UF/IFAS Plant Diagnostic Center 2024 Report

January Visit from USDA-NIFA

The UF-IFAS Plant Diagnostic Center (PDC) welcomed Dr. Majit Misra, the Director of the USDA National Institute of Food and Agriculture (NIFA), along with Florida stakeholders. The PDC teaching library hosted a lunch for Florida stakeholders to meet with Dr. Misra (a).


(a)


(b)

During the visit with Dr. Misra and former UF colleague, Dr. Michelle Samuel-Foo, Dr. Carrie Harmon and PDC staff demonstrated plant diagnostic center operations and integration with the National Plant Diagnostic Network (NPDN)(b).

Outreach and Communication

Over the past year, the PDC has worked to better serve its clientele by redesigning its website, updating submission forms, and refining sample collection instructions. These improvements ensure more accurate diagnoses and efficient service. Visit the PDC website to find our lab information.

Improved communication with clientele has led to a noticeable decreased in samples labeled as "insufficient," making up only 1% of samples in 2024. Our goal is to minimize insufficient samples, allowing clients to receive accurate results promptly without the delays and extra effort of sending new samples.

Research

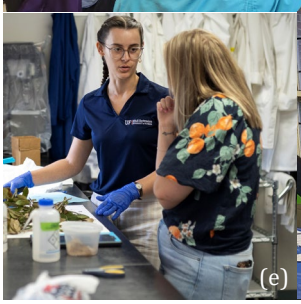
Dr. Carrie Harmon was honored with the UF/IFAS Large Grant Leadership Award in 2024 for securing over $1 million in grant funding (c). This achievement highlights the PDC's commitment to plant health research, enhanced diagnostics, and stakeholder support. As a part of strengthening lab resources and outreach, the PDC collaborated with the UF Engineering Department to discuss engineering of microfluidics for diagnostics.


(c)

Florida Diagnostician Outreach

As part of our outreach efforts, the PDC hosted 13 group tours and hands-on educational opportunities over the course of 2024, including Florida Master Gardener trainings (d, e) and educational events such as Plants Get Sick Too!, Scientist in Every Florida School, and STEM night in local elementary schools (f). Dr. Carrie Harmon's individual outreach efforts and guided tours of the PDC resulted in over 300 in-person interactions.


(d)


(e)

(f)

Hands-on training with Master Gardeners equips them with the knowledge and skills to better serve their communities through local plant clinics. These efforts enhance community access to reliable plant care information, promoting healthier landscapes and gardens across Florida.

Samples and Growing Demand

The PDC processed 3,152 samples in 2024. This was over 500 more samples in 2024 compared to 2023, often arriving in large batches at a time (g). Despite the number of samples in the center at any time, the PDC staff continues to ensure a range of clientele are well served by our many diagnostic services. Find our up-to-date list of services offered here.


(g)

A Leader in Florida Diagnostics

The PDC has shown its capacity for leadership, providing expertise and support for establishing new diagnostic labs across the state of Florida. Dr. Carrie Harmon serves as a key resource, offering guidance and supplies to institutions setting up lab facilities, such as the new Hastings Triage Lab (h, i).


(h) (i)

Additionally, the training of students and researchers at the PDC has had a nationwide impact, with former trainees going on to establish and manage plant diagnostic labs across the country.


(j)

This was demonstrated at the NPDN National Meeting, held in Portland, Maine in 2024 where diagnosticians who received training at the PDC and other UF colleagues gathered with professionals from across the U.S.(j).

Distribution

The PDC in Gainesville processed samples for clientele from 57 out of the 67 counties in Florida and 23 other states and territories in 2024 (Figure k). Our international diagnostic service received samples from Dominica, Dominican Republic, and Switzerland.

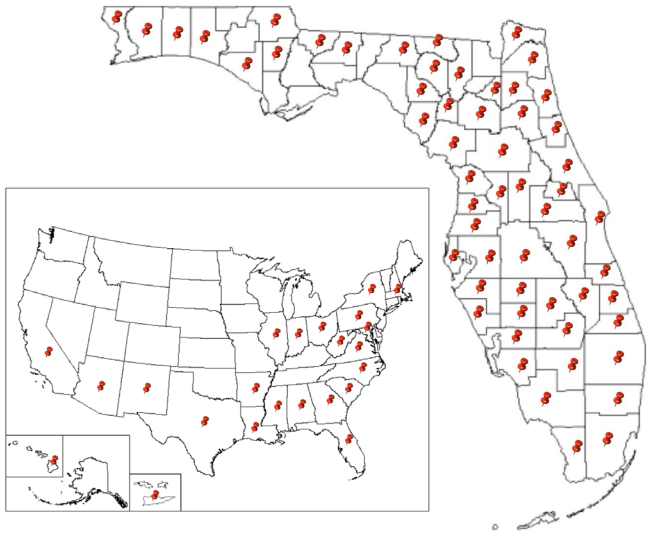


Figure k. Distribution of samples in 2024 by FL county and state.

Sample Submission

Turf and palms continue to represent the majority of PDC samples (Figure l). The number of turf and palm samples has steadily increased in recent years, accounting for over half of all samples for the first time in 2020 and rising to two-thirds by 2023. Compared to 2023, turf samples increased from 24% to 37% in 2024.

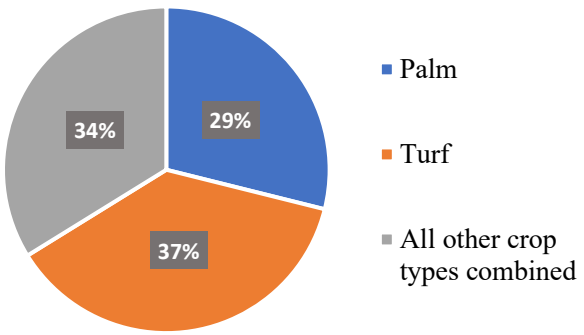


Figure l. Percent of 2024 Main PDC and RTDS samples by crop type.

Rapid Turf Diagnostic Service (RTDS)

Florida turf managers face high rates of turf problems in recent years, including take-all root rot (caused by *Gaeumannomyces graminis* var. *graminis*), Pythium blight, Bipolaris leaf blotch, nematode damage, leaf and sheath spot (caused by *Rhizoctonia zeae*), and Mosaic and Lethal Viral Necrosis (LVN) diseases of St. Augustinegrass, caused by Sugarcane Mosaic Virus (SCMV).

UF/IFAS Plant Diagnostic Center
2570 Hull Rd, Bldg 1291
Gainesville, FL 32611-0830 | Phone (352) 392-1795
Facebook.com/PlantDiagnosticCenter

FOR THE #GATORGOOD

SPDN SOUTHERN PLANT DIAGNOSTIC NETWORK

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