to be monitored at a local level within one’s own orchard. Before chemical products are applied, be sure to be in compliance by obtaining the current usage regulations and examining the product label. **Product information can be easily obtained from CDMS.**

For the home gardener and backyard grower:

If you have questions about fruit trees growing in your backyard, please contact your county Extension office and ask for Master Gardeners: [Penn State Extension](https://extension.psu.edu/). For Maryland, contact [University of Maryland Extension](https://extension.umd.edu/). Help can also be found at your local county Extension Office through the [Master Gardener Program Hotline](https://mastergardener.umd.edu/). Useful information can be found in the guide for [Fruit Production for the Home Gardener](https://extension.umd.edu/).
with an early bloom and/or extreme summer heat has pushed apple harvest ahead in the past few years. During the past few years we have seen problems with late-harvested Gala fruit in the mid-Atlantic Region. Late harvested Gala fruit have two problems. First they are prone to rain cracking. Once in storage, they can become unmarketably soft by the time they are packed. The difficulty finding harvest labor, coupled with the increase in August apple plantings sometimes leads to ripe fruit being unmarketably soft after refrigerated storage.

Photo 1: Two red Gala sports harvested in the first week of August from tall-spindle plantings.

One solution has been to plant redder strains of Gala. This allows growers to pick fruit earlier before it develops ripening-related red color. In the case of Gala, red selections are now marketed that are almost 100 percent red. For better or worse, some red Gala fruit now resemble their grandparent, Delicious. When thinking about long-term storage, remember FILO; first in last out. While it seems counter-intuitive, early harvested apples have a longer storage life than late harvested fruit. Of course, when wholesale prices are good early in the season, storing fruit is not the primary thought for many.

Commercial orchards currently use two chemicals to regulate the synthesis and action of ethylene, the so-called “fruit ripening hormone.” AVG is an ethylene-synthesis inhibitor, while 1-MCP is an inhibitor of ethylene action. AVG (marketed as ReTain) is widely used by Gala growers to delay the maturity and act as a stop-drop spray on a portion of their crop. While AVG delays ethylene synthesis in the fruit, it also delays red color development, the conversion of starch to sugar, flesh softening and fruit abscission triggered by ethylene.

In the past few years, 1-MCP (marketed as SmartFresh) has greatly improved the quality and marketability of stored apples. This is now routinely applied to harvested apples and typically gives benefits on firmness after storage. This works well if the fruit are storage-mature but not tree-ripe at harvest. Once the fruit have tree-ripened, the softening enzymes are present in the fruit and it is too late to get the full benefits of 1-MCP.

With all these factors leading to an earlier and earlier apple harvest season, growers, consultants and extension faculty should begin monitoring fruit maturity now. Be ready for this year’s earlier than average apple harvest.

To help fruit growers with apple maturity evaluations, the Walsh and Beaulieu Lab is funded by a Pennsylvania Apple Grower Grant. For more information and weekly updates about this, email cswalsh@umd.edu

Photo 2: Tall spindle, high density planting systems improve light penetration into the canopy and red color development of apple fruit.

Welcome! To the Grapes and Fruit website. Statewide Extension and research programs (link is external) for viticulture (grape growing), tree & small fruits, and enology (winemaking), are being created and implemented at Western Maryland Research and Education Center by Dr. Joseph A. Fiola (link is external), Extension Specialist in Viticulture and Small Fruit. Dr. Fiola works with existing vineyard and winery owners to increase production and improve quality. He is working to expand the industry in Maryland by educating new vineyard owners. This site is designed for the commercial grower or someone who would like to start a vineyard.

If you are a homeowner you can go to The Home and Garden Information Center for information or contact your University of Maryland Extension County Office.
Safety training for workers and handlers be conducted; workers may be trained; they must be trained prior to the required training. For handlers, as previously required, training must be conducted prior to performing any handling activity. Only those who are certified applicators, state/tribal/federal-approved trainers, and persons who have completed an EPA-approved train-the-trainer course are qualified to administer training. The training content for both workers and handlers has been expanded to include more items. Formerly, there was no requirement for keeping records of the training. The revised standard dictates that records be kept for 2 years, and a copy of the training record must be provided to workers and handlers upon their request.

When working with labor contractors it cannot be assumed that workers have been trained. Each farm operator should take it upon themselves to make sure all workers are trained each yearly harvest season, all new workers are trained before entering fields, and that records of those trainings are kept.

