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Mississippi *Vaccinium* Journal

Volume 7, Issue 1 January-March 2018

Blueberry Wars: A New Hope

Okay, saying "blueberry wars" is pure hyperbole, but sometimes it seems that way doesn't it? Other states like Georgia and Florida are the big players and Mississippi is not on their level of production, so getting a slice of the marketplace is getting tougher. But could a transition to southern highbush help? I discuss this on page 7. Also included in this issue is some recommendations for disease sample collection from Dr. Melanson (page 2) and some meeting recaps from the Mississippi Blueberry Education Workshop held in Hattiesburg and the Southeast Regional Fruit and Vegetable Conference held in Savannah, Georgia. The MSU Coastal Research and Extension Center is also holding a Producer Advisory Council program on February 27. I know some of you will be there to give us some feedback and words of wisdom. As always I hope you get something useful out of this newsletter and may the force be with you this upcoming growing season.

Update on Chill Hour Accumulation

Eric T. Stafne, Fruit Extension Specialist, MSU-ES

As of this writing (February 23) in Poplarville we have accumulated 582 hours between 32 F and 45 F and 781 hours below 45 F. Compared to last year at this time when we had 367 and 434, respectively. As you know, chill hour accumulation can be very important for some blueberry cultivars. Last year we had too few and the results were seen as reduced yield and delayed budbreak for some. This look everything looks normal, however the recent streak of record high temperatures has accelerated bud break to the point where any freeze will cause havoc.

If you wish to check the chill hours at your location, check out this website: https://webapps.msucares.com/chill_hours/. You can also install it on your smartphone as an app (look for direction on how to do that under "About this App").

Sample Collection and Assistance for Blueberry Disease Identification

Rebecca Melanson— Extension Plant Pathologist, MSU-ES

Diagnosis is the first step in disease management. It is important to know what disease and pathogen is affecting a plant or crop so that appropriate disease management actions can be taken. When seeking assistance from county agents or specialists, it is important to provide relevant information that can help your local county agent or specialist to identify the problem in a timely manner and determine the best management options. **It is always a good idea to provide at least the following information: the affected plant host and variety, the extent of the damage, a description of the symptoms, and your preferences for disease management, which may range from conventional to strictly organic**. Additional information such as disease history and recent pesticide use is also valuable.

Often times, digital images (photos) of plants are also received from growers or homeowners wanting to know what is wrong with their plant. Photos can be very valuable and provide additional information regarding a situation, but it is often not possible to diagnose a disease problem from a digital image. Information about the types of images that are most useful and examples of good images are available in the publication "Taking Photos of Plant Disease Problems", available on the MSU Extension website. If sending photos to your local county agent or specialist, please remember to make sure that your photos are in focus and that you also provide the information requested above.

Despite the valuable information that can be provided through words and images, it is often still necessary to examine a physical sample for diagnosis. Samples submitted for diagnosis should not be in an advanced stage of decay. They should also be fresh and arrive undamaged. Instructions for collecting and packaging samples for diagnosis are available in the publication "How to Collect and Package Plant Disease Specimens for Diagnosis", available on the MSU Extension website.

2017 Mississippi Blueberry Education Workshop

Eric T. Stafne, MSU-ES

On January 23 in Hattiesburg the annual Mississippi Blueberry Education Workshop was held. Several topics were covered in relation to blueberry production and other areas of interest. Dr. Blair Sampson covered new updates on controlling spotted-wing Drosophila fruit fly (SWD). As we all know, SWD is difficult to control. Unfortunately, at present, there are no new products to recommend. However, research is in the works in the areas of biological control, including mass trapping. These solutions are likely a few years down the road.

The second speaker was yours truly in lieu of Dr. Juan Silva who was ill with the flu. I covered some highlights of the FSMA requirements. The table below may help you decide if you are covered by FSMA regulation or not.

Business Size	Years to Comply After Effective Date (1-26-16)*	Water testing
All other businesses (>$500K)	2 (2018)	6 (2024)
Small businesses (>$250K-500K)	3 (2019)	7 (2025)
Very small businesses (>$25K-250K)	4 (2020)	8 (2026)

**Compliance dates for certain aspects of the agricultural water requirements allow an additional two years beyond each of these compliance dates.*

Workshop, cont.

