

## **SUBMITTING SAMPLES TO THE UGA PLANT DISEASE CLINICS**

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The UGA Plant Disease Clinics provide diagnostic support for county Extension personnel and the residents of Georgia. Our services include analysis for plant disease or disorders as well as suggesting appropriate management strategies. Our clients include Extension Educators, Growers, Retailers, Arborists, Golf Courses, Researchers, and Homeowners. The Plant Disease Clinic works closely with the UGA Cooperative Extension county offices.

Contact your county office for assistance with your plant disease problem <http://extension.uga.edu/about/county> . 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 the Distance Diagnostics through Digital Imaging System (DDDI) to track both physical and digital disease submissions. All county extension offices have access to and should use the DDDI system to submit information on samples before shipping. DDDI is used by the clinics to track when samples are sent and when they arrive. Specialists use this system to return diagnoses and recommendations to county offices. The DDDI system is a valuable tool for tracking disease outbreaks from year to year.

Fill out a PLANT DISEASE INFORMATION FORM for each specimen. 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 <http://plantpath.caes.uga.edu/extension/clinic.html>.

The county extension office should have copies of these forms and the information will be entered into the DDDI system by the county extension office.

### **Taking Good Images for the DDDI System:**

Images can be submitted with physical samples or as just a digital submission through the DDDI system. Diseases and disorders are often influenced by conditions in the surrounding site. For dieback issues on woody plants, taking images is often vital since entire plants cannot be submitted.

Image submissions should include both close-ups of the problem and the entire plant including surrounding conditions. Images alone may not provide enough

information for confirmation of a disease and a follow-up physical sample may be needed, but images can be an important part of the diagnostic process.

### **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 sheet. Diagnosis of a sample that was improperly collected, packed, and/or shipped and arrives in poor shape is usually very difficult and often impossible.

Place diseased specimens in a plastic bag. DO NOT ADD ANY MOISTURE. Place a DRY paper towel in the plastic bag. This will absorb any excess moisture. Fleshy fruit and vegetables should be wrapped separately in paper towels. If whole plants are shipped, seal root balls in a plastic bag to keep the roots moist and to prevent contamination of the foliage. Mushrooms should be wrapped in newspaper and shipped overnight in a box; avoid using plastic bags. KEEP ALL SPECIMENS COOL. 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. If practical, send the entire plant (leaves, stems, roots). Collect plants or plant parts which have early disease symptoms. Dig up carefully. DO NOT PULL UP---many roots will be lost. If whole plants cannot be submitted, images of the plants can be useful for diagnosing die back issues.

**Twig and Branch Blights and Cankers.** Select specimens which show recent infection. Include healthy tissues connected to diseased tissues. The problem cannot be diagnosed from entirely dead samples.

**Foliage Diseases (spots, blights).** Select leaves which have early or recent infections. Leaves still attached in groups are better than a few individual leaves. Marginal leaf burn 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 which is exhibiting advanced stages of decay or disease. Select fresh specimens which exhibit early symptoms.

## Examples of Good and Bad Sample Submissions



**Good with healthy & diseased tissues**



**Bad sample 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**

## 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 which 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 which 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 appropriate sized box.

A \$10 processing fee is charged 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." 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 may require additional fees if the test is requested for pathogen confirmation.

<b>Plant Disease Clinics at the University of Georgia</b>		
<b>Sample Type</b>	<b>Diagnostician</b>	<b>Contact Address</b>
Commercial ornamentals, forestry, Christmas trees, legume forages, wood rots, commercial fruit, ornamental landscapes, turf, small grains; all homeowner, organic, community gardens	Ansuya Jogi Ph 706.542.8987 or 706-542-9157 Fax 706.542.4102 Ansuya@uga.edu	UGA - Plant Pathology Dept. Plant Disease Clinic Rm 2106 Miller Plant Sciences Bldg. Athens, GA 30602-7274
Tobacco, pecan, cotton, soybean, peanut, corn, kenaf, commercial vegetables	Jason Brock Ph 229.386.7495 Fax 229.386.7415 jbrock@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)	Ganpati Jagdale Ph 706.542.9144 Fax 706.542.5957 gbjagdal@uga.edu	UGA - Plant Pathology Nematode Laboratory 2350 College Station Road Athens, GA 30602-4356