GROWERS, BE AWARE OF SPOTTED LANTERFLY EGG MASSES TRYING TO HITCHHIKE IN TO TN!

SLF is an invasive planthopper that can damage nursery trees. It lays its eggs in masses, often resembling splotches of mud. The female will drop eggs on just about any surface, including trucks and tires. Be diligent and keep an eye out for stragglers and please contact me or report to Dr. Steve Powell with TDA.

TSU NURSERY NEWS TO USE

ISSUE 32
FEB 8, 2022

ABOVE: Infected leaves may die but will remain attached to the branch, as many oak species do.

BELOW: vascular discoloration in the "vessels" of the branch; once the vascular system is no longer functioning properly, the tree can

EMERGING ISSUE UPDATE:
VASCULAR STREAK DIEBACK

In an effort to keep everyone updated, I will continue to include updates in each month's NURSERY NEWS TO USE on the recently focus topic, dieback in redbud and other woody ornamentals. All future discussion of this disease will be called Vascular Streak Dieback, as we have yet to confirm *Ceratobasidium theobrominae* (CT) to the molecular level that is required by USDA to confirm a new pathogen, therefore, cannot confirm that CT is in fact causing dieback.

We know that a pathogen was identified from eastern redbud tissues exhibiting vascular streaking and necrosis in 2020. North Carolina has since confirmed the same pathogen from redbud, dogwood, red maple and native spicebush samples.

Many have expressed concern due to the 'slow move', but there is a reason. This isolated pathogen would be new to the United States, and redbud trees, in general. Assuming that CT is the cause of the dieback would be hasty and wrong; we could miss something brand new. The pathogen is very difficult to isolate and grow, part of the confirmation process. NC State has taken this task to manage. Tennessee will be performing Koch's postulates. Purdue is continuing to work with DNA confirmation and genetic stock. South Carolina is working with a grower on possible management.

TDA is currently surveying and will begin sampling in order to determine host (and cultivar) infection, as well as concentration across the state. These details are vital in identification and confirmation of the source of dieback. Currently, it has yet to be confirmed the source of the dieback and redbud mortality and these details will be implemental in moving forward. TDA also plans to sample dogwood and red maple.

Katy Kilbourne, with TDA, has applied for research funding, as have other states. At any point in time, please feel free to contact me. I am happy to speak one-on-one, to a group, or over the telephone. We are all here to help, not hurt. Admittedly, we are in a learning phase, as this is new and unknown to everyone. We hope to learn as much as we can over the next few months in order to allow chemical companies to trial control products that may be useful in management.

Proper pruning and disposal of pruned tissue from nursery block is essential, as are sanitary practices while grafting. If CT, it will spread by spore and grafting, i.e., pruning, budding, etc. By removing diseased tissue from the block, we decrease the amount of pathogen available to infect host plants, therefore, we lower the disease severity and infection potential of the entire block. For those growing in the field, this task seems impossible. Please understand, if CT, keeping it clean will be crucial in management.

Extension specialists in other states have mentioned recommendations for control of CT in Cacao, however, I cannot recommend specific controls until the pathogen is confirmed. We don't know that CT is causing the dieback. We don't know that an actual pathogen is causing the dieback. In the case of vascular streaking on cacao caused by CT, DMI fungicides (e.g. FRAC 3) and strobilurins (e.g. FRAC 11) have been efficacious immediately following premature leaf abscission.

Please work with TDA on surveys and sample requests. I will also be available for sampling. We are not concerned about who or where this issue came from, only how to stop it! Your input is vital. Please contact me at adismuk1@tnstate.edu or 970-372-8556 for questions or to schedule a site visit. You can also contact Katy Kilbourne at Katherine.Kilbourne@tn.gov or any TDA inspector.

Infected leaves often remain attached to the branch, however, those that do drop are an added source of infection.
PHOTO CREDIT: Amy Dismukes

GROWER MEETING!! PLEASE JOIN US ON SATURDAY, FEBRUARY 26, AT 9AM, TO DISCUSS THE VASCULAR DIEBACK DISEASE, RECENTLY FOUND IN REDBUD IN TENNESSEE. I will do my best to explain what is happening and what is being done. Knowledge is an essential tool for getting control. The meeting link is https://us02web.zoom.us/j/82719376653?

2021 Woody Ornamental Disease Management Research Report is now available at is https://www.tnstate.edu/extension/documents/Ornamental%20Pathology%20Handbook%202022%20.pdf.

The report consists of all 2021 efficacy trial results of various pathosystems conducted by Dr. Fulya Baysal-Gurel and her lab. All trials were supported by industrial partners, USDA-NIFA and IR-4. Trial subjects include: boxwood, crape myrtle, daylily, flowering dogwood, hydrangea, lilac, maple and rose. Past years results are also available online.

GROWERS! IT'S TIME TO SCOUT FOR JAPANESE MAPLE SCALE!

WEED OF THE MONTH: Curly Dock, *Rumex crispus*, is an herbaceous perennial broadleaf weed native to Europe and west Asia. It was introduced to the United States in the 1600s and is now found in all 50 states.

Curly dock thrives in full sun and moist soil but is adaptable to a wide range of conditions and is commonly found in open areas such as ditches, roadsides, pastures, and nursery fields. Plants are distinguished by leaves with wavy edges that are long (up to 12 inches) and narrow (1 to 2 inches) and dull green in color (sometimes with a reddish tint).

Curly dock seeds germinate spring to summer, first forming a dense rosette then producing a tall (to 5 ft) stem and flowers (yellowish-red). At maturity (mid to late summer), the stem and fruits turn a rusty brown. A single plant can produce several thousand seeds which are spread by wind and water and can remain viable in the soil for over 50 years. Curly dock produce a very long taproot from which plants re-sprout each spring. It's leaves are very low-growing and can tolerate mowing and large patches of curly dock can quickly outcompete small nursery crops.

ABOVE: curly dock mature plants

BELOW: curly dock basal rosette

Post-emergent herbicide applications (clopyralid and glyphosate) can control curly dock but are most effective when applied to basal rosettes (prior to stem elongation) in late winter/early spring. Pre-emergent herbicide control options are limited but effective products contain indaziflam.

Please contact Dr. Anthony Witcher (awitcher@tnstate.edu) for more information on nursery weed control practices.

We at the TSU NRC want to make every effort to keep growers informed and updated on all topics, and we have established multiple sites to do just that! Sharing information! Should you be interested, previous newsletter publications can be found online. We also have a TSU Facebook page and YouTube channel, where we will continue to share programming and research updates. All TSU nursery publications are also available online, in both English and Spanish.

TSU News to Use: https://www.tnstate.edu/agriculture/nrc/nursery_news-to-use.aspx
TSU Nursery publications: https://www.tnstate.edu/extension/publication_index.aspx
TSU NRC Facebook page: https://www.facebook.com/TSUNurseryResearchCenter/
TSU NRC YouTube channel: https://www.youtube.com/channel/UCtaeH5dIwGi0TjTwG-c_Gnw

Dr. Amy Fulcher recently released updated links to all UT resources. UT websites have been redesigned and have a new, up-to-date look. For links to resources, select publications and archives, please use https://plantsciences.tennessee.edu/sustainable-nursery-crop-and-landscape-management.

For the Tennessee Master Nursery Producer program please use: http://www.tnmasternursery.com/. Please contact Dr. Amy Fulcher (afulcher@utk.edu) for more information on the Tennessee Master Nursery Producer program.

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