

February 20, 2004

PP-562

**JANUARY PLANT PROBLEM REPORT FROM THE  
AUBURN PLANT DIAGNOSTIC LAB**

**JANUARY PLANT PROBLEM REPORT FROM THE  
BIRMINGHAM PLANT DIAGNOSTIC LAB**

**DISEASE POSSIBILITIES FOR FEBRUARY**

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Auburn Plant Disease Report-January (J. Mullen)

Many of the 42 plant samples received in the lab in January were from greenhouses or nurseries. Greenhouse/nursery sample diseases included Botrytis blight on geranium, bacterial leaf spot on lantana, Cercosporidium blight on Leyland cypress, Pythium root rot and anthracnose on dwarf mondo grass, root-knot nematode on snapdragon, and early blight, target spot, and a suspect virus on tomato. Other diseases seen include Pestalotia blight on arbor-vitae, Pythium blight on bentgrass and *Poa trivialis*, Phytophthora root decay on boxwood, several fungal fruit decays of Satsuma fruit in storage, and scurf on sweet potato.

Pestalotia blight on arbor-vitae typically develops on stressed plants. It often appears during winter months where plants are stressed from cold damage or nutrient deficiency. Pruning and Cleary's 3336 may be applied as a protective fungicide. If plants are closely watched so as to avoid winter stresses, pruning may be the only disease control method needed.

Cool-season Pythium blight was observed on bentgrass and *Poa trivialis*. These cool season Pythium species fungi often cause a primary problem of root rot. Areas having a problem usually also have a wet-soil problem. Diagnosis of Pythium often involves ELISA and culture work. See the AL Pest Management Handbook or Austin Hagan for further comments.

The Phytophthora root decay on boxwood must have begun last fall when temperatures were cool-moderate. Plants with root problems typically develop foliage symptoms of yellowing or reddening of leaves with eventual dieback. The color change and dieback may be confined to lower foliage or it may develop on scattered branches, depending upon the areas of roots damaged. Roots damaged from environmental stresses or high populations of nematodes last fall could cause similar foliage symptoms as would be seen after root disease development. Damaged plants should be removed. When root disease is involved, soil water drainage should be improved. Also, removal of root-associated soil may be helpful as many of the fungal root disease spores will be present in soil closely associated with the roots. Protective fungicide drenches are usually not recommended in landscape situations due to the high cost of the materials.

Botrytis blight of geranium is a common disease problem in greenhouses during winter, spring, and fall when temperatures are in the 70 degree range and humidity levels are high. Control often involves sanitation of diseased foliage, reducing humidity levels, raising temperatures, and sometimes application of protective fungicide sprays. See the AL Pest Management Handbook for details of fungicide recommendations.

Bacterial leaf spot of lantana appears as angular, dark brown, wet-looking spots which often become noticeable first on lower leaf surfaces. When bacteria are actively dividing, microscopic study will show bacterial oozing out of cut edges of leaf spots. Control requires 'strict sanitation' of diseased plants. Also plants should be kept dry and watered at pot level.

Cercosporidium blight on Leyland cypress in January was unexpected. We suspect the disease became active during a warm period of late December. Spore structures were present on blighted foliage mostly on lower portions of the trees. For disease control, see the protective fungicide treatments listed in the AL Pest Management Handbook, ANR-500-A.

Dwarf mondo grass showed the leaf spots and tip blights typical of anthracnose. Severe cutting back of the grass followed by application of Cleary's 3336 fungicide are the usual recommendations. Pythium root disease was also present (culture & ELISA test results) and would have contributed to the dieback. Water levels should be reduced; Subdue may be applied as a protective fungicide drench.

Several fungi were found to be in association with Satsuma fruit rots. Botryosphaeria, Colletotrichum, Fusarium, and Sclerotinia have all been associated with brown sunken rots (dry or wet) of satsuma fruit in storage. Check with Ed Sikora for recommendations. Often these fungi develop in previously wounded areas.