A second area is regarding notification of treated area. It is required that warning signs be posted if Re-entry Interval (REI) is greater than 48 hours (outdoor applications) or 4 hours (enclosed space applications such as greenhouses). Pesticides with lower REI’s allow for posting or oral notification unless the label requires both. Oral notification can be difficult to reach all employees and hard to document. For most farms, posting would be the most efficient way to comply with the WPS and to keep workers out of treated areas until the REI is past. Posting should be at common entry points into each field. Specific no-entry signs must be used.

A third area within the WPS that has changed is regarding Hazard Communication. Employers must display application information and safety data sheets (SDSs) at a central location within 24 hours of the end of a pesticide application and before workers enter the treated area. The application information and SDSs must be displayed for 30 days after the REI expires, must be kept for 2 years from the end of the REI, and must be made available to workers, handlers, designated representatives (identified as such in writing), or treating medical personnel upon request. Previously, the posting and recordkeeping of SDSs was not required.

In addition changes have also been made in a number of other areas within the WPS:

- Minimum age for handlers and early entry workers (18)
- Entry restrictions during applications for outdoor production (zones around fields where workers cannot be during an application are designated)
- Handler suspends application in certain situations (if there is danger of contacting workers i.e. drift)
- Exemptions and exceptions (mostly regarding crop advisors and commercial applicators)
- Basic pesticide safety information (required at central locations and decontamination areas)
- Personal protective equipment (changes to respirator requirements and need for medical clearance)
Decontamination supplies (requirements have changed)

Emergency assistance (must be able to promptly provide the SDS, product information – name, EPA Reg No and active ingredient).

Definitions of “family” and “employer” (family exemptions have been expanded, employer defined and clarified in regards to contracted labor)

Certifications in Agriculture and Natural Resources

By Neith Little
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I get a lot of questions about certifications. What certifications should a farmer or landscaper or food entrepreneur get? What professional development certifications can UMD Extension help you work towards?

If you ask me that question, I’ll likely ask you to take a moment to think about why you want a certification. Do you want to make sure your business is complying with relevant regulations? Do you want to go above and beyond what is required to set your business apart from your competition? Is one of your customers asking for a specific certification? Are you looking for a job and hoping a certification on your resume will help you find one?

Being clear on what your goal is will help you figure out which certification you should work towards—and whether you even need one! If you don’t have a clear reason why you need a certification, maybe more informal educational opportunities would be a better place to start so you can learn and explore before taking the plunge.

Below are links to more information about the certifications I am familiar with that are relevant to farmers, landscapers, and food entrepreneurs. It is by no means a comprehensive list, so please let me know which ones I’ve missed that you think are important or valuable. I’ve gone through a couple of these certifications processes myself, as evidenced by my wall of paperwork.

Legally required certifications:

Nutrient management: In Maryland, farms that sell more than $2,500 gross per year are required to have an approved nutrient management plan. UMD Extension has a state-wide training program to help farmers become certified to write their own plans. Alternatively, county Extension offices also have Nutrient Management Advisers on staff who can write nutrient management plans for farmers. But even if a farmer chooses to have an Adviser write their nutrient management plan, all farmers who apply nutrients to 10 or more acres of cropland are required to get a Nutrient Applicator Voucher. UMD Extension offers annual Continuing Education trainings for this voucher at the county or city level.

Landscapers or anyone who applies nutrients to turf grass for hire are required to be “licensed by the Maryland Department of Agriculture (MDA) and must have at least one Certified Professional Fertilizer Applicator on staff.” Nurseries or greenhouses that sell over $2,500 per year also need nutrient management plans, but they use a different template and training from crop farmers.

Pesticide use: Anyone who purchases or uses Restricted Use Pesticides must be a Certified Pesticide Applicator. UMD Extension’s website with study materials for this certification is online here. There are different categories of certification, in addition to the required “core” certification.

Food safety: I’ll talk about voluntary food safety certifications below. But large-scale farms that grow food commonly eaten raw are required to comply with the federal Food Safety Modernization Act (FSMA). The Maryland Department of Agriculture and UMD’s food safety team are working together to build a training program to help farmers understand FSMA. I got to go to some of their pilot trainings last winter. Keep your eye out for more soon.

Value-added food businesses have their own set of food safety regulations to comply with. Some of them will need to comply with the Preventative Rule within FSMA. At UMD Extension, Ginger Myers has gathered together a wealth of resources for value added food producers on her Ag Marketing website. In particular, you may find helpful this list of relevant licenses published by the MDA and MD Department of Health and Mental Hygiene. If you look at that list and feel overwhelmed, consider attending a Food for Profit workshop. You can keep an eye on the statewide calendar here, and there is one coming up November 7th in Baltimore County.

