

North Mississippi Fruit and Vegetable Newsletter

April 2017



Dr. Jeff Wilson, Regional Horticulture Specialist

We had our most successful fruit & vegetable conference ever this past February. There were 200 participants on Thursday and 80 on Friday. We had 20+ vendors representing numerous areas of horticulture production. Specialist and producers gave presentations about their farming experiences and the latest research being conducted. We look forward to continuing this event next year as we make it even bigger and better. Please contact us and let us know your thoughts on topics and speakers for next year's conference.

We recently held an early production fruit tree pruning training here at NMREC. We will have more production field days during the year, so pay attention to the upcoming events section in the newsletters and also the emails that I send out. We hope to see many of you at these events.

Please take note of the Upcoming Events section to see which programs can benefit your operation and make it more productive. If you have any ideas for any of these programs or for possible research projects, we would like to hear your thoughts. Please contact me at any time.

UPCOMING EVENTS

Season Extension and Commercial Strawberry Production Field Day (Flyer Attached)

April 4, 2017, 9:00 A.M. - 4:00 P.M.

MAFES Truck Crops Branch Experiment Station
Crystal Springs, MS

Christmas Tree Growers Workshop

April 22, 2017, 9:00 A.M. - 2:00 P.M.

Rosebud Christmas Tree Plantation
Walnut Grove, MS

Farmers Market Manager Workshop

April 26, 2017, 9:30 A.M. - 2:00 P.M.

Sparkman Auditorium-MS Ag & Forestry Museum
Jackson, MS

Pesticide Applicator Trainings

Anyone using pesticides in their farm operation should have proper trainings and certifications. These are one of the most basic trainings that all workers should attend. They are held in individual counties and you should contact your local Extension Ag Agent for further info.

GAP/GHP Cost-Share Program

The Mississippi Department of Agriculture and Commerce is currently offering a cost-share program to provide financial assistance to Mississippi fruit and vegetable farmers receiving Good Agricultural Practices (GAP) and Good Handling Practices (GHP) Certification. Eligible farmers will receive reimbursement for 75% of the certification costs up to a maximum of \$500.

Tomato Fertilization

T. Casey Barickman, Ph.D., Assistant Research and Extension Professor

It's that time of year again when we are ready to transplant out our field tomato plants. As we gear up and get our fields prepped, we want to make sure and consult our soil test results for fertilizer and liming recommendations. At the North Mississippi Research and Extension Center (NMREC) tomato research plots our soil tests do not recommend lime as we are within range of our soil pH (between 6.0 and 7.0 pH for a tomato crop). However, there are recommendations to add nitrogen, phosphorus, and potassium. What fertilizers do we use for our research plots? Well, we always custom blend out fertilizer using ammonium nitrate, calcium nitrate, super phosphate, and potash.

Custom blending fertilizers allow flexibility and precision in applying fertilizers to the recommended rates on the soil tests. Once we calculate our fertilizer rates from our soil test, we preplant half the rate of our nitrogen and apply all of our phosphorus and potassium. Once the tomato plants are transplanted into the field, the fertilizers applied preplant will be all the tomato plants need until they start to flower. When the tomato plants flower we will add 5-10 lbs of calcium nitrate per week through the drip irrigation system until we have applied all the recommended rate of nitrogen to the tomato plants.

For example, it is recommended to apply 120 lbs/acre of nitrogen to tomato plants. Half of the nitrogen (60 lbs/acre) will be applied as ammonium nitrate preplant. The remaining 60 lbs/acre of nitrogen will be applied in 5-10 lbs/acre/week increments, given as calcium nitrate, through the drip irrigation. Once tomato plants start to flower, in general, there are about 45 days to a ripe tomato. Thus, at 5-10 lbs/acre/week of calcium nitrate that should be about 6-9 times to fertilize through the drip for a tomato crop. I hope this recommendation help and gives you some insight into how we fertilize our tomato plants at NMREC.

On a side note, I wanted to keep you informed on the tomato research projects we have in store for the spring season. We are in our second year of a grant examining the effects of cover crops and reduced tillage practices for tomato fruit yields and quality. Our cover crops had a late start in the fall because of the 2016 drought. However, they completely recovered due to late-season rains and a warm winter. We are very excited to get this project planted in Skyway tomato plants in a few weeks!

We are conducting two other tomato research projects examining how tomato plants may be tolerant to different herbicides such as Dicamba and Sencor. Both of these studies have shown promise, and we are excited to get the results of these studies to you at our next meeting. I am also working on getting our research results and other information to all grower and extension agent easily through our new vegetable research program website, Facebook page, and Twitter site. We are also working on a Snapchat site so you can see all of our story and progress throughout the season. Please feel free to contact me if you have any questions about your operation or if you have suggestions for our research and extension program! Please visit our website and social media outlets for all our progress! Happy Growing!

