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PP-560

**DECEMBER PLANT DISEASES FROM THE AUBURN
PLANT DIAGNOSTIC LAB**

**DECEMBER PLANT DISEASES FROM THE BIRMINGHAM
PLANT DIAGNOSTIC LAB**

DISEASE POSSIBILITIES FOR JANUARY

PLANT DIAGNOSTIC LAB ANNUAL REPORT

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Auburn Plant Disease Report-December (J. Mullen)

As usual, December was a relatively quiet month with respect to plant samples received; 26 plant samples were received.

Diseases seen in December included sooty blotch on citrus; anthracnose, Fusarium, and Phomopsis leaf spots/blotches on Boston fern; and Phytophthora root rot on juniper; Bipolaris seedling disease and seed rot of bermuda; bacterial leaf spot of flowering cherry; anthracnose on lavender; Cercospora leaf spot on oleander; and Pythium blight on bentgrass. Also, we saw severe damage on oats caused by crown rust in Houston County.

I am told (A. Hagan) that December is relatively early to see this rust disease of oats being so severe. In November we received red maple, holly, and live oak, and southern magnolia which all showed trunk cankers. Culture work on all except the magnolia produced Botryosphaeria fungal isolates. We suspect the magnolia canker may also be a Botryosphaeria problem.

The sooty blotch on citrus fruit was very similar to the sooty blotch (*Gloeodes* sp.) we often see on apple. It is a superficial fungal growth that appears as though someone left a sooty thumb print on the fruit surface. Sanitation will help control spread of this fungus.

The brown leaf spots/blotches on the fern were associated with the three fungi, *Colletotrichum*, *Fusarium*, and *Phomopsis*. Some root damage was also present but culture work did not indicate a root disease. Root abiotic stress damage may have caused an increase in foliage susceptibility to disease.

The juniper showed foliage yellowing on inner and lower branches. Root decay produced a *Phytophthora* isolate in culture. Damaged junipers should be removed. Watering practices should be examined and reduced if appropriate. In greenhouse/nursery situations, a protective fungicide drench treatments should be applied (See ANR-1173 or check the web site <http://www.aces.edu/pubs/docs/A/ANR-1173/ANR-1173.pdf>).

Table 1. 2003 December Plant Diseases Seen In The Plant Diagnostic Lab at Auburn.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Bermuda, Tifgreen	<i>Bipolaris sorokiniana</i> Seedling Disease & Seed Rot	Montgomery
Cherry, Flowering	Bacterial Leaf Spot	Bullock
Citrus	Sooty Blotch (<i>Gloeodes</i> sp.)	Colbert
Fern, Boston	<i>Anthracnose</i> (<i>Colletotrichum</i> sp.)	Jackson
	<i>Fusarium</i> Leaf Spot	Jackson
	<i>Phomopsis</i> Leaf Spot	Jackson
Juniper	<i>Pestalotia</i> Blight	Montgomery
	<i>Phytophthora</i> Root Rot	Cullman
Lavender	<i>Anthracnose</i> Leaf & Stem Spots	*
Oats	Rust (<i>Puccinia coronata</i>)	Houston
Oleander	<i>Cercospora</i> Leaf Spot	Montgomery
Privet	Sooty Mold	Montgomery
Bentgrass	<i>Pythium</i> Blight	GA

*Counties are not reported for samples from commercial greenhouse and nursery operations.

Birmingham Plant Disease Report-December (J. Jacobi)

The lab received a total of 11 samples during the month of December. The most common problem seen last month was fungal canker diseases of woody ornamentals. For more information on canker diseases of Leyland Cypress see ANR-1160 (<http://www.aces.edu/pubs/docs/A/ANR-1160.pdf>.) General information on the identification and control of several other dieback and canker diseases can be found at the following web site (<http://www.ipm.uiuc.edu/diseases/series600/rpd636/>).

Pansy root and soil problems were the other main problems seen last month. Above ground symptoms of Black and Pythium root rot are similar. One of the first above ground symptoms is yellowing of the lower leaves. Root symptoms are different for each disease, but typically require laboratory study for exact diagnosis. For a complete description of both diseases including control recommendations see ANR-1214, Diseases of Pansy and Their Control (<http://www.aces.edu/pubs/docs/A/ANR-1214/ANR-1214.pdf>).

