Department of Plant Pathology
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UNIVERSITY OF GEORGIA

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Submitting Samples to the UGA Plant Disease Clinics

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The University of Georgia Plant Disease Clinics are housed within the Department of Plant Pathology and include two plant diagnostic labs: one in Athens and one in Tifton. A Plant Molecular Diagnostic Lab (MDL) in Tifton and an Extension Nematology Lab in Athens are also part of the diagnostic services provided by the Department of Plant Pathology. Sample submission information for the Extension Nematology Lab can be found here: https://plantpath.caes.uga.edu/content/dam/caes-subsite/plant-pathology/extension-pdfs/NemaGuide%2001-2020.pdf. Information about the services and testing within the MDL can be found here: https://site.caes.uga.edu/mdl/. The labs provide diagnostic support for county Extension personnel and the residents of Georgia. In addition to providing diagnosis of plant problems and diseases, appropriate disease management recommendations are also provided. Our clients include Extension Educators, Growers, Retailers, Arborists, Golf Courses, Researchers, and Homeowners. The Plant Disease Clinics supports the county delivery system and works closely with the UGA Cooperative Extension County offices.

The first step in submitting a sample to the Plant Disease Clinics is to contact your county Extension office for assistance with your plant disease problem. UGA county extension office locations and contact information can be found here: https://extension.uga.edu/county-offices.html. If the county Extension office cannot provide an answer to the disease problem, the county office will often submit the sample to the appropriate plant disease clinic. **All samples sent to the clinics must be submitted through the county extension offices.**

Instructions for Submitting Samples

The UGA plant disease clinics use PClinic to track both physical and digital disease submissions. All county extension offices have one PClinic account for the office. Sample information should be entered into PClinic before shipping. Samples entered through the county extension office account are visible in the county sample dashboard, which can be used to track sample progress through the plant disease clinics, as well as archive completed samples and reports. Samples entered by the Plant Disease Clinic staff will not be visible in the county office sample dashboard. Sample diagnoses and recommendations will be returned as an email to the county office and ANR agent email addresses. Results will not be returned directly to the client unless requested by the ANR agent or county office.

All samples must be accompanied by either a Commercial or Homeowner **Plant Disease Clinic Submission Form** regardless of whether the sample information was entered into PClinic by the

county office. We must have the submission form. Fill out a submission form for each specimen. If submitting multiple hosts, then each host should have a submission form. All commercial samples should use the commercial plant disease submission form and all homeowner samples should use the homeowner plant disease submission form. The information on these forms is a valuable tool in the diagnostic process. Forms can be found on the clinic website at https://plantpath.caes.uga.edu/extension/plant-disease-clinics.html. Do NOT use the UGA Agricultural & Environmental Services Laboratory soil and plant tissue testing submission forms for Plant Disease Clinic samples. The two labs are separate and can result in sample processing delays and lost samples. Samples will not be processed in the plant disease clinics without a submission form. The Plant Disease Clinic only evaluates and identifies plant disease problems. If you have a plant, insect, or weed identification issues, then contact the appropriate Extension Specialist or Department for assistances. Do NOT submit these samples to the Plant Disease Clinic. The samples will not be processed or forwarded to other departments.

Preparation of Samples for Submission:

The ability to correctly diagnose plant diseases or disorders is only as good as the quality of the sample and the information provided on the disease submission form. Diagnosis of a sample that was improperly collected, packed, and/or shipped and arrives in poor shape is usually very difficult and often impossible. Samples determined to be too dry or too deteriorated for an accurate diagnosis will not be processed, and county offices/ANR Agent will be contacted to resubmit a fresh sample.

Place all disease samples in a sealed plastic bag. Place a DRY paper towel in the plastic bag to absorb any excess moisture. DO NOT ADD ANY MOISTURE to the bag, which can cause the sample to decay during shipment. Use boxes or padded envelopes for shipping to protect the sample. Fleshy fruit and vegetables should be wrapped separately in paper towels. If whole plants are shipped, enclose root balls in a plastic bag to keep the roots moist and to prevent contamination of the foliage. Try to ship samples early in the week (Monday-Wednesday) so the sample will arrive in the diagnostic lab by Thursday-Friday. It is better to refrigerate a sample over the weekend to ship on Monday than ship the sample on a Friday where it will sit in a truck or facility over the weekend. Keep all specimens as cool as possible, and do not allow specimens to dry out.

