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

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HOMEOWNER PLANT DISEASE CLINIC REPORT

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Cooler temperatures are generally associated with decreased homeowner plant sample submission. Typically, the homeowner IPM diagnostic clinic averages around 29 samples for the month of November, so far for 2007 we have processed 10 plant samples. The cooler weather restricts many homeowners from gardening and working in their yards. Therefore, plant problems may either go unnoticed or simply not occur. The extremely dry weather this year is an additional limiting factor for establishment and spread of various plant disease organisms.

The Disease of the Month for November is **downy mildew on rose**. The table of homeowner plant samples processed by the diagnostic clinic is shown below.

NOVEMBER 2007 Homeowner Samples

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Bibb	Zoysia	Cultural (compacted, clay soils) & root rot (*Gaeumannomcyes graminis* and *Pythium* sp.)	Physical
Bibb	Centipede	Take all root rot (*G. graminis*)	Physical
Bibb	Centipede	Take all root rot (*G. graminis*)	Physical
Bryan	Centipede	No disease – herbicide burn/damage	Physical
Camden	Knockout rose	Unable to determine	DDDI
Camden	Centipede	Take all root rot (*G. graminis*)	Both
Clarke	Persimmon	Leaf spot (*Cercospora* sp.)	Physical
Cobb	Emerald Zoysia	No disease	Both
Cobb	Mushroom	False truffle (*Rhizopogon* sp.)	Both
Dougherty	Ivy	Root rot (*Phytophthora* sp.)	Physical
Dougherty	St. Augustine	Take all root rot (*G. graminis*)	Physical
Douglas	St. Augustine	Take all root rot (*G. graminis*) and heavy thatch	Physical
Echols	Cherry & Plum	Shot hole (*Blumeriella jaapii*)	Physical

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Echols	Apple	Frogeye leaf spot (*Botryosphaeria* sp.)	Physical
Fayette	Bermuda grass	Possible Large Patch or Take-all root rot	DDDI
Forsyth	Rhododendron	Possible root rot	DDDI
Grady	Banana shrub	Scale insects	DDDI
Gwinnett	Boxwood	No disease – appears to be drought stress	DDDI
Gwinnett	Mushroom	Weeping conk (*Inonotus dryadeus*)	DDDI
Lee	Cruciferous vegetables	Possible damping off or basal stem rot (*Pythium* sp. or *Rhizoctonia solani*)	DDDI
Lincoln	St. Augustine & Centipede	Take all root rot (*G. graminis*) and Large patch (*Rhizoctonia solani*)	Physical
Lumpkin	Oak	Possible Bacterial Wetwood	DDDI
Monroe	Cruciferous vegetables	Root rot on turnips (*Rhizoctonia solani*); fertilizer burn on collards	Physical
Newton	St. Augustine	Possible beginning of Take all root rot infection (*G. graminis*)	DDDI
Pierce	St. Augustine	Take all root rot (*G. graminis*)	Physical
Rockdale	Centipede	Large patch (*R. solani*) and Take all root rot (*G. graminis*)	Physical
Stephen	Fescue	Unable to determine	DDDI
Thomas	Camellia	Algal leaf spot (*Cephaleuros virescens*)	DDDI
Thomas	Dogwoods	Compounded stresses (including drought, mechanical damage, leaf spots)	DDDI
Ware	Centipede	Take all root rot (*G. graminis*)	Physical
Ware	St. Augustine	Take all root rot (*G. graminis*)	Physical
Ware	Centipede	Take all root rot (*G. graminis*)	Physical
Total Samples (late-October to late-November) = 32			

DOWNY MILDEW ON ROSE

Causal agent: *Peronospora sparsa*

Pathogen group: Oomycete (related to *Pythium* and *Phytophthora* “water-mold” pathogens)

Symptoms:

- Disease is primarily a foliage blight attacking leaves and stems.
- Most obvious symptoms are:
  - Irregular, angular, purplish-red to dark brown spots on upper surface of the leaves (sometimes spots are almost black and people confuse the spots/symptoms with the Blackspot of rose caused by *Diplocarpon rosae*);
  - Yellowing of surrounding leaf tissues during advanced stages of infection.
- Defoliation can occur under high disease pressure.
- Spots and purplish lesions can form on canes and kill twigs.

