



UF/IFAS Plant Diagnostic Center 2023 Report

The Impact of “No Pathogen Found”

In addition to routine disease diagnostic service, the PDC offers several specialty services to clients, including [palm disease diagnosis](#), [SCMV testing in turf](#), [rapid turfgrass diagnostics for amenity turf](#), and phytosanitary testing for regulated organisms. During routine diagnostics, we average about **five diagnoses per sample**! One of those diagnoses might be “no pathogen found”, which can be great news for growers and plant professionals, since it means they don’t need to apply pesticides to manage a pathogen. **11% of general and 22% of rapid turf samples were “no pathogen found”** in 2023. Assuming the low estimate of \$1000 per amenity turf application and \$100 per application for everything else, a “no path found” diagnosis represents a **savings of over \$800,000 per year in pesticides**, not to mention **reduced exposure for applicators, citizens, and ecosystems**.

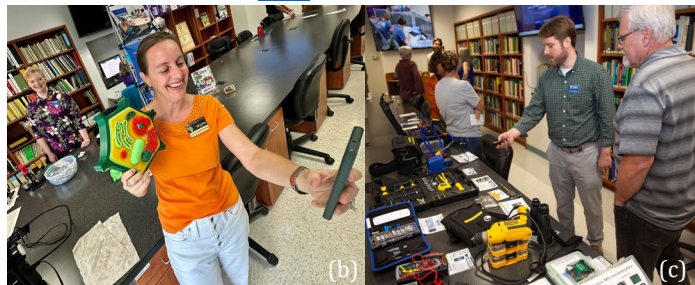
The PDC Receives Visit from USDA

The UF-IFAS Plant Diagnostic Center (PDC) welcomed Dr. Chavonda Jacobs-Young, the Under Secretary for Research, Education and Economics and the USDA’s Chief Scientist (a). PDC staff demonstrated how plant diagnostic labs play a vital role in crop protection and food security, as part of the USDA-NIFA funded [National Plant Diagnostic Network](#).



The PDC Celebrates 10 Years!

In the tenth year at our current building, the PDC hosted multiple events in 2023 as part of our outreach and education program. At our 10th Anniversary Celebration and Open House, PDC Director Carrie Harmon and guests took “cell-fies” (b) and explored the many unconventional ways UF’s Academic Research Consulting and Services (ARCS) and Marston’s Makery support science, including the lending library of tools (c). The event highlighted available technology and resources in our collaboration with UF’s multipurpose library. Learn more on our website [here](#).



The PDC hosted and visited with diagnosticians from the Washington Department of Agriculture as a part of the diagnostician exchange program, a capacity-building program funded by the National Plant Diagnostic Network ([NPDN](#)) (d).



The PDC hosted a group of international plant pathologists for the Universal Fungal Identification Tool (UFIT) Workshop (e). This USDA-NIFA funded event introduced new methods for plant pathogen detection identification by working with the Nanopore MinION mini sequencer. Learn more [here](#).

Samples

The PDC processed 2,560 samples in 2023.

Distribution

The PDC in Gainesville processed samples for clientele from 58 out of the 67 counties in Florida and 22 other states and territories in 2023 (Figure f). Our international diagnostic service received samples from Bahamas, Bermuda, Cayman Islands, Costa Rica, Dominican Republic, Singapore, and Thailand.

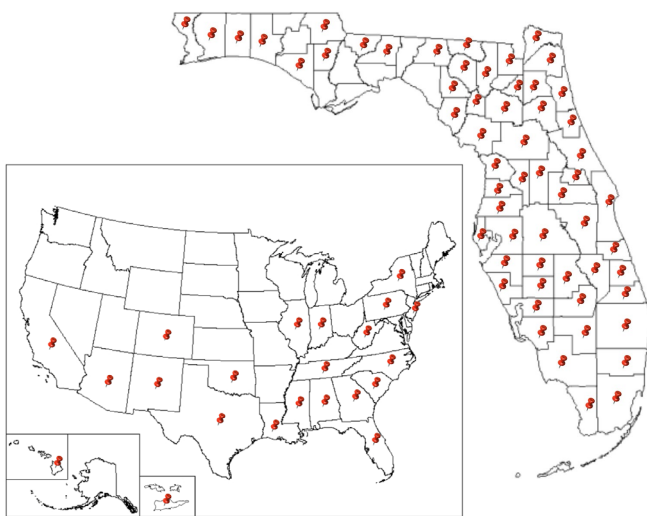


Figure f. Distribution of samples in 2023 by FL county and state.