Voluntary certifications

There are several voluntary certifications that farmers can pursue to add value to what they produce and open the doors to specialized markets.

Maryland Good Agricultural Practices (GAPs) is a voluntary food safety certification for Maryland fruit and vegetable growers. UMD and the MDA work together to offer trainings to help farmers achieve this certification. One such training is coming up in Baltimore on September 12th.
USDA Organic is a national certification for farmers who use organic practices. UMD Extension has an article on organic production and certification here. MDA has a state-level organic certification program. There are also several other private certifications out there.

Resume enhancing certifications
Several of the certifications above are relevant to individuals, not just businesses. But again, it’s important to think about your goals. Before you work towards a certification to list on your resume, you should at least have a field of work in mind that you are interested in, if not a specific type of job. Even if you’re not ready to apply, it’s worth reading job advertisements in that field to see what qualifications are valued. Then you can find certifications to pursue that will demonstrate your skill in those qualifications.

I work in the field of agricultural education, so I am certified as a Nutrient Management Adviser, a Pesticide Applicator, and a Certified Crop Adviser (CCA). Farms and landscaping companies might need their employees to become certified as Pesticide Applicators or Fertilizer Applicators. Food businesses might need their employees to gain food safety certifications. Having these certifications as an applicant for a job on a farm, landscaping business, or food business, would be a way to demonstrate your training and dedication to the field. But you will need job experience and/or classroom education to enable you to apply the skills and knowledge needed. Being able to pass a test is just a small part of being able to do the job.

Keep learning
A professional certification is about more than passing a test once. It is a commitment to lifelong learning and self-improvement. That’s what UMD Extension education is about too.

Flying Dog Brewery and University of Maryland Partner on Hops Production Initiative
By Graham Binder
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Maryland’s largest brewery and the University of Maryland (UMD) are committed to developing the highest quality ingredients for Maryland beer.

Flying Dog has engaged with UMD’s College of Agriculture and Natural Resources in a partnership that will allow them to work side-by-side on the future of beer-centric agriculture in the region. To start, the focus is on hops.

“Hop farming in the state of Maryland continues to grow, and what we appreciate most about the program is the practical approach to the business of beer agriculture,” Matt Brophy, chief operating officer for Flying Dog, said. “It’s equal parts commitment to the development of our existing farms and providing local breweries with the highest quality ingredients.”

Hops used in craft beer production need to meet the same quality standards that are achieved in traditional hop growing regions of the world. Understanding this dynamic, UMD has established a replicated variety trial using 24 varieties of hops at the Western Maryland Research and Education Center (WMREC) in Keedysville,
Maryland. The trials will collect critical information on how Maryland’s unique climate affects harvest date, levels of acids and oil in the hops, and any special aspects of profile.

“I am thrilled to be part of a partnership with a business leader in the state that has the foresight to help an entire industry grow using research-based information,” Bryan Butler, extension agent for UMD, said.

The current planting consists of 24 varieties of hops with each variety replicated three times. The first 12 varieties – planted in 2016 – were selected from discussions with academic and industry experts on what might perform well in this area and what was being used by brewers. The second 12 varieties were selected based on an informal survey of Maryland growers and brewers to establish what might be most marketable in this region.

As a land grant institution, the University of Maryland aims to provide information to producers on the viability and marketability of these varieties, as producers will need research-based details on not only varieties, but also disease, insect and fertility management specific to the mid-Atlantic, quality analysis of harvested hops and economic viability of hops as a crop.

To compliment the program, Flying Dog will help fund hop processing equipment for UMD and provide resources to analyze and evaluate each test crop the program harvests. Flying Dog will also develop beers using those hops, eliciting feedback from and exposing craft beer fans to the full potential of local hops.

“One of the most critical components of data collection for this trial is the timing of harvest because it directly affects the value of the crop,” Butler said. “Harvesting must be done consistently, and within a narrow window of time, to ensure maximum production, quality, and comparison of varieties. Flying Dog’s partnership will allow us to invest in a harvester, which will ensure that hops are harvested properly, and that data on each yield is realistic and relevant to growers.”

A culmination of these hop trials will be an annual guide that both UMD and Flying Dog will produce on growing hops in the mid-Atlantic, which will summarize best management practices specific to this region, something Brophy thinks is crucial to the continued growth and development of local hop farms.

UMD will also work with Flying Dog on the East Coast Hop Project, a limited-edition variety pack slated for release in the spring of 2018. It will feature three different beers, each one highlighting a different East Coast hop farm and regionally-viable hop varieties. Black Locust Hops, located in northern Baltimore County, and Pleasant Valley Hops, located in Rohrersville, Maryland, have already signed onto the project.

