

# TIMELY INFORMATION

## Agriculture & Natural Resources

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PP-694

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

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

**INSECT REPORT**

**DISEASE POSSIBILITIES FOR APRIL**

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Auburn Plant Disease Report, February ()

**Table 1.** February Plant Diseases Received at the Auburn Plant Diagnostic Lab

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Blueberry	Stem Blight	Elmore
	Botryosphaeria Canker	Houston (4)
Cryptomeria	Phytophthora Root Rot	*
Cypress, Leyland	Seiridium Canker	Elmore
Cypress, Mexican	Phomopsis Blight	Jefferson
Indian Hawthorn	Entomosporium Leaf Spot	Lee
Ivy	Phytophthora Root Rot	Houston
Pachysandra	Volutella Blight	Lee
Pansy	Pythium Crown and Root Rot, Aphid	Geneva
Satsuma	Armillaria & Phytophthora Root Rots, Melanose	Baldwin
Skullcap	Root Knot Nematode	Macon
Southern Magnolia	Colletotrichum Leaf Spot, Thrips	*
Tomato	Cold Injury	Elmore

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

Birmingham Plant Disease Report, February (J. Jacobi)

The lab received a total of 64 samples during the months of January and February. The most common problems last month were related to the lingering effects of the drought during the summer and fall of 2010. Conifers like arborvitae, Japanese Cryptomeria, and Leyland cypress have shown the most damage. Damage symptoms included dieback and interior browning of affected conifers. Many of these plants were installed in the last year or two; more established plants often showed little damage. Some of the more unusual problems seen last month were San Jose scale on apple, broad mites on greenhouse basil and pepper, wool-bearing gall wasp on live oak, and anthracnose on snake plant.

**Table 2.** Problems Seen in the Birmingham Plant Diagnostic Lab during January and February, 2011

<u>Plant</u>	<u>Problem</u>	<u>County</u>
Apple	San Jose Scale	DeKalb
Arborvitae	Phytophthora Root Rot	Jefferson
	Armillaria Root Rot	Lauderdale
Azalea	Azalea Lacebug	Jefferson

	Cercospora Leaf Spot	Jefferson, Walker
	Iron Chlorosis	Jefferson
	Phomopsis Dieback	Walker
Basil	Broad Mites	Lauderdale
Bentgrass	Yellow Patch ( <i>Rhizoctonia</i> )	*
Bluegrass, Roughstalk ( <i>Poa trivialis</i> )	Yellow Patch ( <i>Rhizoctonia</i> )	*
Boxwood	Boxwood Leafminer	Jefferson (2)
	Planted Too Deep	Jefferson
	Winter Damage	Jefferson (2)
Cast Iron Plant	Vole Damage	Jefferson
Cherry Laurel	Cercospora Leaf Spot	Jefferson
Elaeagnus	Vole Damage	Jefferson
Gardenia	Cold Damage	Jefferson
	Phomopsis Canker	Jefferson
Holly	Two Lined Spittlebug	Shelby
Holly, Chinese	Cottony Camellia Scale	Jefferson
	Sooty Mold	Jefferson
Juniper	Phytophthora Root Rot	Walker
	Dieback (Drought)	Jefferson
Magnolia	Algal Leaf Spot	Jefferson
	Anthrachnose ( <i>Colletotrichum</i> )	Jefferson
Oak, Live	Wool-bearing Gall Wasp	Jefferson
Pansy	Pythium Root Rot	Shelby
Peach	Phomopsis Canker	Chilton
Pepper	Broad Mites	Lauderdale
Pine, Longleaf	Drought/Root Girdling	Jefferson
Rosemary	Cold Damage	*
Sansevieria (Snake Plant)	Anthrachnose ( <i>Colletotrichum</i> )	Jefferson
Tomato	Two Spotted Spider Mites	Lauderdale
Wax Myrtle	Sapsucker Damage	Jefferson
Zoysiagrass	Large Patch ( <i>Rhizoctonia</i> )	Jefferson