Sample Submission

The PDC updated sample submission forms to be simplified and fillable for ease of use. Visit the [PDC website](#) to find general diagnostics, rapid turfgrass and crop specific (Palm and SCMV) sample forms. Detailed sample collection instructions are also available.

The [PDC services and prices list](#) has been updated and is available on the PDC website.

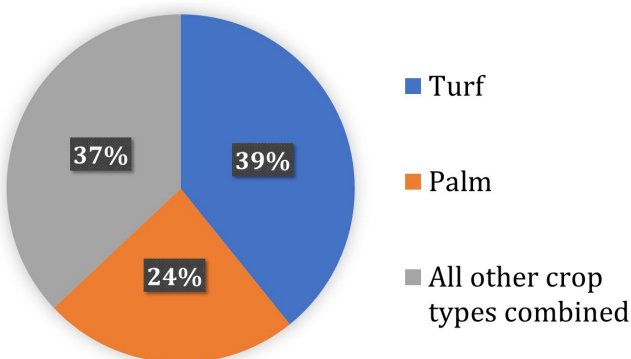


Figure g. Percent of 2023 Main PDC and RTDS samples by crop type.

Rapid Turf Diagnostic Service (RTDS)

Most RTDS samples continue to be Bermudagrass, making up 58% of samples in 2023. The four major diseases of turf were Take-all root rot (caused by *Gaeumannomyces graminis* var. *graminis*), Bipolaris leaf blotch, nematode damage, and leaf and sheath spot (caused by *Rhizoctonia zeae*) (Figure h).

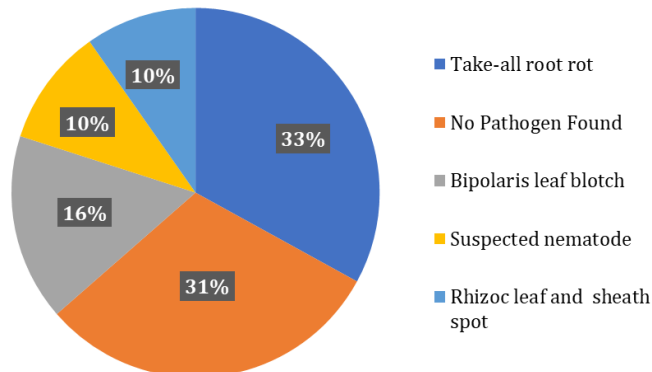


Figure h. Percent of 2023 RTDS samples by diagnosis.

Sugarcane Mosaic Virus (SCMV) in turfgrass

Mosaic and Lethal Viral Necrosis (LVN) diseases of St. Augustinegrass, caused by Sugarcane Mosaic Virus (SCMV), is an ongoing problem in Florida. The PDC confirmed the virus in Sarasota, a new county in 2023 (Figure i). UF-IFAS turf scientists are working to identify resistant turf varieties, since no pesticides can cure or stop the infection. Learn more about SCMV in Florida turfgrass [here](#).

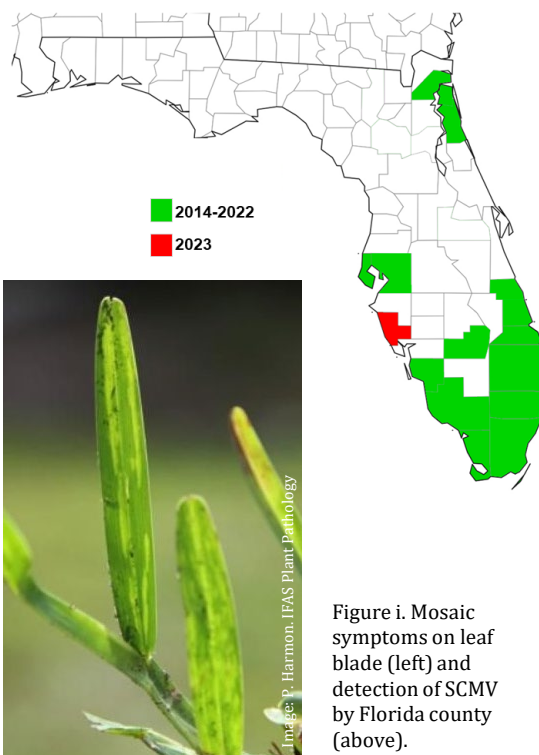


Figure i. Mosaic symptoms on leaf blade (left) and detection of SCMV by Florida county (above).