“By promoting and engaging East Coast hop farms, Flying Dog and UMD hope to accelerate both supply and demand for quality local hops,” Brophy said.

About Flying Dog Brewery:
As one of the fastest-growing regional craft breweries in the mid-Atlantic, Flying Dog has been brewing world-class beer that pushes the confines of traditional styles for almost 25 years. Flying Dog attracts everyone from craft beer connoisseurs to those just catching the wave with up to 20 styles available at any given time and its Gonzo ties to writer Hunter S. Thompson and artist Ralph Steadman. Named the Mid-Size Craft Brewery of the Year at the 2009 Great American Beer Festival (the highest honor for its size in the United States), recent accolades for Flying Dog include its Pale Ale ranked as the #1 American Pale Ale in the U.S. by The New York Times. For more information, please visit www.flyingdogbrewery.com (link is external).

You can also see you the CBS News story at: http://baltimore.cbslocal.com/2017/08/08/umd-partners-with-flying-dog-brewery-to-grow-better-beer-hops-in-md/

Take a Look!

Before Spraying 2,4-D or Dicamba

Pesticide Sensitive Crop Locator
- Pesticide Sensitive Crop Locator Map
- Pesticide Sensitive Crop Locator User Guide
- Pesticide Sensitive Crop Locator Application
AG MARKETING ALERT!

Dear Ag Marketing Subscriber,

Mastering Marketing - August 2017: Farm to Door--Should You Offer a Product Delivery Service? has been posted on the web. To access the article click on the link below:
http://extension.umd.edu/learn/farm-door-E2%94%80should-you-offer-product-delivery-service

If you have any questions of comments about this article or have clients or colleagues that would value receiving it as well, please contact Ginger Myers at gsmyers@umd.edu or sbarnes6@umd.edu

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Director, Maryland Rural Enterprise Development Center
Principal Agent Associate
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Maryland Agricultural Highlights

Nutrient Management Plan Writing Workshops Offered September 19 and 26
The Maryland Department of Agriculture and University of Maryland Extension will offer two, one-day workshops titled, How to Write a Nutrient Management Plan September 19 at the Wye Research and Education Center in Queenstown and September 26 at the Montgomery Extension Office in Derwood. The workshops are designed for people who are new to the nutrient management plan-writing process. Participants will learn how to write a nutrient management plan using NuMan Pro, the nutrient management planning software program while earning six credit hours toward the Maryland Nutrient Management Program’s continuing education requirement. To register, call 410-841-5959 or visit the department’s website for a registration form. Cost is $20. The registration deadline is September 15.

Homeowners Urged to Use Responsible Lawn Care Practices During Summer Months
With summer in full swing, the Maryland Department of Agriculture urges homeowners to allow established lawns to go dormant during the hot, dry weather. Applying fertilizer to force a lawn to turn green during its dormancy period can damage the grass and contribute to nutrient pollution in streams, rivers and the Chesapeake Bay. Dormant lawns will green up when cooler temperatures arrive and rainfall increases. To help shade grass and conserve moisture, raise the mower’s cutting height by ½ inch to 1 inch during periods of hot, dry weather and leave grass clippings on the lawn as a source of free fertilizer. For more tips and information on Maryland’s Lawn Fertilizer Law, visit the department’s website or University of Maryland Extension

2017 Pesticide Container Recycling Program from MDA
Maryland Department of Agriculture’s Pesticide Container Recycling Program will be accepting clean, empty containers from June through September, during normal business hours. Containers will be collected from their current owners, for safe disposal and recycling.
Containers must be cleaned (triple-rinsed or pressure-rinsed) according to label directions. Please remember to remove lids and label booklets from the containers prior to drop-off.
Call 410-841-5710 for more details and drop-off instructions. Collection dates and venues can be found at this link:

Gardening questions? Pest Problems? The Home and Garden Information Center can help!
Visit the HGIC website at:
www.extension.umd.edu.hgic
2017 Mid-Atlantic Field Crop Weed Management Guide

Featuring updated herbicide tables for managing weeds in corn, grain sorghum, soybean, small grains, and forages, this new edition now includes broadleaf and curly dock, johnsongrass and shattercane, lambquarters, milkweed and hemp dogbane, wild mustard and radish, and Canada thistle in the chapter on problem weeds. 240 pages.

This regional guide was produced by Penn State Extension in cooperation with University of Delaware, University of Maryland, Virginia Tech, and West Virginia University.