Website: <http://vegetablelab.mafes.msstate.edu/>

Facebook: <https://www.facebook.com/nmrechorticulture/>

Plant Pathology Odd and Ends

Dr. Rebecca A. Melanson, MSU Extension plant pathologist

Getting Assistance with Plant Disease Problems. 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. The items listed initially, however, are those items for which I consistently ask of growers when I am contacted for assistance with a potential disease problem.

Often times, I also receive digital images (photos) of plants 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.

Cucurbit Downy Mildew. In 2016, coordinated by myself, in collaboration with Dr. Bill Evans, Dr. Casey Barickman, and others with MSU, sentinel plots for cucurbit downy mildew were planted in the spring and maintained through crop completion at the Truck Crops Branch Experiment Station in Crystal Springs and the NMREC in Verona. A sentinel plot was also planted and maintained at the Truck Crops Branch Experiment Station during the fall of 2016. The purpose is to have cucurbit hosts that are susceptible to downy mildew available to regularly monitor for the presence of the disease in order to detect when the disease first appears in the area. Cucurbit downy mildew was not observed on any of the crops in either of the spring sentinel plots; downy mildew did appear in the fall sentinel plot. The first confirmed report of downy mildew in 2016 in Mississippi was on cucumber in mid-August in Hinds County. Downy mildew was also later confirmed in Copiah (cucumber, pumpkin, squash), Lee (pumpkin), and Madison (cucumber, squash) counties.

Sentinel plots for cucurbit downy mildew will be planted again in 2017 in the spring and fall at Truck Crops and in the fall at the NMREC. If downy mildew on a cucurbit crop is suspected in Mississippi, please contact your local county Extension agent or myself (rebecca.melanson@msstate.edu) so that samples can be obtained for disease confirmation and outbreaks of downy mildew can be reported to the CDM ipmPIPE website (<http://cdm.ipmpipe.org/>).



Figure 1. Symptoms of downy mildew on cucumber. Photo: D. Ferrin, LSU AgCenter, Bugwood.org.



Figure 2. Close-up of downy mildew lesions (symptoms) on cucumber. Photo: R. A. Melanson, MSU Extension, Bugwood.org.

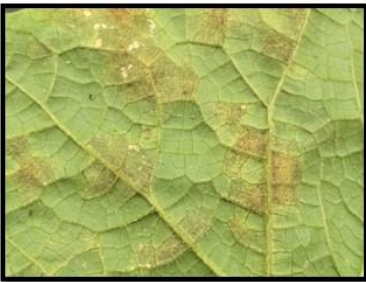


Figure 3. Gray to purple pathogen growth on the underside of a cucumber leaf with downy mildew. Photo: R. A. Melanson, MSU Extension, Bugwood.org.

New and Updated Publications. Several new and updated Extension publications regarding diseases and disease management in fruits, pecan, and vegetables are now available online and are listed below. The collection of these publications include options for non-chemical methods of disease management as well as chemical methods for disease management in the selected crops.

Fruits:

[2017 Southeast Regional Blueberry Integrated Management Guide](http://www.smallfruits.org) (Available at www.smallfruits.org)

[2017 Southeast Regional Organic Blueberry Pest Management Guide](http://www.smallfruits.org) (Available at www.smallfruits.org)

[2017 Southeast Regional Strawberry Integrated Management Guide](http://www.smallfruits.org) (Available at www.smallfruits.org)

[2017 Southeast Regional Muscadine Grape Integrated Management Guide](http://www.smallfruits.org) (Available at www.smallfruits.org)

[2017 Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide](http://extension.uga.edu) (Available at extension.uga.edu)

Pecan:

[Pecan Bacterial Leaf Scorch](http://extension.msstate.edu) (Available at extension.msstate.edu)

Vegetables:

[Organic Vegetable IPM Guide](http://extension.msstate.edu) (Available at extension.msstate.edu)

[Greenhouse Basil Downy Mildew](http://extension.msstate.edu) (Available at extension.msstate.edu)

[Greenhouse Tomatoes: Pest Management in Mississippi](http://extension.msstate.edu) (Available at extension.msstate.edu)

[2017 Southeastern US Vegetable Crop Handbook](http://www.thepacker.com/) (Available at www.thepacker.com/)

OTHER NEWS

Website: <http://vegetablelab.mafes.msstate.edu/>

Facebook: <https://www.facebook.com/nmrechorticulture/>

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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