

The VT Plant Disease Clinic (PDC) Annual Report 2022

A message from the PDC staff

As a service laboratory to Virginia Cooperative Extension (VCE), the Plant Disease Clinic (PDC) staff put their plant diagnostic knowledge into action to solve plant and pest problems and, to provide science-based solutions that support Virginia agriculture and landscape professional and home growers with real, research-based solutions.

The PDC staff continue to look for opportunities to improve our services while providing accurate and timely diagnoses for our clients. We continue to add rapid, sensitive molecular tests for significant pathogens that negatively impact Virginia agriculture and its ecosystem.

In spring 2022, Mary Ann Hansen, an outstanding instructor and Clinic co-manager, [retired](http://bit.ly/3wPqIBs) (<http://bit.ly/3wPqIBs>), Congratulations Extension Specialist Emerita Mary Ann!!! In the fall of 2022, Dr. Lina Rodriguez Salamanca joined the PDC as the new instructor and PDC manager (Meet Lina <https://bit.ly/LinaRS>).

We look forward to more opportunities throughout 2023 to put our plant diagnostic knowledge into action to support Virginian citizens and agriculture with real solutions that will improve the well-being of their plants, landscapes, and production operations !

Sincerely,

Lina, Elizabeth and the PDC Team



(from left to right) Karlie Casper (undergraduate lab assistant), Elizabeth Bush (Diagnostician and Research Associate Senior), Mary Ann Hansen (Diagnostician, Instructor, and Extension Specialist Emerita), and Lina

Rodriguez Salamanca (Plant Disease Clinic Manager and Diagnostician).

The PDC Team

Dr. Lina Rodriguez Salamanca and Ms. Elizabeth Bush perform diagnostics in the PDC. Lina has 8 years of plant diagnostic experience and Elizabeth has been diagnosing plant problems in the PDC for 18 years. They frequently consult VT/VCE agronomic, horticulture, entomology and plant pathology specialists, located both on campus and at VT Agricultural and Research Extension Centers, as part of the diagnostic process—particularly for specialty crops, such as small fruit, tree fruit, and greenhouse crops, but also for row and vegetable crops. Our VT specialists' knowledge, input, and expertise are valued by the PDC team and greatly enhance the PDC diagnostic services.

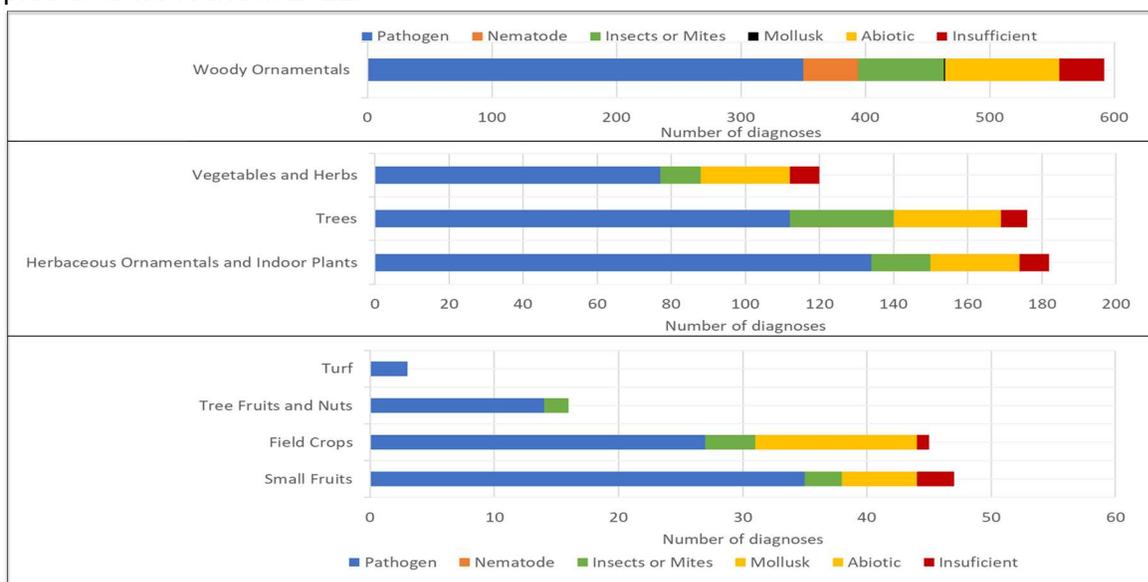
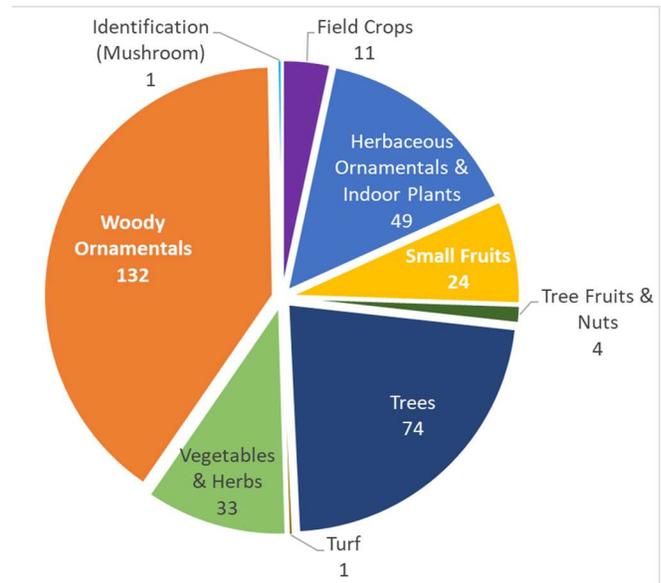
During 2022 we had the pleasure of training and mentoring two undergrad students who provided laboratory assistance in the PDC. We rely on undergraduate laboratory assistants for various support tasks (e.g., clerical and laboratory).