Sweet potato scurf is a common fungal storage disease that affects only the root surface which characteristically becomes black and sometimes blotchy. Cracks that may develop will allow the entry of a variety of secondary fungi and bacteria. Keeping the

storage area cool and dry and avoidance of root wounding will help prevent development of this disease. Clean up

of the storage area is also important. Also, see disease control comments in the AL Pest Management Handbook.

USDA and APHIS reported that some geranium cuttings with *Ralstonia solanacearum* race 3 biovar 2 had entered the U.S. from Guatemala in January & December of 2003. Symptoms of this vascular disease involve yellowing, wilt, and browning of lower leaves, leaf edge scorch, vascular discoloration in the stem. Also roots may become brown. In late January, USDA and APHIS officials visited the Guatemala facility. They found that the bacteria were present in the circulating water in the greenhouse. Subsequent to this finding, USDA/APHIS ordered that all of these cuttings and plants from Guatemala be destroyed. Due to the difficulty in detecting the bacteria in non-symptomatic plants, the inability to test every plant, and the fact that the contaminated irrigation water contained the pathogen, USDA/APHIS decided that there was a high probability that the bacteria was present in many plants shipped to the U.S. and the best response would be total and rapid destruction of all plants.

Root-knot nematode problems on snapdragons cause plants to be spindly and grow poorly. Roots contain irregular, firm galls. Infected plants should be removed. The soil should be treated with a preplant treatment of Vapam or steam before replanting.

Tomato greenhouse samples showed early blight, target spot, and a suspect virus disease. Early blight appears as zonate, brown-gray spots and blotches on leaves and stems. Damaged foliage should be removed, if possible. See the AL Pest Management Handbook for disease fungicide recommendations. Target spot begins as dark, small, wet-looking spots on upper leaf surfaces. Spots gradually become larger, circular, and develop yellow halos. During initial (early) stages, spots may be confused with bacterial leaf spots. Daconil is labelled to control this disease on tomato. Long periods (16-44 hr.) of moisture are needed for optimum disease development. Sanitation is recommended. We also received a sample showing a mosaic and leaf deformity. We suspect a virus, but tests thus far have not confirmed virus presence.

Table 1. 2004 January Diseases Seen In The Auburn Plant Diagnostic Lab.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Arbor-vitae	Pestalotia Blight	Covington
Bentgrass	Pythium Blight	Lee
Boxwood	Phytophthora Root Decay	Tuscaloosa
Geranium	Botrytis Blight	*

Lantana	Bacterial Leaf Spot	*
Leyland Cypress <u>Plant</u>	<u>Cercosporidium Blight Disease</u>	<u>County</u>
Mondo, Dwarf	Anthrachnose ( <i>Colletotrichum</i> )	*
	Pythium Root Rot	*
<i>Poa trivialis</i>	Pythium Blight	Lee
Satsuma	Fruit Decay ( <i>Botryosphaeria</i> )	Baldwin
	Fruit Decay ( <i>Colletotrichum</i> )	Baldwin
	Fruit Decay ( <i>Fusarium</i> )	Baldwin
	Fruit Decay ( <i>Sclerotinia</i> )	Baldwin
Sweet Potato	Scurf ( <i>Monilochaetes infuscans</i> )	Autauga
Snapdragon	Root-knot Nematode ( <i>Meloidogyne</i> )	*
Tomato	Early Blight ( <i>Alternaria solani</i> )	*
	Suspect Virus Disease	*
	Target Spot ( <i>Corynespora cassiicola</i> )	*

\*Counties are not reported for greenhouse and nursery samples.

#### Birmingham Plant Disease Report-January (J. Jacobi)

The lab received 35 samples for the month of January. Some of the diseases seen last month include anthracnose on foxglove, black root rot on pansy and Japanese holly, Volutella blight on boxwood, wax scale on andromeda and holly, and white peach scale on weeping mulberry.