Table 2. 2003 December Problems Seen in the Birmingham Plant Diagnostic Lab.

<u>Plant</u>	<u>Problem</u>	<u>County</u>
Azalea	Phomopsis Canker	Jefferson
Cypress, Leyland	Bagworms	Jefferson
	Botryosphaeria Canker	Jefferson
Gardenia	Citrus Whiteflies	Jefferson
Lily, Easter	Pythium Root Rot	Jefferson
Pansy	Black Root Rot (<i>Thielaviopsis</i>)	Jefferson
	Iron Chlorosis (High Soil pH)	Jefferson
	Pythium Root Rot	Jefferson
Wax Myrtle	Botryosphaeria Dieback	Jefferson

Disease Possibilities For January

In January, we may see rust diseases and barley yellow dwarf virus show up on oats, wheat and related small grains. In the southern sections of the state, fungal and bacterial diseases of vegetables (especially crucifers) and brown patch on turf grasses may be problems. Pythium blight/root rot may occur on cool-season grasses; this is mostly a problem on golf course areas. Black root rot (*Thielaviopsis basicola*) may occur on pansies and container hollies. Botrytis is a common problem on greenhouse crops.

In November, December, and early January we have seen a greenhouse tomatoes with target spot, a disease caused by the fungus *Corynespora cassiicola*. This has not been a common problem on tomatoes in Alabama. On leaves, the spotting begins as small, pinpoint, water-soaked, irregular spots on upper leaf surfaces. Spots may resemble bacterial leaf spots. Brown spots increase in size and become circular with yellow halos. Spots may coalesce and cause large areas of leaves to turn brown. Dead leaves will stay attached to the plant. Stem and petiole lesions develop as brown elongate cankers that may girdle the stems/petioles and then leaflets will collapse. Fruit infections may first appear as dark, sunken, pinpoint, brown spots. Spots may develop into large sunken areas (craters). Ripe fruit develops large, circular, sunken areas with brown moldy centers or pale brown-colored centers that often crack. Disease development requires long periods (16-44 hrs) of wet conditions. Sanitation and protective fungicide treatments are usually recommended for control of this disease. *C. cassiicola* has a large host range which includes pepper, watermelon, cucumber, melons, soybean, sweet potato, field pea, English pea, and many ornamentals.

The list below includes some common disease problems received in the lab in January of the past few years. Comments on control practices are brief. Refer to appropriate fact sheets, timely informations, and 2003 Alabama Pest Management Handbook.

Table 3. Disease Descriptions and Brief Control Comments on Some Common Diseases Often Seen in January.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Alfalfa	Sclerotinia Blight	Plants unthrifty, yellow and die. Shiny, black, irregular resting structures (1-2 mm diam) some-times present on roots and lower stems at the soil line.	Crop rotation.
African Violet	Pythium Root Rot	Roots become brown and wet-rotted.	Sanitation and reduce watering practices.

<u>Plant</u>	<u>Disease</u>		<u>Description</u>	<u>Control</u>
Azalea	Cercospora Spot	Leaf	Medium brown circular-irregular leaf spots (about ¼ inch diam.)	See the AL Pest Management Handbook; Sanitation.
Basil	Botrytis Cutting Rot		Cutting ends become brown and decayed.	Sanitation; increase air circulation and temperature.
Bentgrass	Brown Patch (<i>Rhizoctonia</i>)		Foliage blight in circles or areas of a few inches to a few feet diameter.	See the AL Pest Management Handbook or ANR-342.
	Pythium Blight (Root Rot)		Irregular areas become yellowed and eventually grass dies. The disease may develop rapidly if wet conditions with mild temperatures occur.	See the AL Pest Management Handbook or ANR-594.
	Rhizoctonia Rot	Stem	Stems become brown decayed, and shriveled.	Sanitation.
Bermuda	Brown Patch (<i>Rhizoctonia</i>)		Foliage blight in circles or areas of a few inches to a few feet diameter.	See the AL Pest Management Handbook or ANR-342.
Broccoli	Downy Mildew		Yellow irregular spots on leaves.	Sanitation. See the AL Pest Management Handbook.
Cabbage	<i>Alternaria brassicicola</i> Spot	Leaf	Gray circular, oval or irregular leaf spots.	See the AL Pest Management Handbook.
	Botrytis Damping-Off		Seedlings collapse as a result of soil-line decay.	See Ed Sikora.
Camellia	Anthracnose (<i>Colletotrichum</i>)		Circular-irregular brown-gray spots on leaves.	Sanitation. Cleary's 3336.