Sample types

The PDC diagnosed a broad range of plants in 2022.

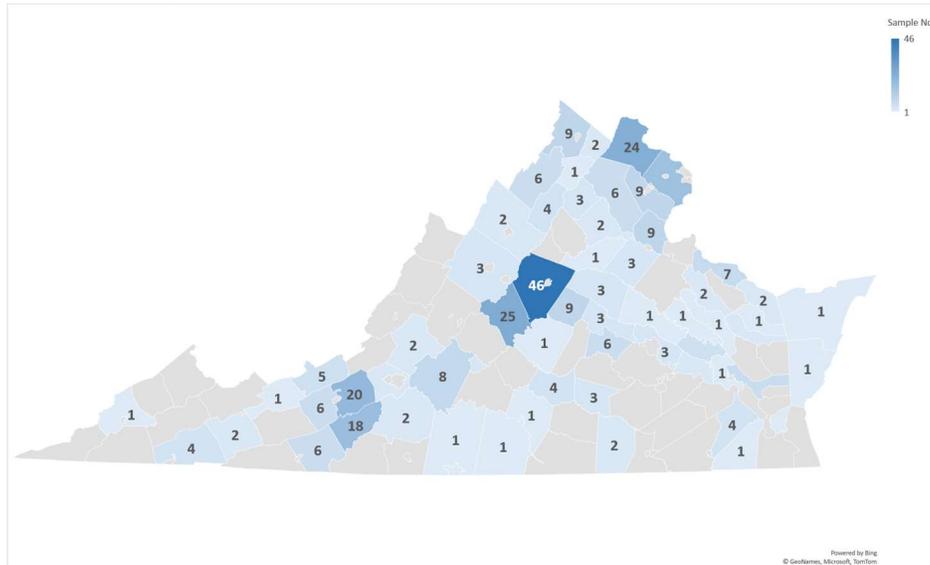
Plant problem breakdown

Disease, insects, cultural and environmental factors can impact plant health, and often more than one problem is diagnosed on a plant sample. This graphic shows what types of plant problems we found in 2022.



Samples by Virginia County

The PDC is a service lab to VCE and the majority of PDC samples are submitted through the client's local VCE offices. However, samples are also directly submitted by some clientele, particularly commercial growers.



Client Breakdown

Client type	No. of samples
Commercial grower (Producer)	122
Garden/Landscape(Non-Commercial) grower	121
Commercial service provider*	73
Government agency	4
Research	9
Total	329

Type of Client Contact	2022
Email inquiries	1040
Phone inquiries	57
Physical sample	266
Physical & Digital samples	54
Digital only samples	9
Talks, webinar, workshops	230

Feedback from some of the PDC clients in 2022

See all our annual clientele survey results at <http://bit.ly/40iCCRB>

From commercial growers:

“Thank you for the diagnosis. The plant clinic has been a big help to us here at Bennett’s Creek Nursery.”-William “Cody” Herbert, Vice President of Horticulture, Bennett’s Creek Nursery.

“We used the service for diagnosing our [wine grape] vines with Pierce’s disease. It was very helpful to know that was, in fact, what was wrong.”