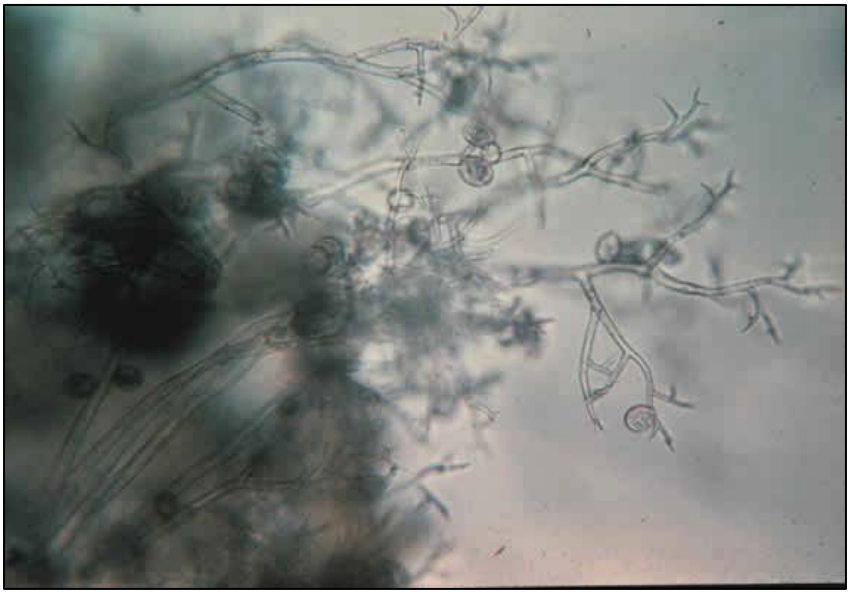
Signs:

- Grayish spore masses can sometimes be seen on the undersides of the leaves during wet, humid conditions in early morning hours (this contrasts with the common disease, Powdery mildew, which produces large amounts of conidia and mycelia on both upper and lower leaf surfaces).

Downy mildew on roses can be difficult to diagnose. Symptoms are often mistaken for environmental and/or nutrient stress or chemical injury. The production of the grayish spores is usually limited or ‘sparse’ (hence the species name *sparsa*) and often times, this pathogen is overlooked.

Disease development:

- Pathogen overwinters in or on infected plant parts – canes and leaves – as oospores.
- Under cool, humid environmental conditions (50-75 degrees F; 85% humidity), the pathogen will sporulate and infect new plant tissue (see microscopic image of spores above).
- Wind and splashing water (rain or overhead irrigation) assist in spreading the pathogen's spores to other plant parts.
- The disease is slowed by warmer temperatures (~85 degrees F) – the pathogen is still active, but it grows much slower.



Management:

- Increase air circulation by pruning, which decreases humidity.
- Avoid overhead irrigation.
- Scouting (for leaf spots and fuzzy growth on undersides of leaves)
- SANITATION – remove diseased, dead, or dying plant tissue.
- Chemical control is difficult. Mancozeb fungicides provide good preventative control. Coppers are less effective. Phosphonate fungicides available in some garden centers provide systemic protection. Often within home landscapes, downy mildew is a minor problem unless the plants are hit by overhead sprinkler irrigation.

Downy Mildew (*Peronospora sparsa*)	**Blackspot (*Diplocarpon rosae*)**
Angular leaf spots (follows leaf veins) – usually purplish-red	Black and yellow round spots – cross leaf veins
Defoliation common – often newer, younger leaves affected first.	Defoliation common – often older leaves affected first.
Cooler temperatures and high humidity	Appears anytime
Not easily managed with chemicals	Chemicals effectively manage the disease if it is detected early and applied regularly.
	

Reference:

- Compendium of Rose Diseases. 1983. St. Paul, MN: APS Press.
- Images with a UGA-number label – www.invasive.org.