<u>Plant</u>		<u>Disease</u>		<u>Description</u>	<u>Control</u>
Camellia, Sasanqua		Edema		Pale yellow leaf spots on upper leaf surfaces; corky, light brown scabby spots on lower leaf surfaces.	Reduce soil water content; especially a problem during cloudy weather.
Centipede		Slime Mold (<i>Physarum</i>)		Thin, often ruffled, sheets of jello-like consistently on grass blades and soil; spores cover the grass/soil with a powdery, dusty coating.	No control needed; physical removal.
		Brown Patch (<i>Rhizoctonia</i>)		Foliage blight in circles or areas of a few inches to a few feet diameter.	See the AL Pest Management Handbook or ANR-342.
Cherry Carolina	Laurel,	Cercospora Spot	Leaf	Irregular-circular brown leaf spots.	Sanitation; Cleary's 3336 or Halt protective sprays.
Coleus		Botrytis Blight		Leaf spots and blotches that are gray-brown.	Sanitation; increase air circulation; increase temperature.
		Pythium Root Rot		Foliage wilt, yellowing, collapse; roots become light brown, watersoaked.	Sanitation; reduce water levels in soil.
Cryptomeria, Japanese		Phyllosticta Blight	Needle	Brown needle spots develop.	Sanitation of fallen needles; protective spray of Cleary's 3336 or Halt may help.
Collards		Black Rot (<i>Xanthomonas</i>)		Black V-shaped lesions may develop at leaf edges. Veins leading away from lesions may become dark. Eventually the central core of the stem becomes black & decayed.	Sanitation; rotate away from crucifers for 2 years.
<u>Plant</u>		<u>Disease</u>		<u>Description</u>	<u>Control</u>
		Oedema		Small, buff, brown	colored, corky,

slightly raised dots form on the lower leaf surfaces. Corresponding spots on upper leaf surfaces become yellowed.	Reduce irrigation practices on cloudy days.		
	Pythium Root Rot	Roots become soft, brown and rotted. The outer root tissues will easily pull away from the central stele or core.	Plant the crop where good drainage exists. Crop rotation.
Euonymus, Winged	Phytophthora Root Rot and Poor Soil Drainage	Dieback; yellowing of lower foliage; root decay.	Improve soil drainage; reduce watering schedule if appropriate; see AL Pest Management Handbook.
Fern	Botrytis Blight	Brown discoloration of fronds and a gray fungal growth when conditions are cool and damp.	Daconil is labelled for use on fern and it will control Botrytis.
	Rhizoctonia Aerial Blight	Brown irregular lesions on fronds.	Sanitation. See the AL Pest Management Handbook.
Fescue	Bipolaris Leaf Spot	Small, brown, or reddish-brown elongated spots (1-6 mm long) on leaf blades.	--
	Rust (<i>Puccinia</i>)	Small, red-orange, powdery spots and blotches form on leaf blades. Leaves turn yellow and brown.	---
	Pythium Crown & Root Rot	See Bentgrass.	See the AL Pest Management Handbook or ANR-594.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Fescue, Tall	Net Blotch (<i>Drechslera</i>)	Small, often elongated, medium-brown or reddish-brown spots (1-2 mm	long). Usually spots are abundantly scattered over leaf blades.

