THE UNIVERSITY OF GEORGIA
COOPERATIVE EXTENSION
Colleges of Agricultural and Environmental Sciences & Family and Consumer Sciences

HOMEOWNER PLANT DISEASE CLINIC REPORT

Holly Thornton, Homeowner IPM Specialist

Despite the recent rains throughout the state, the drought continues to loom over the state of Georgia. Both commercial and homeowner sample numbers are down at the Plant Disease Clinic in Athens. This is likely due to many factors related to the dry weather such as watering restrictions throughout the state (which may help prevent homeowners from drowning their plants), a decrease in sales at nurseries, and/or unfavorable conditions for disease development of most pathogens.

I am seeing the usual summer 'bad guys' like Take-all, chinch bugs, TSWV, and *Rhizoctonia* as the submission table will reflect below. Proper cultural care, avoidance, and purchasing and planting disease-resistant varieties are major factors in preventing the development and spread of these (and other) diseases.

Below you will find samples submitted for the past month listed by the county from which the sample was submitted and the diagnosis. For July, I have decided to discuss the infamous and always popular 'LSREP' diagnosis. Although I have tried not to use this acronym as a diagnosis, I will explain, in detail, what it means and how to avoid getting this in a homeowner diagnostic report. ENJOY!

JULY 2007 Homeowner Samples

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Baker	Fig	Fig Anthracnose	DDDI
Baldwin	Centipede	ETRI (Ectotrophic root-infecting fungi) and Cultural	Physical
Barrow	Centipede	No disease – Cultural	DDDI
Barrow	Centipede	Possible Fairy Ring (clamp connection fungi)	Physical
Bartow	Cactus – Cirrus	Sooty mold	Physical
Bartow	Japanese Maple	No disease – Insect damage	Physical
Bibb	Centipede	Cultural problems & *Rhizoctonia* root rot	Physical

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Carroll	White Clover – Durana	Unable to determine - possible black/sooty blotch	Both
Carroll	Dogwood – Pink	No disease – cultural	DDDI
Carroll	Monkey Face	No disease – Burn/scorch	DDDI
Chatham	Rose – Sun Flare	Root rot – *Armillaria* sp.	Physical
Cherokee	Black Currant	Environmental/cultural and minor spider mite	Both
Clarke	Helleborus	Downy mildew (*Peronospora* sp.) & Foliar nematode	Physical
Clarke	American Beech	Heart/butt rot and/or slime flux	DDDI
Clarke	Holly – Steeds	Root rots – Black root rot (*Thielaviopsis basicola*), *Rhizoctonia*, *Pythium* and improper planting/care	Physical
Coweta	Centipede	No disease	Physical
Coweta	Oak Leaf Hydrangea	No disease	Physical
Coweta	St. Augustine	Chinch bugs	Physical
Coweta	St. Augustine – Bitter Blue	Root Rots – *Rhizoctonia* & *Pythium*	Physical
Crisp	Begonia	Root rot – *Pythium*	DDDI
Dade	Yew	Possible drought stress or canker on lower stem	DDDI
DeKalb	Emerald Green Arborvitae	No disease on foliage	Both
Dougherty	Japanese Maple	No disease – Cultural stress – inconsistent watering	DDDI
Dougherty	Tomato	TSWV – Tomato Spotted Wilt Virus	DDDI
Dougherty	St. Augustine	Unable to determine	DDDI
Fannin	Aucuba	No disease – Drought stress/environmental	DDDI
Fayette	St. Augustine	Take all root rot (*Gaeumannomyces graminis*) and Chinch bug	Physical
Fayette	Zoysia – Emerald	ETRI (Ectotrophic root-infecting fungi) and Cultural	Physical
Fayette	Conifer	Possible drought or lower stem/root problem	DDDI
Fayette	Bouganvilla	No disease – Burn	DDDI
Fayette	Centipede	Possible Fairy ring (clamp connection fungi)	Physical

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Fulton	Leyland Cypress	No disease – site problem	Both
Gordon	Silver Queen Sweet Corn	No disease	Physical
Grady	Blackberry	Cane Blotch (*Cephaleuros virescens*)	Physical
Gwinnett	Tomato cv. Beefsteak	TSWV – Tomato Spotted Wilt Virus	Physical
Gwinnett	Tomato	Unable to determine	DDDI
Gwinnett	Hybrid Bermuda	Take all root rot (*G. graminis*)	Physical
Gwinnett	Tomato cv. Rutgers	Physical damage & TSWV	Physical
Gwinnett	Tomato	Wilt (Possible *Fusarium*)	DDDI
Gwinnett	Liriope – Big Blue	Fusarium crown rot (*Fusarium* sp.) and Anthracnose (*Colletotrichum* sp.)	Physical
Gwinnett	Juniper – Shore	No disease	Physical
Gwinnett	Tomato – Big Boy	TSWV – Tomato Spotted Wilt Virus	DDDI
Gwinnett	Eggplant	Possible Virus?	DDDI
Gwinnett	White Oak	Leaf spot	DDDI
Harris	Crape Myrtle	Sooty mold & spider mite	DDDI
Jackson	Tomato cv. Rutgers	Possible herbicide or environmental damage	Physical
Jackson	Bermuda – Tif 419	No disease	Physical
Jackson	Fescue	Brown patch (*Rhizoctonia*) and ETRI (Ectotrophic root-infecting fungi)	Physical
Jenkins	Bradford Pear	Possible Herbicide damage or scorch	DDDI
Jeff Davis	Centipede	Take all root rot (*G. graminis*) and Gray Leaf Spot (*Pyricularia grisea*)	Physical
Jefferson	Tomato cv. BHN 444	TSWV – Tomato Spotted Wilt Virus	DDDI
Lee	Zinnia	TSWV– Tomato Spotted Wilt Virus	Both
Lumpkin	Red Maple	Nutrient Toxicity – Boron?	DDDI
Macon	Thuja Green Giant	Unable to determine (canker or drought)	DDDI
Madison	Bean	No disease – Heat/environmental stress	Physical

