SOIL, PLANT & PEST CENTER
UT EXTENSION
INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

Quarterly Newsletter
(April 2025 - June 2025)

14 Aug , 2025

Picture credit: Dipika Sharma, University of Tennessee

Summer Growth and Diagnostics

As the heat settles in across Tennessee, the UT Soil, Plant & Pest Center (SPPC) continues to stay busy this summer! From April 2025 to June 2025, we received and processed 293 total plant samples from 47 different counties.

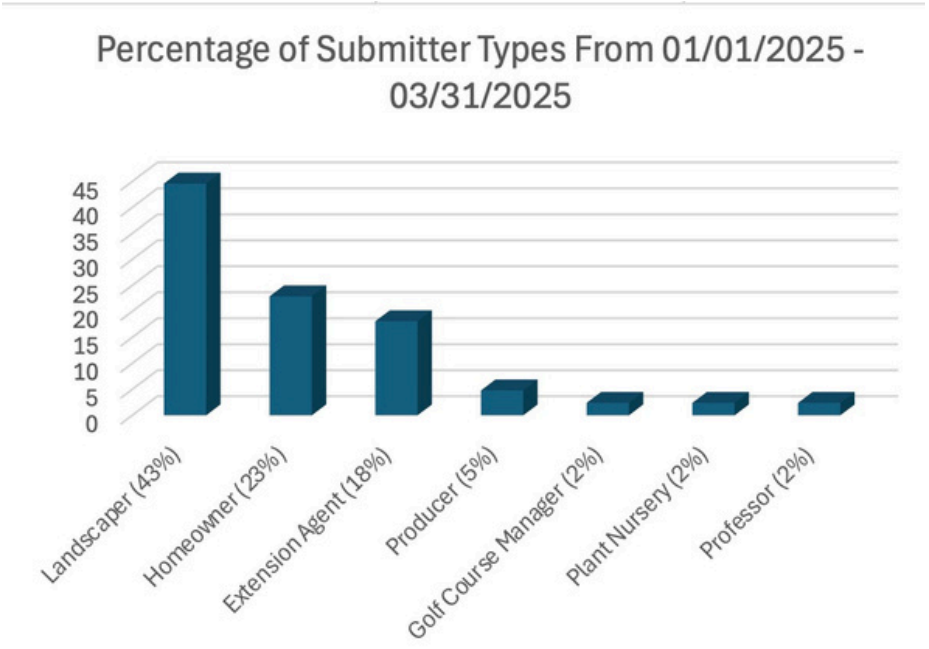
This quarter, SPPC saw a notable rise in samples from landscape ornamentals, vegetable gardens, and commercial nurseries, with frequent concerns related to drought stress, foliar diseases, and insect damage.

Stay tuned to learn what's been keeping growers, landscapers, and homeowners on their toes this season!