See	AL	Pest	Management	Handbook.	
			Pythium Blight	See Bentgrass.	See the AL Pest Management Handbook. or ANR-594.
Foliage Plants			Bacterial Leaf Spot	Small, angular, black, water-soaked spots (1-3 or more mm diam) on foliage. As spots age, centers become dry, papery and may fall apart. Some centers may become light in color. Spots may be surrounded by yellow "halo".	Sanitation. See AL Pest Management Handbook.
Fuchsia			Botrytis Blight	Brown-gray spots/blight.	Sanitation. Cleary's 3336.
Geranium			Bacterial Leaf Spot (<i>Pseudomonas</i>)	See Foliage Plant Description.	Sanitation. See AL Pest Management Handbook.
			Fusarium Stem & Root Rot	Lower stem and roots become black colored with a dry decay.	Sanitation. Cleary's protective drenches/sprays will help.
			Oedema	Small (1/8 inch diam. or less), light brown, corky slightly raised spots scattered over lower leaf surfaces. Corresponding areas on upper leaf surfaces are yellowed spots.	Reduce watering on cool, cloudy days.
<u>Plant</u>			<u>Disease</u>	<u>Description</u>	<u>Control</u>
			Pythium Stem and Root Rot	Black cankers (rotting) of lower stem, crown and roots.	Sanitation. See the AL Pest Management Handbook.
Gerbera Daisy			Bacterial Leaf Spot (<i>Pseudomonas</i>)	See Foliage Plants.	See Foliage Plants.

Greenhouse Crops	Botrytis Blight	Gray-brown spots and blotches on the foliage. During moist, cool conditions, this fungus will produce a delicate gray web of fungal growth.	See AL Pest Management Handbook; Sanitation.
	Downy Mildew (<i>Peronospora</i>)	Faded, yellow blotches on upper leaf surfaces. Lower leaf surfaces showed gray-purple, powdery masses of fungal growth.	Reduce humidity; raise temperatures; refer to the AL Pest Management Handbook.
Greenhouse & Nursery Crops	Pythium/Phytophthora Root Rot	Root tissues become brown and water-soaked. Foliage shows yellowing, wilt and/or dieback.	See AL Pest Management Handbook; sanitation; reduce watering schedules.
Holly, Hellebore	Thielaviopsis Root Rot	Black spots and areas on roots and root tips; foliage yellows, wilts, and/or shows dieback.	Sanitation; Cleary's 3336, Domain drenches may help as a preventative measure. See the AL Pest Management Handbook.
Hydrangea	Powdery Mildew	White powdery dusting on leaves and shoots; dieback; blight.	See the AL Pest Management Handbook.
Indian Hawthorn	Colletotrichum Leaf Spot	Brown circular leaf spots.	Sanitation of fallen leaves. Protective sprays of Cleary's 3336 or Halt.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Irish Potato	Fusarium Rot	Dark brown, soft rot of inner tuber tissue. The rot is not watery.	Sanitation. Maintain cool dry storage conditions.
	Rhizopus Rot	A soft, watery, colorless rot develops.	Sanitation. Keep storage conditions cool and dry.

	Scab (<i>Streptomyces</i>)		Rough, slight sunken lesions on tubers, usually about 5 mm but size may vary greatly.	See the 2003 AL Vegetable Control Guide.
	Scurf, Black (<i>Rhizoctonia</i>)		Black, hard, slightly raised spots/irregular lesions of variable size but usually about 5 mm diam.	See the 2003 AL Vegetable Control Guide under Rhizoctonia.
	Soft Rot (<i>Erwinia</i>)		Soft, brown or cream-colored watery areas with a foul smell.	Sanitation. Avoid wounding. Keep cool.
Ivy, Swedish	Bacterial Leaf Spot		See Foliage Plants.	See Foliage Plants.
Lavender	Botrytis Blight		Gray-brown leaf spots & blotches.	Sanitation of fallen leaves; increase air circulation and temperature.
Leucothoe	Colletotrichum Leaf Spot		Reddish-brown irregular spots about ¼ inch diameter.	Sanitation. Cleary's 3336 may help.
	Pestalotia Leaf Spot, usually secondary to cold damage		Large, light gray, irregular spots and blotches.	Sanitation.
Nandina, Dwarf	Colletotrichum Leaf Spot		Medium brown circular to irregular spots (about ¼ inch diam.).	Sanitation; Cleary's 3336 or Domain may help. (Test on a few plant first.)
<u>Plant</u>	<u>Disease</u>		<u>Description</u>	<u>Control</u>
Oats	Blotch (<i>Drechslera avenae</i>)		Small brown flecks that become large longitudinal strips and blotches of dead tissue. Outer edges of spots fade into irregular areas of brown, red-brown or yellow.	See AL Pest Management Handbook.
	Crown Rust (<i>Puccinia coronata</i>)		Bright orange-yellow, round or oblong pustules develop mostly on leaves but sheaths, stems and	panicles may also have pustules. Plant yellowing and lodging may result from infection.