Eric T. Stafne, MSU-ES

There have been certification trainings held, one in Hattiesburg last fall and one in Waynesboro on February 12. More will be coming in the near future. Even though your operation may not fall under the FSMA regulations, it might be a good idea to get the certification anyway. The regulations state, "At least one supervisor or responsible party for your farm must have successfully completed food safety training at least equivalent to that received under standardized curriculum recognized as adequate by the FDA". Our trainings will satisfy this requirement. Let us know if you have not yet attended and training and would like to do so. For more information on the certification process and valuable related materials visit: https://producesafetyalliance.cornell.edu/

Dr. Rebecca Melanson was third, with a presentation on Proper Disease Sampling Techniques. Proper identification of disease is critical to its subsequent control strategy, thus obtaining a good sample will allow it to be identified more readily. Some key tips were to take good, clear photos from several different perspectives; if taking a plant sample, include both symptomatic and non-symptomatic portions so they can be compared; get any samples sent off promptly and let someone know they are coming in advance.

Accelerated breeding was the topic delivered by Dr. Ebrahiem Babiker from USDA-ARS in Poplarville. He is the new molecular geneticist and works with Dr. Stephen Stringer to develop new blueberries. His focus so far has been on getting blueberry plants to flower and produce fruit in the fall when another crop would be beneficial to growers. Right now there are several promising selections in the field at the station in Poplarville, as well as a few in a high tunnel. More will be planted out at the MSU Beaumont Horticultural Unit for evaluation. A few selections are now in the release process and should be available in the next couple of years.

The final speaker of the day was Mr. Louis Wasson. He came down from the MSU campus in Starkville to talk about the potential of using unmanned aerial systems in agriculture. He gave us the lowdown on what it takes to legally operate a drone and what uses it might have for blueberry growers. Unfortunately, a demonstration could not be done at the location because it was too close to the airport. This technology might be useful to see areas damaged by animals, foliage discoloration, or other anomaly. So far in Mississippi it has been only used on field crops like corn, but new initiatives to try it on specialty crops is going forward.

Next year we will have another workshop, so plan to attend! If you have suggestions for topics or speakers please let me know and I will see what I can do to make it happen.

Coastal area producers to meet Feb. 27 in Ellisville

COOPERATIVE EXTENSION SERVICE

Mississippi State University and U.S. Department of Agriculture Cooperating

You are cordially invited to participate in the
Coastal Research and Extension Center

Commodity Advisory Council

February 27, 2018

********NEW LOCATION********

Ronald E. Whitehead Advanced Technology Center
Howard Technology Park
72 Technology Blvd, Ellisville, MS 39437

9:00 am – 3:00 pm
Lunch will be served

Please RSVP by February 16, 2018
Lester.Mitchell@msstate.edu or 228-546-1004

Individuals invited to this Advisory Council are selected as representatives of specific commodities and are asked by Mississippi State University to evaluate and provide future direction for research and educational programs for their commodity. Your input is extremely valuable to us in setting priorities for the coming year.
We hope that your schedule permits you to attend.

Tentative Agenda

9:00-9:20 a.m.	Registration Breakfast (**Farm Bureau**)
9:20-9:30 a.m.	Welcome and Introductions
9:30-11:00 a.m.	Breakout Commodity Session One Agronomic Crops (Cotton, Corn, Peanuts & Soybeans) Commercial Ornamental Horticulture Fruits & Vegetables Livestock Seafood and Aquaculture
11:00-12:30	Breakout Commodity Session Two Apiculture (Bees) Forestry Home Horticulture Horse & Small Ruminants
12:30-1:15 p.m.	Lunch (**Southern AgCredit**)
1:15-1:45 p.m.	Comments from USDA & Farm Bureau
1:45 – 2:30 p.m.	Reports from Commodity Groups
2:30 p.m.	Reponses from MAFES & MSU-ES
3:00 p.m.	Adjourn

Short Review of the Southeast Regional Fruit & Vegetable Conference

Eric T. Stafne, MSU-ES, Poplarville, MS

I don't always go to Savannah, Georgia to attend the Southeast Regional Fruit & Vegetable Conference. Usually, in order to attend, I need to be presenting something. This year I was fortunate enough to be an invited speaker — not in the blueberry section, but rather the caneberry (blackberry) session. Since blackberries are not the focus of this newsletter I won't go into detail on what I talked about; however, I did have the opportunity to sit in on a couple blueberry talks early on in the conference.