“The Plant Disease Clinic makes a huge difference in our operation where we would otherwise be essentially guessing at what we're treating and why. I can always rely on the clinic for help.”

“Speedy and very helpful! Great to have such a valuable resource nearby!”

“The services have helped me feel more confident in my initial thought processes when we encounter a problem which may result in plant loss for the company. Sometimes more than one attack may occur, and it's very helpful to have the results from the clinic to proceed with the steps to help eliminate the problem, and move toward a solution. Thank you.”

From landscape professionals:

“Accurate and fast results”

“I think you should charge and it's a great valuable service. “

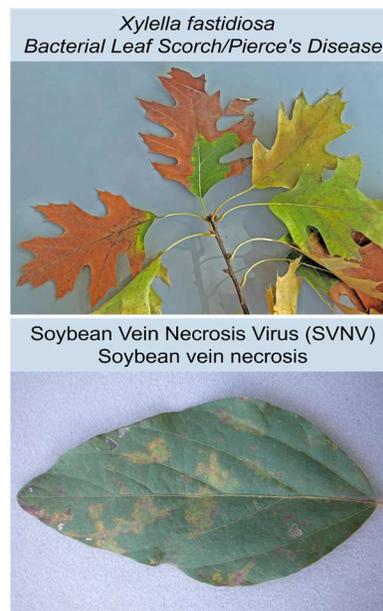
From home growers:

“I had heard of the Extension Service, but didn't know much about you. I am blown away by your services and the educational materials you forwarded.”

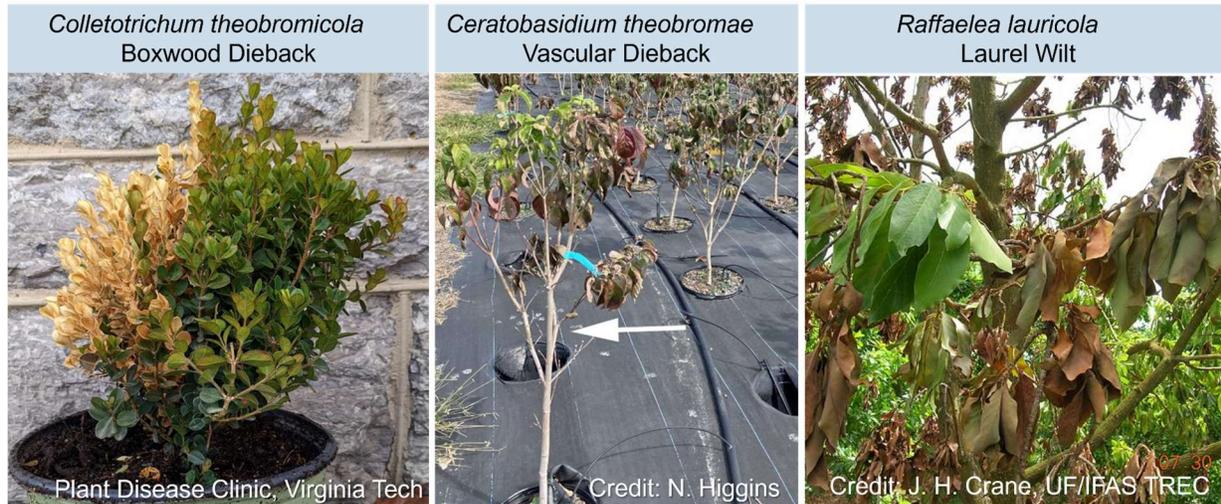
“Really value this service! We found it so helpful and I had no idea what an incredible resource it was prior to this year!”