Symptoms of anthracnose on foxglove (*Digitalis*) include light tan to brown spots on leaves and stems. Spots may have a faint purple border. Under favorable conditions, seedlings and infected transplants may collapse and die. Keep foliage dry through proper watering and remove infected leaves to slow disease spread. Azoxystobin (Heritage) can be used to prevent disease during periods of mild, wet weather.

Both pansy and Japanese holly were diagnosed with black root rot (*Thielaviopsis basicola*), last month. Symptoms of black root rot on holly include stunted growth, shortened internodes, leaf chlorosis, and leaf drop. Established plants may suffer a gradual dieback and eventually death. Blacked root tips and/or black lesions on roots are other symptoms of this disease. To control this disease, remove and destroy severely diseased plants, avoid wet locations and improve soil drainage as needed. Chinese holly is very resistant to black root rot and can be planted in beds where this disease has occurred. Yaupon and American holly are moderately resistant, and Japanese hollies are very susceptible to black root rot and should be avoided in future plantings. Additional information on this disease is available in Extension circular ANR-1087, Common Diseases of Holly and Their Control (<http://www.aces.edu/pubs/docs/A/ANR-1087/ANR-1087.pdf>).

Table 2. 2004 January Problems Seen in the Birmingham Plant Diagnostic Lab.

<u>Plant</u>	<u>Problem</u>	<u>County</u>
Andromeda, Japanese	Wax Scale	Jefferson
Boxwood, Common	Phytophthora Root Rot	Jefferson
	Volutella Blight	Jefferson(2)
Cypress, Leyland	Cercosporidium Needle Blight	Jefferson
Foxglove	Anthracnose ( <i>Colletotrichum</i> )	Jefferson
Holly, Chinese	Tea Scale	Jefferson
	Wax Scale	Jefferson
Holly, Japanese 'Helleri'		Black Root Rot ( <i>Thielaviopsis</i> ) Jefferson
Magnolia, Southern	Leafminer	Jefferson
Mulberry, Weeping	White Peach Scale	Jefferson
Pansy	Black Root Rot ( <i>Thielaviopsis</i> )	Jefferson
	Botrytis Blight	Jefferson
	Pythium Root Rot	Jefferson(2)

## Disease Possibilities For February

Powdery mildews and Botrytis may be a problem in greenhouses where temperatures are on the moderate to cool side. Also downy mildew (yellow spotting, sometimes defoliation) on rose and bedding plants and vegetable transplants may develop when temperatures are moderately cool (60-70°F). Powdery mildew disease spread requires a high relative humidity. Botrytis and downy mildew require high relative humidity and free moisture for disease spread. If temperatures are 60-70°F, some leaf spots on grasses may develop.

Early in February a wheat sample from Dallas County was tested using ELISA for barley yellow dwarf virus. Test results were positive for this virus. Plants were stunted with yellowing of leaf tips with yellowing progressing down the leaf blades. Check with Austin Hagan for further comments.

The list below includes some common disease problems received in the lab in February of the past few years. Comments on control practices are brief. Refer to appropriate fact sheets, or timely information sheets for details of disease control.

Table 1. Disease Descriptions and Brief Control Comments on Some Common Diseases Often Seen in February.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Aglaonema	Rhizoctonia Crown Rot	Brown dry decay of lower stem.	Sanitation; Cleary's 3336 protective treatments.
Alfalfa	Spring Black Stem and Leaf Spot ( <i>Phoma</i> )	Numerous black spots on lower leaves, petioles, and stems. Leaf spots often coalesce and become medium or light brown. Spotted leaves become yellow and fall. Lesions may completely girdle stems and petioles and cause death to the foliage beyond. <i>Phoma</i> may also cause a crown and root rot.	--