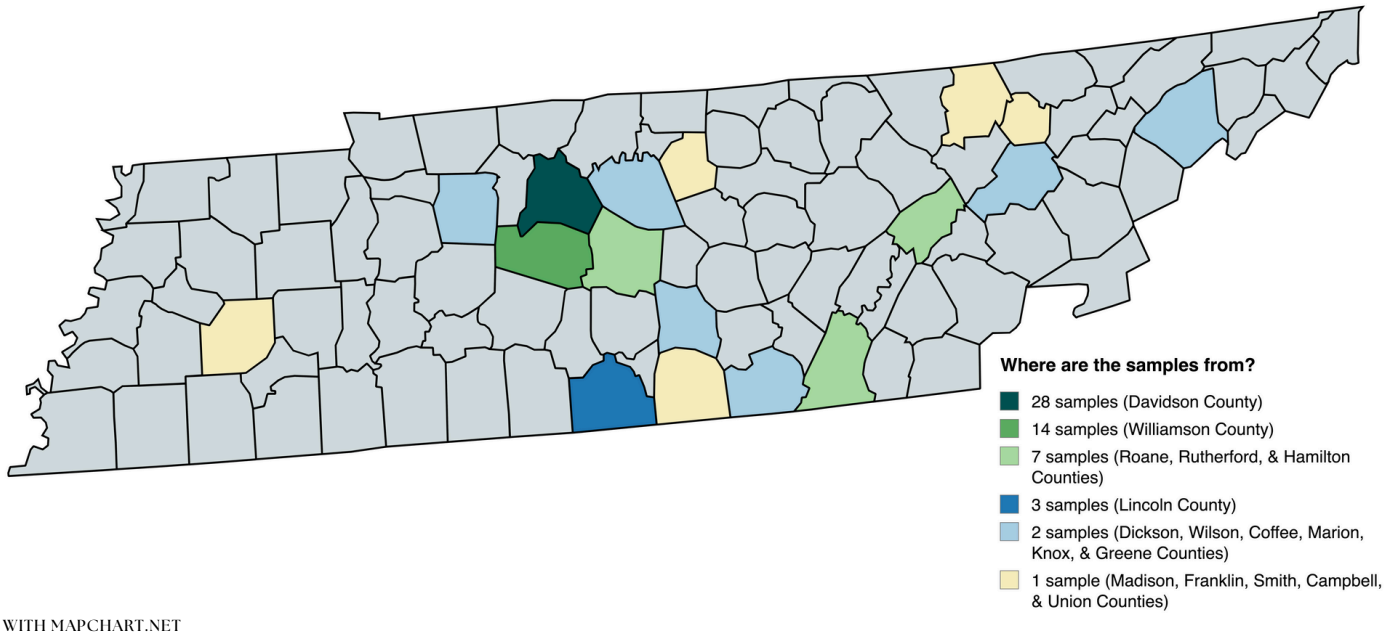
In this newsletter you can explore:

Who sent samples?

Landscaper (43%)
Homeowner (23%)
Extension Agent (18%)
Producer (5%)
Golf Course Manager (2%)
Plant Nursery (2%)
Professor (2%)



WHERE ARE THE SAMPLES FROM?



MADE WITH MAPCHART.NET

UNINVITED GUESTS ON YOUR GARDEN FAVORITES!

Picture credit: Nar B Ranabhat, University of Tennessee

Shot Hole Disease

Host Plant(s): Flowering cherry(*Prunus* spp), English laurel (*Prunus laurocerаus*) and other ornamental stone fruits like peach and plums (1, 2).

Cause(s): Shot hole disease can be caused by fungal and/or bacterial complex. Fungal pathogens; *Wilsonomyces carpolphilus*, *Blumeriella jaalopii* (most common on cherries),
Bacterial pathogens: *Xanthomonas campestris pv pruni*, *Pseudomonas syringae*

Signs/Symptoms: Symptoms begin as brown or reddish-brown spots, usually with a red or purple margin. These spots enlarge and the affected tissue drops out, leaving small, neat, round holes- a "shot hole" appearance. The disease typically starts in spring under wet conditions. Infected leaves may yellow and drop prematurely (1, 2). Lesions are often surrounded by yellow halos and commonly result in defoliation if infections are severe or recurrent (2). In laurels and cherry, holes can be numerous and give a tattered look to leaves; severely affected cherry trees may lose much of their foliage by mid-summer.

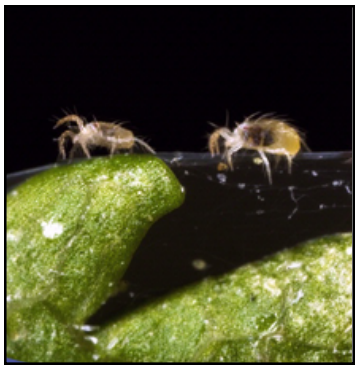
Picture credit: Nar B Ranabhat, University of Tennessee

Seiridium Canker

Host Plant(s): Leyland cypress (*Cupressocyparis leylandii*), Italian cypress, Monterey cypress, Arizona cypress, Junipers and members of Arborvitae are commonly affected

Cause(s): Seiridium canker is caused by fungal pathogen *Seiridium cardinale*, *S. cupressi*, or *S. unicorne*.

Signs/Symptoms: Infected plants exhibit browning and dieback of individual branches (called flagging), typically starting mid-branch and progressing outward (3). Foliage turns from green to straw to reddish-brown. Dark, sunken, resinous cankers may be observed on stems or branches, often accompanied by resin oozing from the site of infection. Scraping away bark from cankered areas reveals dead, girdled tissue. Small black fruiting bodies (acervuli) of the fungus may also be present on dead branches and persist for years (4). Affected branches eventually die, and repeated infections can disfigure or kill the entire tree.

