

Dr. Jeff Wilson, Regional Horticulture Specialist

We have been busy this summer with research and demonstration projects here in Verona. We will have lots of information on research to share in upcoming newsletters and also at the conference in February (info below). Casey and I have also had the opportunity to visit with many of you at your farms this summer. We are currently planning for the fruit & vegetable conference and also for field days next year. If you have any ideas for either of these programs we would like to hear your thoughts. Please contact either of us at any time.

UPCOMING EVENTS

2017 North MS Fruit & Vegetable Growers Conference - February 9th & 10th.

We will have numerous speakers over the day and a half conference. The agenda is almost finalized and will be included in the November issue. All other necessary info will also be included, along with pre-registration info.

MS Pecan Growers Association Fall Field Day, Tuesday, October 11, 2016, 10:30 a.m. - 4:00 p.m. Agenda and other info is attached to this newsletter.

Wine Making Workshop – October 21, Starkville. If you wish to register please send an email to Eric Stafne AND Juan Silva (JSilva@foodscience.msstate.edu). You must send it to both of them! At this time we believe there will be no registration cost. If you have questions please contact us. I (Eric) will be out of my office from Sept 17-October 3, so don't expect to receive a response during that time period from me (although you may get one from Juan). Attendance is limited to 25 persons so make sure you get signed up early.

Rebecca A. Melanson, Ph. D. - Extension Plant Pathologist - Central Mississippi R&E Center

Sentinel Plots for Cucurbit Downy Mildew

In last year's August newsletter, I discussed downy mildew in cucurbits. This disease is caused by a fungus-like organism called a water mold. Symptoms of this disease typically occur only on leaves and begin as slightly yellow to bright yellow lesions on the upper surface of a leaf. Lesions may remain yellow or the leaf tissue may turn brown and die. In most cucurbits, lesions have irregular margins; however, in cucumbers, lesions are angular. Under favorable environmental conditions, gray to purple pathogen growth may be observed on the underside of lesions on the lower surface of the leaves. The cucurbit downy mildew pathogen requires a living host to survive and does not overwinter in areas where freezing temperatures prevent cucurbit production. The spores of the pathogen, however, can travel on air currents from areas warm enough for cucurbits to survive the winter to areas where the pathogen has not overwintered.



Downy mildew on cantaloupe.

Credit: G. Holmes, Cal Poly, Bugwood.org



Downy mildew on cucumber.

Credit: D. Ferrin, LSU AgCenter, Bugwood.org



Grayish-purple pathogen growth on the underside of downy mildew lesions on cucumber.
Credit: S. Miller, OSU, Bugwood.org



Downy mildew on pumpkin.
Credit: S. Miller, OSU, Bugwood.org

This year with the collaboration of Dr. Bill Evans, Dr. Casey Barickman, and others with MSU Extension, sentinel plots for cucurbit downy mildew were planted in the spring & maintained through crop completion at the Truck Crops Branch Experiment Station in Crystal Springs, MS, and the NMREC in Verona, MS. The purpose is to have plant hosts that are susceptible to cucurbit downy mildew available to regularly monitor for the presence of the disease in order to detect when the disease first appears in the area. The sentinel plots are maintained & harvested to keep plants healthy as possible, but fungicides that have activity against cucurbit downy mildew are not applied. This year, each sentinel plot included cucumber ('Straight 9'), cantaloupe ('Hales Best'), pumpkin ('Big Max'), acorn squash ('Table Queen'), butternut squash ('Waltham'), and watermelon ('Mickey Lee'). When cucurbit downy mildew is confirmed on a host in the plots or other areas of the state, a report is submitted to the CDM ipmPIPE website (<http://cdm.ipmpipe.org/>). This helps to generate forecasts or risk prediction maps that determine the risk of cucurbit downy mildew occurring in a particular area. These forecasts can be used as a tool to help make decisions regarding the timely application of fungicides for management of cucurbit downy mildew. The most current forecasts can be found at <http://cdm.ipmpipe.org/current-forecast>.



Pumpkin planting in spring sentinel plot for cucurbit downy mildew at NMREC.



Butternut squash planting in spring sentinel plot for cucurbit downy mildew at NMREC.

Cucurbit downy mildew was not observed on any of the crops in either of the spring sentinel plots. The first confirmed report of cucurbit downy mildew in 2016 in Mississippi occurred on cucumber in mid-August in Hinds County. Downy mildew was also recently confirmed on pumpkin in Lee County. A fall sentinel plot has been planted at the Truck Crops Branch Experiment Station in Crystal Springs in order to continue to monitor for the development of cucurbit downy mildew throughout the fall. However, you can help! If downy mildew on a cucurbit crop is suspected, please contact your local county Extension agent/horticulture specialist or myself so that we can obtain samples to confirm and report new outbreaks of the disease. A list of fungicides labeled for use against cucurbit downy mildew as well as an efficacy table of those fungicides can be found in the latest edition of the [Southeastern US Vegetable Crop Handbook](#) (available online at

www.thepacker.com). If you have any questions about protecting your crop against downy mildew, please do not hesitate to contact me.

Genovese basil was also included in the spring sentinel plots for the detection of basil downy mildew. Basil downy mildew was not observed on basil in the sentinel plots, but was confirmed on greenhouse-grown basil earlier this year. Genovese basil is also planted in the fall sentinel plot at the Truck Crops Branch Experiment Station in Crystal Springs. More information about basil downy mildew can be found in the publication “[Greenhouse Basil Downy Mildew](#)” available on the MSU Extension website.

OTHER NEWS

The **2016 Southeastern U.S. Vegetable Crop Handbook** is online for easy access for you and your clientele. It can be found at: <http://www.thepacker.com/guides/Pest-production-guides>. The online version may be quicker for you to find answers on culture and pest management questions than the printed book.

MSU-ES Contact info: Below are the contact names and numbers that are directly related to you and your production issues. Please start with your local county Extension agent to help find answers to your questions. They are capable of handling your request and have access to all of our resources.

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