Arbor-vitae	Cold Damage/ Pestalotiopsis Tip Blight		Tips show some dieback which eventually becomes gray colored.	Spring pruning to remove the dead plant parts.
<u>Plant</u>	<u>Disease</u>		<u>Description</u>	<u>Control</u>
Azalea	Cercospora Leaf Spot		Brown, roughly circular leaf spots, diameter.	Sanitation; See the Ala. Pest Management Handbook.
Begonia	Botrytis Blight		Brown, water-soaked or dry tissue blight.	Sanitation. See the Ala. Pest Management Handbook.
Bentgrass	Brown Patch ( <i>Rhizoctonia</i> )		Irregular foliage leaf spots and blight; irregular brown patches in lawn.	See the AL Pest Management Handbook.
	Pythium Blight		Quickly spreading, brown blight (wet-looking) or grass blades.	See AL Pest Management Handbook.
	Pythium Root Rot		Roots become brown and water-soaked and then dry.	Sanitation. See the Ala. Pest Management Handbook.
Bermuda	Algae		Dark green-black thin 'sheets' of algae sometimes develop at the soil level.	Reduce water levels. See the AL Pest Management Handbook.
	Helminthosporium Spots		Brown elliptical or elongated rectangular, usually small (but spot coalescence often occurs) leaf spots. Sometimes decay occurs at the stem near the soil line and then whole plants die rapidly. Often, spots remain localized on the leaves.	See ANR-621.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Rhizoctonia Blight	Patchy areas become brown. Individual leaves show brown spots, larger blotches, or a complete leaf blight.	See ANR-492 or the AL Pest Management Handbook.
	Slime Mold	Thin, translucent, ruffled sheets of gelatin-like material.	Physical removal.
Blackberry	Orange Cane Blotch Cephaleuros (Alga)	Orange or brown slightly raised blotches on cane.	See the AL Pest Management Handbook for copper products labelled on blackberries.
Boxwood	Macrophoma Blight	Foliage becomes off color (usually yellow but may be bronzed) and tiny black dots (fruiting bodies) develop on leaves and sometimes small twigs.	Maintain plants in good health and avoid stressful conditions. Protective fungicide treatment may not be needed but if desired, see AL Pest Management Handbook.
	Phytophthora Crown & Root Rot	Lower trunk is brown and rotted. Initially the decayed tissues are water-soaked but later the dead tissues are dried.	Sanitation. Improve soil drainage and/or decrease irrigation. See Alabama Pest Management Handbook for fungicides recommended for nursery situations & some large scale landscape plantings.
Broccoli	Downy Mildew ( <i>Peronospora</i> )	Faded, yellow blotches on upper leaf surfaces show gray, powdery masses of fungal growth on lower leaf surfaces in areas corresponding to yellow spots.	Reduce humidity; raise temperatures; see Ala. Pest Management Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>