Plant Symptoms and Specimen Selection:

Wilting, yellowing or general decline of foliage often indicates a problem with the roots or the lower stems. A root problem can only be diagnosed from a root sample. Submission of only the yellowing or wilting foliage will result in a request for a sample containing roots. Ideally, send the entire plant (leaves, stems, roots). If the plant is too large to send, then remove some of the roots and place in a sealed plastic bag so they roots don't dry out. Collect plants or plant parts that have early disease symptoms. Carefully dig and remove the plant from the soil. DO NOT PULL THE PLANT UP as this will strip the roots and too many diseased roots will be lost. If whole plants cannot be submitted, images of the plants can be useful for diagnosing dieback issues.

Twig and Branch Blights and Cankers. Select specimens that show recent infection. Do not send completely dead stems. A diagnosis cannot be made from dead tissue. Include in the sample the junction between healthy and diseased tissues.

Foliage Diseases (spots, blights). Select leaves that have early or recent infections. Leaves still attached to small branches/stems are better than a few individual leaves. Do not send leaves picked up from the ground. Marginal leaf scorching symptoms usually indicate chemical injury or some type of root disorder (physiological, organic or chemical), in which case it may be necessary to include the roots.

Turf. Remove a section of turf approximately 6 to 12" square from the edge of the problem area so that the sample shows a range of disease symptoms. Include the intact roots with the underlying soil. Place in a plastic bag and seal. Dried out turf is very difficult to diagnose.

Fruit and Fleshy Plant Organs. Diseases of these structures require special attention. Never select a specimen that is exhibiting advanced stages of decay or disease. Select fresh specimens that exhibit early symptoms.

Shipping Samples:

The county extension office will ship the samples to the clinic. A $25.00 fee will be charged for disease diagnosis of any Georgia samples not approved by the county extension office of sample origin. If possible, ship specimens Monday, Tuesday, or Wednesday. Samples shipped on Thursdays and Fridays usually take longer to reach the Plant Disease Clinic resulting in possible specimen degradation that can make an accurate diagnosis very difficult. Specimens may be sent by regular mail, delivery service such as FedEx or UPS, or by State Courier. Samples that break down quickly should be shipped by express mail. Weekend deliveries are not accepted. It is advised that you place the specimen in a refrigerator over the weekend if necessary. Place prepared specimen in an appropriately sized box.

A $10 processing fee will be assessed to the client for all physical homeowner samples submitted to clinic. Homeowner samples include all categories of plants (trees, shrubs, vegetables, fruit, turf) that are not grown for profit. This fee should be submitted along with the shipment of the plant sample. The check should be made out to the "UGA Plant Disease Clinic." The Plant Disease Clinic will also invoice county offices for samples submitted without payment. Digital image diagnostics and commercial disease submissions are free, if submitted through the extension offices. Advanced testing using some of the more complicated molecular and serological methods will require additional fees if the test is requested for pathogen confirmation. Molecular testing will be conducted through the Plant Molecular Diagnostic Laboratory (MDL) in Tifton.

UGA Plant Disease Diagnostic Laboratories

Sample Type	Diagnostician/Contact	Shipping Address
Commercial ornamentals (nursery, greenhouse, landscapes, cut flowers), forestry, Christmas trees, legume and grass forages, turf, small grains, fruit (apples, peaches, strawberries, grapes), CEA, community gardens; all homeowner samples	Daniela Gutierrez Yanez Phone: 706-542-9157 Daniela.GutierrezYanez@uga.edu	UGA - Plant Pathology Athens Plant Disease Clinic 2405 Miller Plant Sciences Bldg. 120 Carlton Street Athens, GA 30602-7274
Commercial vegetables, row crops (cotton, peanut, soybean, corn, tobacco, etc.), southern GA fruit (blueberries, citrus, brambles), olives, pecans	Laxmi Pandey 229-848-2532 laxmi.pandey@uga.edu	UGA - Plant Pathology Dept. Tifton Plant Disease Clinic Room 116, 4604 Research Way Tifton, GA 31793
All samples for nematode analysis (check with nematode lab for instructions and fees)	Dr. Ganpati Jagdale 706-542-9144 gbjagdal@uga.edu	UGA - Plant Pathology Nematode Laboratory 2350 College Station Road Athens, GA 30602-4356
Molecular diagnostic samples, fungicide resistance assays	Dr. Alejandra Jimenez Madrid 229-386-3372 a.jimenez@uga.edu	Plant Molecular Diagnostic Lab 115 Coastal Way Tifton, GA 31794

Examples of Good and Bad Sample Submissions

Good with healthy & diseased tissues

Bad sample that is dried out and brittle

Good sample with a dry paper towel and plastic bag

Degraded sample sent in a moist paper towel and plastic bag

Good sample with entire root system packaged separately

Correctly packaged turf