Rapid, sensitive testing for difficult-to-detect and high-consequence pathogens

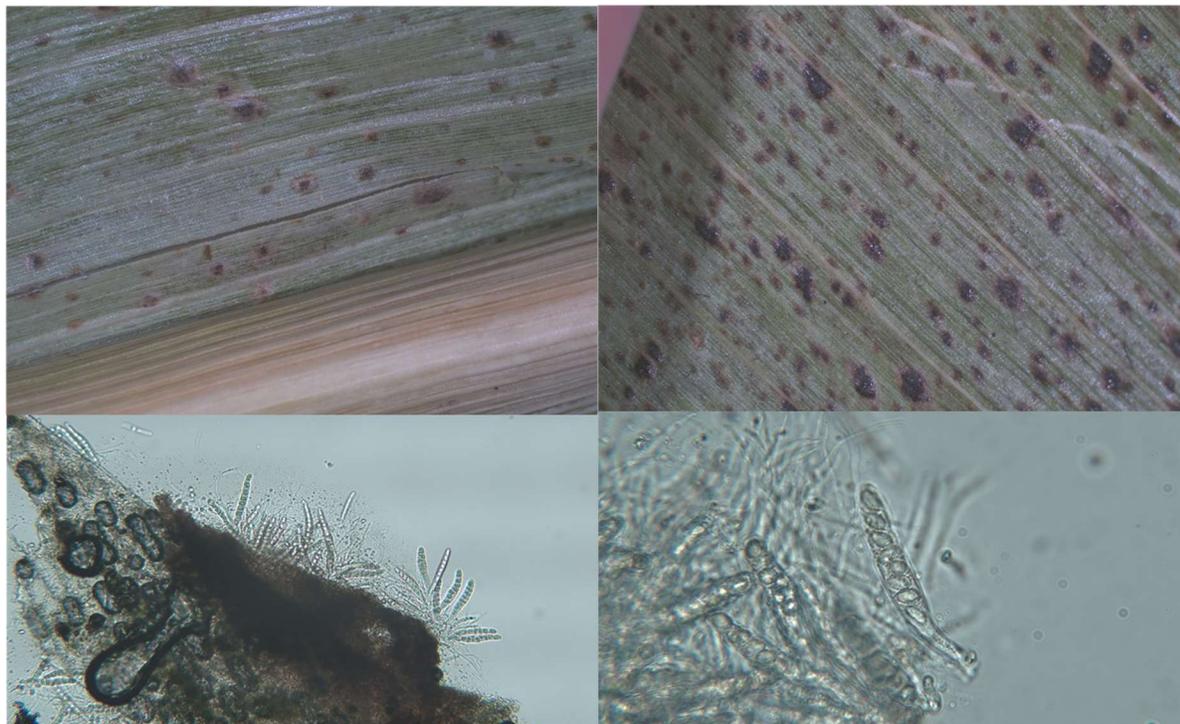
Regular and popular services:



New services implemented in 2022: vascular dieback is a new disease in Virginia and the US. See more on our disease alert page <http://bit.ly/3wla0ng>



Diagnostic Highlights



Corn Tar spot (*Phyllachora maydis*), 1st report in VA, in Shenandoah Co. Be on the look out for this disease mid- to late fall.

Resources

Not every plant problem requires a sample.

Some plant diseases have very characteristic symptoms or signs. Using a combination of your observation skills and the PDC's [Plant Problem Image Gallery](https://apps.cals.vt.edu/ppig/) (<https://apps.cals.vt.edu/ppig/>), one may be able to narrow down some suspects.

bit.ly/VTplantclinic



However, if a pesticide or other significant management tactic is warranted, it is advisable to have confirmation by the PDC, especially if the disease is a severe problem or to avoid a needless or inappropriate pesticide application. Timing of management tactics is critical in many cases, depending on the pathogen/pest.

Accurate diagnosis is foundational to implementing appropriate and best management practices. Since microorganisms cause plant diseases, it is advisable to obtain a diagnosis from a reputable plant diagnostic laboratory and not guess. With diagnostics comes great responsibility. Misdiagnosing a problem can impact our state's food and green industries and potentially lead to inappropriate and needless application of pesticides that negatively impact Virginia's ecosystem, non-target organisms and human health.

Not sure what to submit?

Digital submissions via your Extension office or email are a great place to start. This allows the PDC diagnostician to observe the problem in the nursery, landscape or field and advise on exactly what type of physical sample to submit, saving in shipping, and avoiding a resubmission. Refer to the [Guidance on Submitting a Good Digital Sample](https://bit.ly/3DoBvWE) (<https://bit.ly/3DoBvWE>) document, which details the range of images needed.

A digital submission is especially helpful for trees and turf/lawn, but is generally very useful for most samples. Keep in mind the fee for digital submission is the same as for a physical sample. A sample requested by the diagnostician after a digital sample submission has no additional charge.

The general guideline of the type of sample to submit can be found at the PDC site <https://bit.ly/VTplantclinic>. Contact the PDC if you are unsure of what type of sample to send.



Want to learn more about common diseases?

This handout (<https://bit.ly/3RgKSNQ>) has the most up to date resources from PDC and VCE.

bit.ly/3RgKSNQ

What the PDC cannot do: Test for nutrients in plant tissue (must use a private lab) or soil testing (goes to [Virginia Tech Soil Testing Lab, https://www.soiltest.vt.edu/](https://www.soiltest.vt.edu/)), test for chemical residue on plant tissues (must use a private lab), or recommend edibility of mushrooms or plants.