Camellia		Algal Leaf Spot ( <i>Cephaleuros</i> )	Reddish-green or reddish-brown roundish leaf spots with a slightly raised edge develop.	Prune to reduce humidity levels. Protective treatments of Bordeaux mixture may be used. See the AL Pest Management Handbook.
		Anthraco nose ( <i>Colletotrichum</i> )	Light to medium brown, circular-irregular (0.2-1 cm diam.) spots develop on leaves.	Sanitation; Protective fungicides labelled on camellia such as Cleary's 3336.
		Botrytis ( <i>Sclerotinia</i> ) Flower Blight	Brown, small-large, irregularly-shaped lesions.	Sanitation of fallen blossoms; see Ala. Pest Management Handbook.
		Ring Spot Virus	Yellow rings appear on foliage; plants may become slightly stunted.	Sanitation.
Carolina Laurel	Cherry	<i>Blumeriella jaapii</i> ,	Roundish, brown leaf spots with a slightly darker edge develop on leaves.	Sanitation. Cleary's 3336 or Halt may provide some protection.
Collard		Black Rot ( <i>Xanthomonas</i> )	Yellow, V-shaped lesions on leaf edges become darkened. Bacteria spread into the vascular system and cause leaf veins to darken. Eventually, tissue death and decay spreads into the central vascular system with the lower center stalk becoming rotted.	Crop rotation away from crucifers for 2 years.
Daylily		Kabatiella Leaf Spot	Red brown elongated spots (approx. $\frac{1}{4}$ inch diam.).	Sanitation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Dusty Miller	Alternaria Leaf Spot	Dark brown angular spots (0.2-0.6 cm) on foliage.	Sanitation. Cleary's 3336 may help.
English, Ivy	Anthrachnose ( <i>Colletotrichum</i> )	Circular or irregular, dry, brown spots or blotches on leaves. Leaf spots often begin at leaf edges. Brown stem lesions may also develop.	See the AL Pest Management Handbook or ANR-1148.
Euonymus	Anthrachnose ( <i>Colletotrichum</i> )	Large ( $\frac{1}{4}$ - $\frac{1}{2}$ inch diam.; 0.6-1.2 cm) brown, circular spots.	See Ala. Pest Management Handbook.
Fescue	Pythium Foliage Blight	Dark, water-soaked spots and blotches.	See Ala. Pest Management Handbook.
	Scab ( <i>Elsinoe</i> )	Brown, raised, slightly corky spots (0.1-0.3 cm) develop on foliage.	Sanitation; Cleary's 3336 may help.
Gardenia, Dwarf	Bacterial Leaf Spot	Small, dark, wet-looking, angular leaf spots.	Do not water overhead. Remove all damaged plants.
Geranium	Oedema	Small (0.1-0.3 cm diam.), raised corky spots scattered on lower leaf surfaces. Upper leaf surfaces corresponding to corky spots often show yellowed spots.	Reduce watering schedules when weather is cloudy and cool.
Gerbera Daisy	Powdery Mildew	Leaves show some necrosis and white powdery dusting on leaf surfaces.	Sanitation; Cleary's 3336.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Pythium Root Rot	Plants become stunted and yellowed. Usually	lower leaves become yellowed first. Roots become brown and

water- soaked.	Sanitation of damaged plants. In some situations, removal of contaminated soil or media is recommended. Protective fungicide drenches in greenhouse situations.		
Greenhouse/Nursery Crops	Peat Mold ( <i>Chromelosporium</i> )	Tan-orange-yellow spore masses often develop on the surface of potting mix or at the edge of potting mix next to the pot rim. Extensive fungal growth may cause the potting media to become water repellent; that is, the media will not absorb water.	Sanitation.
Holly, Foster	Bacterial Leaf Spot	Small, black, angular leaf spots.	Sanitation.
Holly, Japanese	Phomopsis Dieback	Cankers on twigs and small branches with dieback resulting.	Sanitation.
Hydrangea	Powdery Mildew	White dusty coating on upper leaf surfaces. Leaf yellowing and blight; some new growth distortions.	Sanitation. Fungicide spray treatments. See AL Pest Management Handbook.
	Phytophthora & Pythium Root Rot	Roots brown and water-soaked initially, then dried.	Sanitation; improve soil drainage and/or reduce irrigation; Banrot or Banol are recommended in some nursery situations.

<u>Plant</u>		<u>Disease</u>	<u>Description</u>	<u>Control</u>
Illicium		Phytophthora Root Rot	Roots brown and water-soaked initially, then dried. Foliage develops dieback & yellowing, usually of lower foliage first.	Sanitation, improve soil drainage and/or reduce irrigation; Subdue may be recommended in some nursery situation.
Impatiens		Alternaria Leaf Spot	Dark brown circular or angular leaf spots.	Sanitation. Daconil, Kocide, or Benefit may be used.
		Impatiens Necrotic Spot Virus	Black, circular leaf spots; stunted growth.	Sanitation; thrips control.
		Phytophthora Crown Rot	Plants become stunted. Older leaves turn yellow. Roots become brown and water-soaked.	Sanitation of plants and sometimes removal of contaminated soil or media. Adjust watering practices and/or improve water drainage through soil or media. Fungicide drenches are often recommended in greenhouse situations.
		Pythium Crown Rot	See Phytophthora comments.	See Phytophthora comments.
Impatiens, Guinea	New	Botrytis Stem Rot	Dark, water-soaked leaf blight & stem rot.	Sanitation; See Ala. Pest Management Handbook.
		Impatiens Necrotic Spot Virus	New growth is stunted; circular black, greasy spots develop.	Remove damaged plants; control thrips.
		Tomato Spotted Wilt Virus	Damage is identical to impatiens necrotic spot virus.	Remove damaged plants; control thrips.
<u>Plant</u>		<u>Disease</u>	<u>Description</u>	<u>Control</u>
Indian Hawthorn		Cercospora Leaf Spot	Circular, dark brown spots (approx. 1/8 inch diam.)	Sanitation; Mancozeb fungicide.