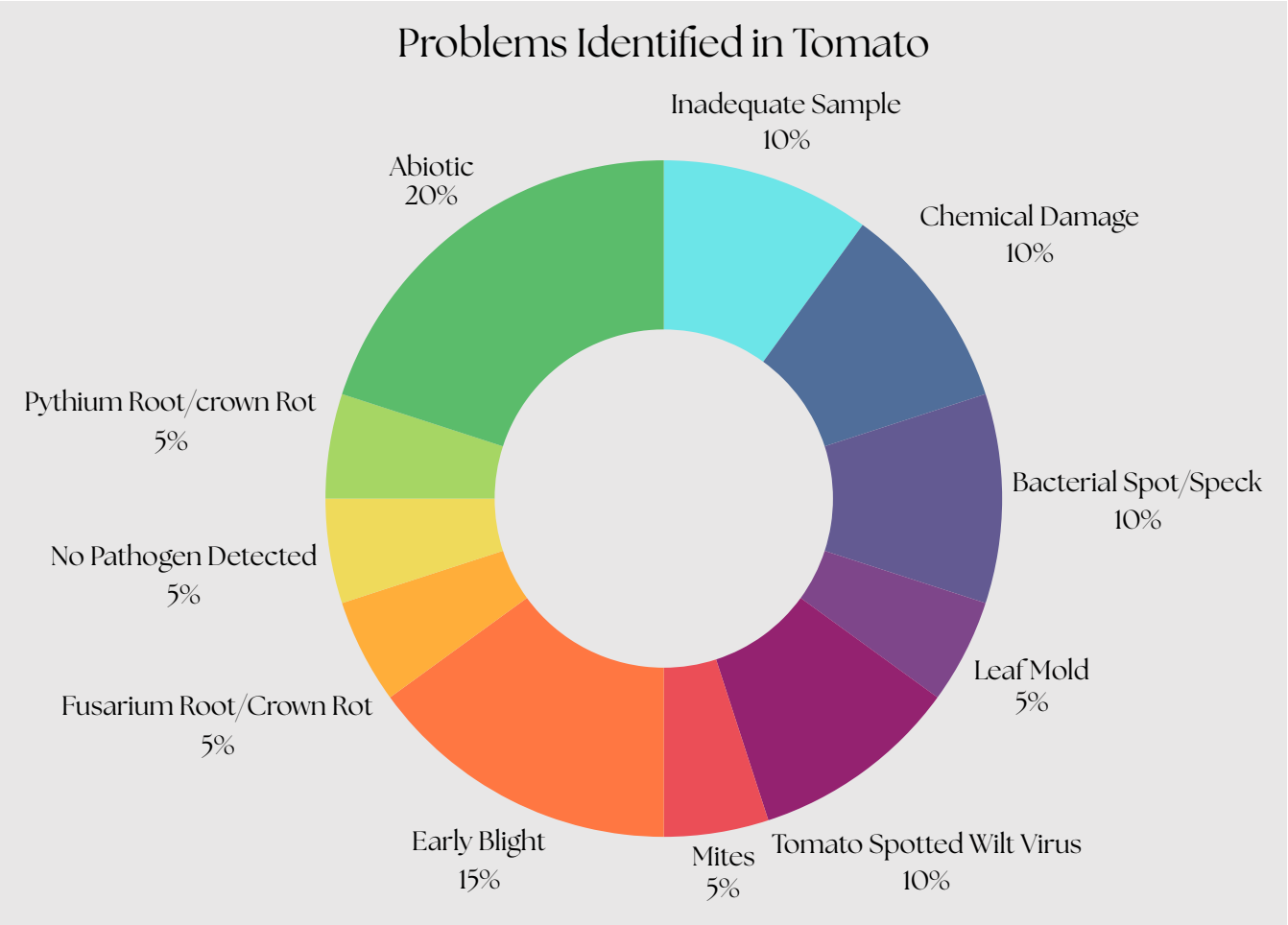


Picture credit: David Cappaert, Bugwood.org

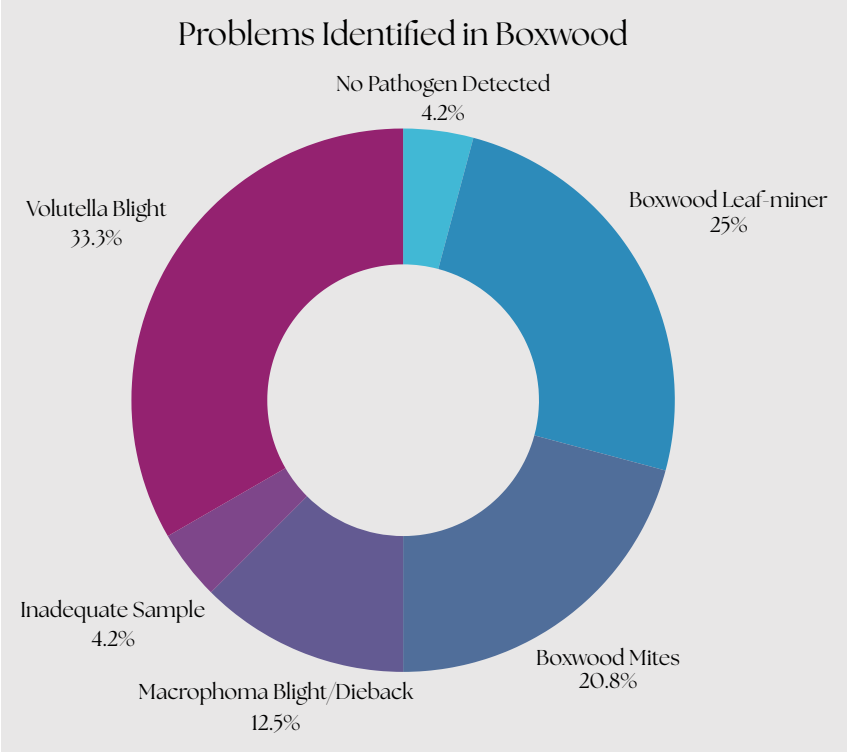
Spider mites

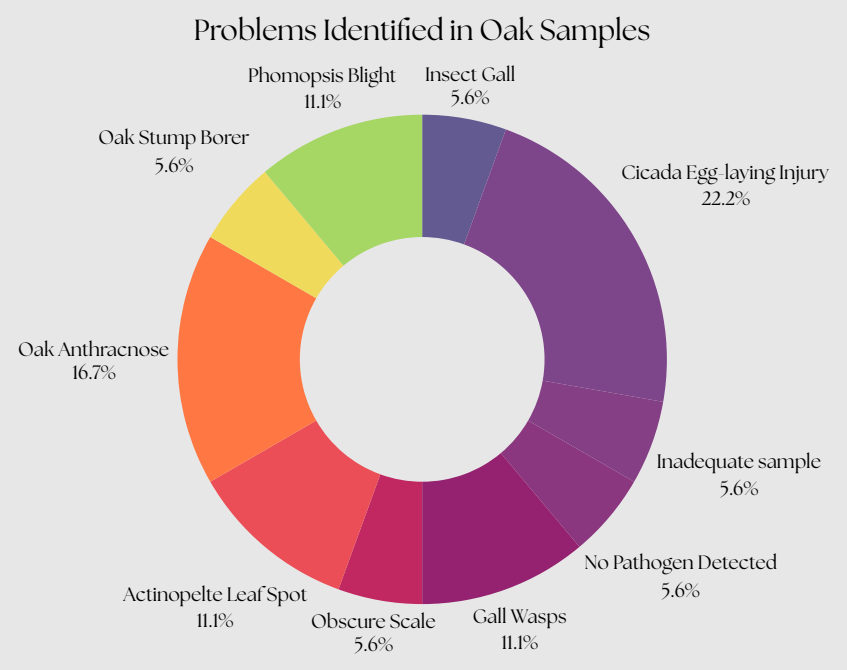
Have you noticed any tiny webbing or speckled leaves on your plants lately? Be sure to be on the lookout for tiny spider like creatures.You might be dealing with spider mites, one of the most common pests in gardens and greenhouse. Spider mites are tiny pests with adults reaching upto 1 mm in length and appear yellowish-green to reddish, depending on the species and season (5,6).
Spider mites thrive in hot, dry weather and are especially active during mid to late summer. They feed by piercing plant cells and sucking out the contents, leading to a stippled or bronzed appearance on leaves. If populations grow unchecked, fine silk webbing may appear on the undersides of leaves or along stems (5,6,7). They reproduce rapidly—a single female can lay over 100 eggs in her lifetime, and each generation takes only a week or three to develop under ideal conditions (7). This means infestations can explode quickly.
Predatory mites and horticultural oils can help reduce populations, but early detection is key (7).
Spider mites can develop resistance to many chemical miticides, so rotating control methods is essential for long-term management!