Plant	resistant	cultivars.		
Oxalis		Rust (<i>Puccinia</i> sp.)	Rusty orange powdery spots develop on leaves; eventually leaves wither and die.	Sanitation.
Pansy		Alternaria Blight	Small, brown, irregular lesions.	Sanitation. Daconil may help.
		Botrytis Blight	Gray or gray-brown circular-irregular spots/blotches on foliage.	See AL Pest Management Handbook; sanitation or ANR-596a.
		Colletotrichum Leaf Spot	Circular brown leaf spots.	Sanitation of fallen leaves; See the AL Pest Management Handbook.
		Pythium Root Rot	Plants unthrifty, wilt, yellow and die. Roots become brown and watersoaked.	See AL Pest Management Handbook; sanitation or ANR-596a.
		Rhizoctonia Foliage Blight	Spots/blight of brown color.	See AL Pest Management Handbook.
<u>Plant</u>		<u>Disease</u>	<u>Description</u>	<u>Control</u>
		Thielaviopsis Root Rot	Black spots and areas on roots and root tips. Plants wilt, yellow and die.	Sanitation; Cleary's 3336 or Domain drenches, as a preventative measure, may give some control. See AL Pest Management Handbook or ANR-596a.
Pear		Root Knot Nematode (<i>Meloidogyne</i>)	Pear decline. Roots develop irregular galls.	Sanitation. Crop rotation or fallow.
Photinia		Colletotrichum Leaf Spot	Brown, circular leaf spots develop.	Sanitation. See AL Pest Management recommendations for

Entomosporium.

	Entomosporium Leaf Spot	Red-black circular-irregular spots on foliage; spots may coalesce; leaf fall will result.	Sanitation; protective fungicide sprays. See AL Pest Management Handbook or ANR-392.
Pittosporum	Alternaria Leaf Spot	Grey, circular-irregular leaf spots.	Sanitation. Cleary's 3336 or Halt may be applied if desired as protective treatment.
Poplar, Yellow	<i>Cylindrocladium clavatum</i> Crown Rot	Sunken, dry decay of lower trunk at soil level.	Sanitation.
Pothos	Anthracnose (<i>Colletotrichum</i>)	Small-large brown lesions.	Sanitation. See the AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Rye	Spot Blotch (<i>Bipolaris sorokiniana</i>)	Usually on lower leaves, dark brown spots of varying shapes and sizes appear. Spots may coalesce so that large leaf areas are involved. Older lesions are olive colored when spores are present. Severely infected leaves completely die.	See AL Pest Management Handbook.
Ryegrass	Pythium Blight	Roots become brown and water-soaked. Grass blades may also become brown and water-soaked or they	may yellow and decline from root rot problem.

See the AL Pest Management Hand-	book or ANR-594.		
Southern Magnolia	Algal Leaf Spot (<i>Cephaleuros</i>)	Green or reddish circular spots, usually 3-5mm diam., slightly raised.	See the AL Pest Management Hand-book.
Spinach	Pythium Root Rot	Dieback; roots appear brown, rotted, and water-soaked.	Sanitation; reduce soil water content.
St. Augustine	Brown Patch (<i>Rhizoctonia</i>)	Brown blotches develop on grass blades; circular to irregular patches turn brown.	See the AL Pest Management Hand-book and Circular ANR-324.
	Take-All Patch (<i>Gaeumannomyces graminis</i> pv. <i>graminis</i>)	Patchy areas show scattered plants turning yellow and dying; roots/stolons show black cankers.	See ANR-823.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Strawberry	Phomopsis Blight/Leaf Spot	Brown, V-shaped areas develop at edges of leaves. The blotches may involve _ or more of the leaf area.	See the AL Pest Management Hand-book or 2003 Ala. Fruit Control Recommendations.
	<i>Phytophthora cactorum</i> Crown and Root Rot	Crowns and roots develop brown, decay areas.	Sanitation; reduce water levels in soil; See the AL Pest Management Hand-book.
Sweet Potato	Fusarium Root Rot	Dry, dark brown rotted patches on the surface of the root. Rot area usually does not extend beyond vascular tissues.	Sanitation and careful handling during harvest.
	Scurf (<i>Monilochaetes</i>)	Dark brown to black spots/areas develop on the surface of the	roots. Surface cracking may develop.