	Entomosporium Leaf Spot	Red-black spots.	Sanitation. See the Ala. Pest Management Handbook.
	Suspect Bacterial Leaf Spot	Red-black angular spots.	Sanitation.
Irish Potato	Scab ( <i>Streptomyces scabies</i> )	Slightly raised, rough, corky, cortex-colored spots, lesions (small-large) on tubers.	Crop rotation. Keep soil pH at 5.0-5.5, if possible.
	Scurf ( <i>Rhizoctonia</i> )	Black, irregular, hard slightly raised rough-surfaced scabs on tuber surface.	Crop rotation. Terraclor. See E. Sikora.
Ivy, English	Anthracnose ( <i>Colletotrichum</i> )	Black irregularly shaped leaf spots.	Sanitation; See AL Pest Management Handbook.
	Bacterial Leaf Spot ( <i>Xanthomonas</i> )	Brown-black, angular, wet-looking spots ( $\frac{1}{4}$ inch diam.; 0.3-0.6 cm).	Sanitation; See Ala. Pest Management Handbook.
Geranium	Botrytis Blight	Gray-brown spots and blotches on the foliage.	Sanitation. See the AL Pest Management Handbook.
	Fusarium Crown & Root Rot	Lower stem and roots develop a brown, dry rot.	Sanitation.
	Pythium Root Rot	Lower foliage turns yellow; poor growth. Roots become water-soaked, soft, and pale brown.	Sanitation. See the AL Pest Management Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	<i>Ralstonia solanacearum</i>	Plants show poor growth, yellowing of lower leaves initially; wilt.	Sanitation.
Geranium, Ivy Leaf	Oedema	Upper leaf surface shows diffuse yellow	spots; lower leaf surface shows

brown, corky, slightly raised spots (less than 1/8 inch diam.; 0.1-0.3 cm).

Decrease watering schedule.

Kalanchoe

Botrytis Blight

Brown, gray spots, blotches on the foliage. Infected areas may become limp. Spots look grayer when spore production occurs.

Sanitation. Apply protective fungicide drenches. See the Ala. Pest Management Handbook. Decrease humidity. Increase temperature.

Lantana

Foliar Leaf Spot Nematode

Angular, brown-black leaf spots.

Sanitation.

Leyland Cypress

Botryosphaeria Canker

Cracked, sunken, dry lesions on branches.

Sanitation. Remove stress factors. See the AL Pest Management Handbook.

Pestalotia Tip Blight

Tips of branches turn brown and dried.

Sanitation. Remove stress factors.

Seiridium Canker

Elongated, sunken lesions with sticky sap running down the bark.

Pruning. Sanitation. Maintain good tree vigor. See AL Pest Management Handbook.

Lily, Easter

Lily Symptomless Virus & Cucumber Mosaic Virus

Yellow and brown flecks on foliage; plants stunted; leaves curl under.

Sanitation. Control aphids.

Plant

Disease

Description

Control

Liriope

Anthracoese

Cream-colored blotches and leaf tips sometimes with tiny black specks on leaf spot surface.

See the AL Pest Management Handbook.

Magnolia

Algal Leaf Spot (*Cephaleuros*)

Greenish or reddish slightly raised spots (0.1-1 cm) on upper leaf surfaces. Spot edges are often irregular or wavy in

appearance. Old spots are usually cream colored in the center.