TOP 3 SAMPLES AND THEIR DISEASES/PESTS



TOP 3 SAMPLES AND THEIR DISEASES/PESTS





"No pathogen found" means that a pathogen was not in the sample brought in. Why?

- The customer would like to ONLY double check if the plant was healthy before they planted it in their garden.
- The part of the plant that was submitted in did not contain the pathogen, OR
- The plant has an abiotic/other external issue.

Sometimes, the SPPC receives insufficient samples and/or images to provide an accurate diagnosis, especially when submitted through the Distance Diagnostic system. For guidance on how to take effective photos for remote diagnosis and how to properly collect and submit your plant samples, please refer to the following link:

https://soillab.tennessee.edu/plant-pests/plant-disease-diagnosis/

THIS NEWSLETTER WAS PRODUCED BY:

Dipika Sharma

Graduate Research Assistant
Department of Entomology and Plant Pathology
University of Tennessee Knoxville
dsharm11@utk.edu

Nar Ranabhat, PhD

Assistant Professor & Extension
Plant Pathologist
Department of Entomology and Plant Pathology
University of Tennessee Knoxville
nranabhat@utk.edu

Midhula Gireesh, PhD

Assistant Professor & Extension Specialist
Department of Entomology and Plant Pathology
University of Tennessee Knoxville
mgireesh@utk.edu

Sylvia Moraes, PhD

Plant Pathologist
Plant Diagnostician
Soil, Pest & Plant Center
University of Tennessee
smoraes@utk.edu

Robert Florence, PhD

Lab Director
Soil, Pest & Plant Center
robertf@utk.edu

References

1. Khan, N. A., Bhat, Z. A., & Bhat, M. A. (2021). Diseases of stone fruit crops. In Production Technology of Stone Fruits (pp. 359-395). Singapore: Springer Singapore.
2. Pscheidt, J. W., & Ocamb, C. M. (2015). Pacific northwest plant disease management handbook. Oregon State University.
3. Rahman, M. (2015). Seiridium canker on Leyland cypress (ANR-IPM-15-014) [Fact sheet]. West Virginia University Extension Service . https://extension.wvu.edu/files/d/1e136417-9d2b-4371-ab44-05c66de8490d/seiridium-canker.pdf
4. Martinez, A., Williams-Woodward, J., & Pearce, M. (Year). Diseases of Leyland Cypress in the Landscape (Publication No. B1229). University of Georgia Cooperative Extension. Retrieved from https://extension.uga.edu/publications/detail.html?number=B1229&title=diseases-of-leyland-cypress-in-the-landscape
5. Potter, M. F., & Potter, D. A. (2025). Spider mites on landscape plants (ENTFACT-438). University of Kentucky College of Agriculture, Food and Environment, Department of Entomology. Retrieved from from https://entomology.ca.uky.edu/files/ef438.pdfhort.extension.wisc.edu+4entomology.ca.uky.edu+4plantpathology.ca.uky.edu+4
6. University of California Agriculture and Natural Resources. (2023). Spider Mites: Pest Notes. Retrieved from http://ipm.ucanr.edu/PMG/PESTNOTES/pn7405.html
7. Williamson, R. C., Soper, S., & Liesch, P. J. (2015). Managing mites in greenhouses (A3744). University of Wisconsin–Madison Division of Cooperative Extension. Retrieved from https://hort.extension.wisc.edu/articles/managing-mites-greenhouses/