Download Sample
Sample of 2017 Mid-Atlantic Field Crop Weed Management Guide
PDF, 650KB

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How to Order: Contact the Publications Distribution Center
Call toll-free 877-345-0691, between 8:00 a.m. and 4:30 p.m., Monday through Friday
2017 Late Summer Vegetable Twilight Meeting
Wye Research and Education Center
211 Farm Lane, Queenstown, MD 21658
Wednesday, August 23, 2017
6:00 PM till dark
(Lite fair and registration begins at 5:30)

✓ Talk with Andrew Ristvey, Extension Specialist
  Commercial Horticulture, and see his High Tunnel
  Ground Cherry Production Trial, Year 2.
✓ Hear the latest from Cerruti Hooks, Department of
  Entomology Lab, on his work with Sustainable weed
  management, red clover, pollinators and greenhouse gas emissions.
✓ What is the CONSERVE program? Amy Sapkota,
  Associate Professor in the Maryland Institute for
  Applied Environmental Health in UMD School of Public
  Health, will discuss CONSERVE, whose mission is to
  facilitate the adoption of transformative on-farm
  solutions that enable the safe use of nontraditional
  irrigation water on food crops. CONSERVE researchers
  are currently conducting a two-year water quality
  survey of surface water, reclaimed wastewater, and
  vegetable wash water in the Mid-Atlantic.
✓ What’s the latest on BT technology in sweet corn?
  Dr. Galen Dively, long time University of Maryland IPM
  Specialist, will discuss current status of this technology
  and what the future may hold for it.
✓ Pumpkins, pumpkins and more pumpkins. An
  important crop for many Maryland growers. See the no-
  till fertility trial and hear Mike Newell, Wye Research
  and Education Center Horticultural Crops Manager,
  discuss cover crops and cover crop manipulation and its
  effects on fertility. Talk with Jerry Brust, UMD Extension
  Specialist, IPM Vegetables, about insect concerns and
  Kate Everts, UMD Professor & Extension Specialist,
  Vegetable Plant Pathology, about late season disease
  issues with cucurbit crops this season.
✓ A visit to the new Hop yard. Hear about the ins and
  outs of Hops production and what we observed this
  season. Nate Richards, University of Maryland
  Extension, Kent County, will be on hand to discuss this
  new venture.

Registration is required (no fee). Lite fare at 5:30.
Contact Debby Dant, ddant@umd.edu; 410-827-8056
X115 for registration or if you need assistance to this
program. For program information, contact
mnewell@umd.edu; 410-827-7388.

Learn More & Apply HERE!

The BFTP offers a year-long immersive training
experience that combines a comprehensive classroom curriculum with hands-on learning
at Chesapeake region farms that employ
practices that are profitable, protect land and water, and build healthy communities.
We offer 3 levels of training, designed to
meet the needs of new farmers at different stages, from entry-level to advanced. The
program has built-in scheduling flexibility
and is open to beginning farmers in MD, VA,
DE—including the Delmarva Peninsula—and
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All 3 levels of the program are FREE and trainees receive a host of additional benefits:
• FHCA S membership
• Free admission to our popular winter conference
• Free admission to our year-round field days at innovative farms
• Access to a supportive network of new and experienced farmers
• and more!

The final submission deadline is October 15, 2017, but spots are limited and applications
will be reviewed on a rolling basis, so applicants are encouraged to submit early.
Detailed program information and instructions on how to apply are on our
website HERE. Questions? Please contact
Sarah Sohn, BFTP.
Director: sarah@futureharvestcasa.org.
Vegetable & Fruit News
A timely publication for the commercial vegetable and fruit industry available electronically in 2017 from April through October on the following dates: April 20, May 18, June 29, July 20, August 17, September 7 and October 26 (Special Research Edition).

Published by the University of Maryland Extension Focus Teams 1) Agriculture and Food Systems; and 2) Environment and Natural Resources.

Submit Articles to:
Editor, R. David Myers, Extension Educator
Agriculture and Natural Resources
97 Dairy Lane
Gambrills, MD 21054
410 222-3906
myersrd@umd.edu

Article submission deadlines for 2017 at 4:30 p.m.
on: April 19, May 17, June 28, July 19, August 16, September 6 and October 25 (Special Research Edition).

The University of Maryland Extension programs are open to any person and will not discriminate against anyone because of race, age, sex, color, sexual orientation, physical or mental disability, religion, ancestry, national origin, marital status, genetic information, political affiliation, and gender identity or expression.

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