Control measures are usually not	necessary. Bordeaux mixture	may be used. See the Ala. Pest	Management.
Marigold	Botrytis Canker	Dark brown, elongated cankers form on stems.	Sanitation. See the AL Pest Management Handbook.
Oats	Helminthosporium Leaf Spot/Blotch	On seedlings, oblong to elongate, light-reddish-brown spots appear on seedling leaves. Seedling leaves may also be twisted. On older leaves, spots start as small, brown flecks that develop into longitudinal flecks of dead tissue. Tissue outside of the leaf spot become brown, yellow or red. Sometimes these discolored areas around the spots spread to involve the major portion of the leaf blade.	See the Small Grains Recommendations for seed treatment; rotate crops; plow under residue.
	Crown Rust ( <i>Puccinia coronata</i> )	Orange-colored pustules form on leaves, mainly; severely infected plants will turn yellow and grow poorly.	

Contact A. Hagan.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Pansy	Black Root Rot	Plants are stunted with lower foliage becoming yellow. Roots develop black tips and blotches.	Sanitation. See the AL Pest Management Handbook.
	Botrytis After Cold Damage	Brown leaf spots/blight; gray mold.	Sanitation; protective fungicide sprays. See AL Pest Management Handbook.

	Cercospora Spot	Leaf	Brown-black circular spots.	Sanitation; Cleary's 3336.
	Phytophthora Crown/Root Rot		See comments for Impatiens.	
	Pythium Crown/Root Rot		See comments for Impatiens.	
Peach	Botryosphaeria Canker ( <i>Gummosis</i> )		Gummy, "bleeding" or oozing spots of sap develop on bark surfaces where sunken, darkened lesions occur in the wood. Lesions are often cracked around the edge.	Sanitation; Benlate sprays on the trunk.
	Cytospora Canker		Sunken lesions on branches and trunk.	Prune off lesions making cuts 3-4 inches beyond margin of decay.
	Phomopsis Blight	Twig	Gray sunken cankers, dieback.	Sanitation. Check with Ed Sikora.
Peas, Austin	Sclerotinia Blight		A dark wet-looking rot develops at lower stem area near soil. A white fungal mat may develop. Small (1/16 inch or less) black, hard, flat, irregular-shape bodies may	
<u>Crop rotation. Control</u>	<u>Plant</u>		<u>Disease</u>	<u>Description</u>
			develop in the fungal mat. Infected plants wilt and die.	
Pentstemom (Beard Tongue)	Septoria Leaf Spot		Small to medium-sized spots (up to ¼ inch diameter) that are brown, somewhat circular with dark margins. Sometimes very tiny black specks may be seen on spot	surfaces.

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Pentas	Bacterial Leaf Spot	Dark brown, angular leaf spots, 1/16-1/8 inch diam.	Sanitation.
Photinia	Entomosporium Leaf Spot	Small reddish spots (¼-½ inch diam.; 0.6-1.2 cm) often coalesce into larger red spots with dark red centers and bright red, diffuse borders.	Sanitation; See the Ala. Pest Management Handbook.
Pine, Loblolly	Needle Rust ( <i>Coleosporium</i> )	Cream-white pustules (¼ inch diam.; 0.2-0.3 cm) on needles.	No control recommended.
Pine Loblolly Seedlings,	Phytophthora Root Rot	Plants become stunted. Older growth becomes yellowed. Roots become brown and water-soaked.	Sanitation of infected plants and sometimes media/soil replacement is recommended. Correct water problems. Fungicide drenches are recommended in nursery situations.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Pine, Virginia	Lophodermium ( <i>Ploioderma</i> ) Needle Cast	Small (1/32-1/16 inch diam.; 0.15 cm or less; just barely visible), black, football-shaped slightly raised fruiting bodies scattered on needles; needles brown and drop.	See Ala. Pest Management Handbook.
Plum	Black Knot	Initially, green swollen areas develop on branches. Swollen areas later become	hard and black.