Sanitation, rotation for Thyme	3-4	years, fungicide protective dips (see Rhizoctonia Stem Rot)	2003 Vegetable Control Stems become brown, decayed, and shriveled.	Recommendations). Sanitation.
Turnip		Cercospora Leaf Spot	Light brown or cream-colored irregular spots on foliage.	See the 2003 AL Vegetable Control Recommendations.
Vinca		Botrytis Leaf Spot	Gray-brown blotches on foliage.	Increase the temperatures to 70°F or above. Decrease humidity. Apply protective fungicide treatments.
		Pythium Root Rot	Roots become brown, water-soaked.	Sanitation. See the Alabama Pest Management Handbook.
<u>Plant</u>		<u>Disease</u>	<u>Description</u>	<u>Control</u>
		Thielaviopsis Root Rot	Black spots and areas on roots and root tips. Plants wilt, yellow, and die.	Sanitation; Cleary's 3336 or Domain drenches may help.
Wax Myrtle		Botryosphaeria Canker	Sunken, cracked lesions on trunks and branches develop.	Sanitation. Maintain a vigorous plant.
Wheat		Bipolaris Leaf Spot	Tan flecks first appear on both sides of lower leaves. (Later, younger leaves may be infected and spotted). Flecks gradually may become much larger and elongated (up to 12 mm). These spots are generally tan with brown centers and yellow borders. Lesions may coalesce.	Generally no control needed.
		Powdery Mildew (<i>Erysiphe</i>)	Gray-white or buff-colored powdery	blotches on leaf blades. Distortion

and yellowing of new growth.

See the 2003 Small Grains Control Recommendations.

Rust-Leaf (*Puccinia recondita*)

Small, dark red dots of spore masses on leaves and leaf sheaths. This disease is commonly seen in Alabama.

See the 2003 Small Grains Control Recommendations.

Rust - Stem (*P. graminis*)

Reddish-brown dots or ovals or elongated masses of spores on stems, leaf sheaths and occasionally on leaf blades and spikes. This disease is occasionally seen in the state.

See the 2003 Small Grains Control Recommendations.

Plant

Disease

Description

Control

Rust - Stripe (*P. striiformis*)

Yellow-orange, narrow stripes of spore masses on leaves and spikelets. Heads may be infected. Disease usually restricted to cool temperatures. This disease is rarely seen, but it was observed in 1990 in one location.

Septoria Blotch

Yellow flecks on lower leaves become elongated lesions (1-5 x 4-15 mm) that change from yellow to red-brown with some spots developing gray centers.

Generally no control needed.

Take-All (*Gaeumannomyces*)

Lower stem and roots at the soil line become blackened and decayed. Usually this disease does not occur until

late in the wheat season, but it occasionally will develop on seedlings.

Crop rotation to oats,	corn, or legumes for	1 year.	
Yarrow	Pythium Root Rot	Poor growth of plant; yellowing of lower foliage; pale brown root decay as a soft rot.	Sanitation; reduce soil water levels; apply a recommended protective fungicide drench is a greenhouse/nursery situation.
Zoysia	Rhizoctonia Brown Patch	Irregular areas or patches become brown.	If temperatures are warm and grass is not dormant, protective fungicide treatments are recommended.

The Plant Diagnostic Lab Annual Report

We hope to have it finished and mailed in February. I hope you will find the report useful as a reference for disease occurrences in the state.