The first talk was entitled "Post Freeze: Gibberellic Acid Application Effect on Yield and Fruit Quality in Rabbiteye Blueberry " by Dr. Erick Smith from the University of Georgia. He did research over a couple of years to see what effect GA applications had on yield and quality. Result? Little to none. From his research in Georgia he found no benefit to spraying GA in rabbiteye blueberries. Of course this is not to say GA could not be beneficial to other cultivars in other locations, thus more research is needed. But, his results were compelling — no yield benefit and no fruit quality benefit. Is the expense of applying GA worth it? Sounds like maybe it's a no.

The second talk I sat in on was from Dr. Patricio Munoz, University of Florida. His presentation was "Update on University of Florida's Blueberry Breeding Program". Dr. Munoz took over the program when Dr. Jim Olmstead went from UF to Driscoll's. His program is focused on southern highbush and pushing the limits of where they can be grown successfully in Florida. Some of the evergreen cultivars are being grown in southern Florida, a place where chill hour accumulation is rare. He is also pushing the limits on the "crisp" texture of blueberries. Cultivars such as Indigocrisp, Keecrisp, Bluecrisp, and Sweetcrisp have been released to satisfy the demand for this fruit texture. More information on all the Florida blueberry releases can be found here at this link:

https://www.blueberrybreeding.com/varieties

Unfortunately, I was not able to keep attending the blueberry session as I had to move onto caneberries. If you have never attended the conference, you really should. There is a great tradeshow as well as many sessions to attend. Savannah is a tremendous, historical city to visit (although every time I go it rains, but don't let that deter you). So, make a plan to go in the coming years — I promise it will be worth your time.

Visit their website here for more information: http://www.seregionalconference.com/

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The Mississippi *Vaccinium* Journal is a quarterly, digital publication of Mississippi State University Extension Service. Subscriptions may be obtained by sending an email address to eric.stafne@msstate.edu.

A Few Words on Southern Highbush

Eric T. Stafne, MSU-ES

I get that southern highbush blueberries are risky to grow. They bloom early, are finicky, require intensive management, and die quickly when compared to rabbiteye blueberries. But maybe that is the problem — comparing them to rabbiteyes. The days of growing blueberries in Mississippi and making money in the frozen market are leaner than they were before. New pests like SWD have only exacerbated the problem. As I mentioned in the previous issue of this newsletter — should we be looking toward SHB as the future?

I asked Dr. Erick Smith from University of Georgia and Dr. Jeff Williamson from University of Florida how long SHB are grown in their states. The answers weren't too surprising — 10 years or fewer. Even as few as 6 or 7. This confounds those who have only grown rabbiteyes. In our state, rabbiteye blueberry plants live for decades with good production. Thus, how can we reasonably expect to migrate toward SHB? It seems to be the name of the game right now.

Fortunately, the USDA-ARS in Poplarville with Dr. Stringer and Dr. Babiker are working on breeding better adapted SHB cultivars for Mississippi. Previous attempts like Pearl sputtered, but remember, Biloxi — a mammoth cultivar in South and Central America — was released from this station. Having examined some of the material being considered for release, I believe it is promising.

Another area being pursued, especially in Florida, is using *Vaccinium arboreum* as a rootstock. This species has more of a tree-like growth habit with a single or very few trunks. The rootstock is much hardier than SHB, meaning that it tolerates higher soil pH, drought, and other conditions that weaken SHB alone. Having a single trunk would also help with minimizing harvest losses by fruit dropped to the ground. Researchers are cautiously optimistic about it. Grafting on this species has been done previously in Texas and Mississippi, but not any in-depth research like is being done in Florida.

Overall, SHB is where the market is at. Can we, and will we, adapt in some form or fashion?

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