Sanitation. See the	AL	Pest	Management	Handbook.
<i>Poa trivialis</i>		Pythium Blight	Foliage blight.	Decrease water content of soil. Apply fungicide treatments as listed in the Alabama Pest Management Handbook for turf grasses.
Pothos		Rhizoctonia Stem Rot	Stems near or touching the soil (potting mix) developed a dark brown canker or lesion (0.3-1 cm).	Sanitation. Protective sprays of Cleary's 3336.
Rhododendron		Botryosphaeria Canker	Elongated, sunken cankers with cracked edges.	Pruning and sanitation.
Rosemary		Pythium Root Rot	Roots become brown and soft rotted.	Sanitation.
Ryegrass		Pythium Root Rot	Grass turns yellow, withers and dies; roots show a wet, brown decay.	See the Ala. Pest Management Handbook or ANR-594.
<u>Plant</u>		<u>Disease</u>	<u>Description</u>	<u>Control</u>
		Take-All Patch	Individual plants become yellow and die. Roots develop dead areas and lesions. Affected plants are usually in patchy areas of landscape.	Manage soil pH and nitrogen appropriately. Apply fungicide treatment when economically feasible. See ANR-823.
St. Augustine		Brown Patch ( <i>Rhizoctonia</i> )	Irregular areas become brown due to browning of individual grass blades.	See the Ala. Pest Management Handbook or ANR-492.
		Take-All Patch ( <i>Gaeumannomyces graminis graminis</i> )		See comments under Ryegrass.

Snapdragon	Downy Mildew	Yellow, irregular, indefinite bordered spots develop on upper leaf surface. A thin gray mold may develop on leaf spot area on lower leaf surface areas.	Sanitation. See the AL Pest Management Handbook.
	Root-Knot Nematode ( <i>Meloidogyne</i> )	Stunted, wilted plants; roots develop irregular galls.	Sanitation; See AL Pest Management Handbook.
Spinach	Pythium Root Rot	Plants are stunted; roots develop a light brown discoloration; roots pull apart easily.	Sanitation; reduce moisture levels in the soil.
Spirea	Powdery Mildew	Leaves show a white powdery dusting on upper leaf surfaces and young shoots.	Sanitation. Cleary's 3336.
Strawberry	Common Leaf Spot ( <i>Mycosphaerella</i> )	Red to red-black leaf spots.	Sanitation; See AL Pest Management Handbook.
	Pythium Root Rot	Roots brown and water-soaked.	See E. Sikora.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Tomato	Bacterial Leaf Speck	Very small (1/16 inch diam.) angular, dark brown spots often with a diffuse yellow halo.	Sanitation. See AL Pest Management Handbook.
	Botrytis Gray Mold	Brown-gray blotches on foliage. A light gray fuzzy mold may develop in humid conditions.	Sanitation. See the AL Pest Management Handbook.
Turnip	Cercospora Leaf Spot	Small, off-white, irregular spots which may enlarge into ¼-½ inch diam. (0.6-1.2 cm).	See AL Pest Management Handbook.

Verbena	Bacterial Leaf Spot	Angular, water-soaked black or dark green leaf spots.	Sanitation.
	<i>Myrothecium</i> Crown Rot	Plants collapse after decay at crown.	Sanitation.
	Foliar Nematode	Angular brown leaf spots; sometimes these symptoms can be confused with bacterial disease.	Sanitation.
	Pythium Root Rot	Roots brown and water-soaked when infections are new.	Sanitation; improve water/soil situation so soil does not remain wet.

Wheat	Bipolaris Leaf Spot	Brown elongated lesions (typically $\frac{1}{4}$ inch long) on foliage.	--
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<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Powdery Mildew ( <i>Erysiphe</i> )	A white to light brown (buff) dusting or slightly raised powdery patches on foliage. Affected leaf areas eventually turn yellow and die. Infection of the flag leaf will severely affect plant development and yield.	See the Ala. Pest Management Handbook and/or A. Hagan.
	Soilborne Mosaic (SBWMV)	Wheat Virus Green-yellow mosaic pattern (short, narrow stripes) on leaves; stunting; reduced tillering; possible plant death.	Crop rotation.