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Monroe	St. Augustine	Take all root rot (*G. graminis*)	Both
Monroe	Tomato	TSWV – Tomato Spotted Wilt Virus	Both
Morgan	English Boxwoods	Possible Boxwood decline & Scale insect infestation	Both
Oconee	Iron Clay Peas	Stem rot – *Rhizoctonia* & *Pythium*	Physical
Paulding	Bermuda Hybrid Turf	Possible Brown Patch (*Rhizoctonia*)	DDDI
Pierce	St. Augustine	Take all root rot (*G. graminis*)	Physical
Pierce	St. Augustine	Take all root rot (*G. graminis*)	Physical
Randolph	Tomato	Sunscald & *Alternaria* (secondary)	DDDI
Schley	Holly – Dwarf Yaupon	Cultural or Root rot	DDDI
Schley	Zoysia – Meyer	Possible Take all root rot (*G. graminis*)	DDDI
Union	Juniper	No disease	Physical
Walker	Tomato	Bacterial Spot	DDDI
Walton	Camellia sasanqua – Apple Blossom	No disease (only leaves submitted)	Physical
Ware	Grass	Too dry to determine	Physical
Whitfield	Tomato (various varieties)	TSWV – Tomato Spotted Wilt Virus	DDDI
NA	Tomato cv. Marglobe	No disease – Possible burn (insufficient sample)	Physical
Total Samples (mid-June to mid-July) = 72			

LSREP

- **What does the acronym LSREP stand for?**
  Lower Stem Root or Environmental Problem

- **What does this mean?**
  Oftentimes, we receive samples from diseased and/or dying plants which show no signs of disease. This does not indicate the plant is disease-free but it does indicate that the plant tissue submitted to the clinic is disease free. This also indicates that the problem is likely to originate lower in the plant – in areas such as the lower stem, crown, and/or root system.
  There is also the possibility that the plant is not diseased or disease did not cause the problem initially, and the problem is an environmental or horticultural issue,

such as cold damage, herbicide damage, mechanical damage, improper care or maintenance, over-watering, etc.


English Boxwood
Photo: Bobby Smith


Oakleaf Hydrangea
Photo: Stephanie Ray

The images above are all GREAT pictures sent to me by county agents (some of them were actually sent as physical samples as well). I love receiving such quality images that I can add to my image library.

Unfortunately, sometimes the problem and/or disease organism is not present or apparent on the tissue or image submitted. If not, another sample will likely be requested, and an LSREP answer is oftentimes given. I have tried to avoid giving the 'LSREP' diagnosis because I know the reputation it has with the agents. There are ways to avoid getting this response…

Symptoms indicative of a lower stem, crown, or root problem (remember there are always exceptions to the rule) are:

- Yellowing foliage
- Wilting foliage
- Necrotic foliage
- Slowed plant growth
- Dieback of branches
- Leaf drop
- Plant death

I know many times agents are aware that the problem is not on the plant tissue brought in by the homeowner, but the homeowner INSISTS on sending the sample anyway. In those particular cases, send it anyway but inform them there is a $10 processing fee.

- **What to do with this diagnosis?**
  If the branch of an oak tree is submitted and the description of the problem is dieback and death of multiple branches, you will likely receive a diagnosis of LSREP or something similar (the problem is originating lower in the tree – possibly a root issue). This is great information for the homeowner! It informs them where to look next – the lower crown may have been damaged or there may be a girdling root or the tree may be infected with a fungal wood rot or some sort of bacterial organism (known as Wetwood). Although it is not a concrete answer like *Seiridium* canker or black root rot, it helps homeowners know where to look next.

- **If the above symptoms are present, what type of sample should be collected and shipped to the Homeowner IPM Plant Disease Clinic?**
  It is always best to send extra symptomatic plant material. Send symptomatic leaves (NOT DEAD) and the lower stem/crown and root material, if possible. Obviously, it would be impossible to send roots of a 40 year old Oak tree. In cases where sending that type of material is not plausible, send images of the plant in the landscape. This will guide us during the diagnostic process and will give clues to what may be causing the problem. In these cases, a picture really is worth a thousand words…

- **How do I ship the sample?**
  It is always best to separate any plant material from soil & root material. If possible, place the root and surrounding soil into a Ziploc bag or some other sort of sealable bag. Place the foliage in a separate Ziploc/sealable bag. In most cases, do NOT place a WET paper towel in the bag with the sample. This can cause additional decay and excessive fungal growth. A DRY PAPER TOWEL IS BEST. It will absorb any additional moisture from the plant tissue/soil.
    - Place the sample(s) in an appropriate size box.
    - Enter the sample/homeowner information into the DDDI system.
    - Print the form.
    - Include the $10 check for the processing fee.
    - Place in an envelope (optional – but helps keep the sheet & check dry).
    - Ship to: 2106 Miller Plant Sciences Bldg., Athens, GA 30602.

As always, additional questions or concerns can be addressed by calling or emailing me.