**Table 3.** February Insect Report (C. Ray)

<b>County</b>	<b>Host</b>	<b>Category</b>	<b>Identification</b>	<b>Scientific Name</b>
Jefferson	Sod	Turfgrass	burrowing sod webworm	<i>Acrolophus</i> sp.
Jefferson	Sod	Turfgrass	may beetle larva	<i>Phyllophaga</i> sp.
Russell	Home	Household - Miscellaneous	Hatchling Smoky Brown Cockroaches	<i>Periplaneta fuliginosa</i>
Autauga	<i>Magnolia grandiflora</i>	Ornamentals	thrips damage	possibly <i>Scirtothrips citri</i>
Houston	Blueberry	Fruits & Nuts	leaf roller damage	Tortricidae
Elmore	Pecan	Fruits & Nuts	Pecan Weevil larva	<i>Curculio caryae</i>
Montgomery		Household - Structural	a powderpost beetle	<i>Lyctus</i> sp.
Montgomery	Azalea	Ornamentals	Azalea Bark Scale	<i>Eriococcus azaleae</i>
Montgomery	Firewood	Miscellaneous	Banded Hickory Borer	<i>Knolliana cincta</i>

#### Disease Possibilities for April

The list below includes some of the disease problems and their symptoms that might be encountered in April and early May. *Refer to the pertinent fact sheets, timely information sheets, spray guides, and the Alabama Pest Management Handbook for detailed control measures.*

**Aglaonema Bacterial Leaf Spot:** Dark, round or angular, water-soaked leaf spots.  
CONTROL: Sanitation; water at soil level.

**Alfalfa Leptosphaerulina:** Small black leaf "pepper spots" which may enlarge up to 3 mm diameter "eyespot" having tan centers with brown borders often surrounded by a chlorotic area; may be present on petioles as well. These lesions may coalesce into a larger bleached area. CONTROL: Frequent harvesting.

**Alfalfa Spring Black Stem and Leaf Spot (*Phoma*)**: Numerous small dark brown to black spots develop on the lower leaves, petioles, and stems in early spring. Leaf spots may increase in size and coalesce; becoming light to medium brown, then leaves may turn yellow, wither, and fall. Lesions on stems and petioles may enlarge and blacken large areas, girdling the base of the plant and causing death to foliage. *Phoma* may also cause a crown and root rot. Seed pods may discolor and shrivel in humid conditions. CONTROL: Early cutting; proper fertility management.

**Alfalfa Stemphylium Leaf Spot**: Oval, light brown, slightly sunken lesions are often surrounded by a light yellow halo. Lesions may expand into concentric rings which may under severe conditions cause the leaf to yellow and fall prematurely. CONTROL: Frequent or early harvesting.

**Apple, Pear Botryosphaeria Canker**: Stem cankers may be small or up to 5 m. long, and either superficial or deep, cracking the bark. See Alabama Pest Management Handbook; pruning.

**Apple, Pear Fire Blight (*Erwinia*)**: Affected plant parts appear scorched by fire and may have a watery ooze under humid conditions. CONTROL: Sanitation; resistant varieties; see Alabama Pest Management Handbook; see ANR-542.

**Apple, Pear Frogeye Leaf Spot (*Botryosphaeria*)**: Dark brown leaf spots up to 5 mm which may develop a lighter center giving it a "frogeye" appearance. CONTROL: Sanitation in the fall, protective sprays in the growing season.

**Apple, Pear Nectria Canker**: Swollen, elliptical, water-soaked, sunken areas on twigs and branches that are darker than surrounding tissue. CONTROL: Prune infected branches 3 inches below canker edges.

**Apple, Pear Powdery Mildew**: White, felt-like patches on leaf surfaces; may also infect blossoms and fruit. CONTROL: See Alabama Pest Management Handbook.

**Apricot Black Knot (*Plowrightia*)**: Elongate, green, corky cankers on twigs and small branches become black and brittle. CONTROL: Sanitation; see ANR-1055 (Disease Note on Plum).

**Aucuba Pestalotia Leaf Spot**: Irregular, light gray leaf spots; usually develop after cold or other injury. CONTROL: Sanitation.

**Aucuba Phytophthora Root Rot**: Lower foliage yellows, wilts, dieback; roots become dark brown, decayed, and water-soaked. CONTROL: Sanitation; reduce water in area.

**Azalea Botrytis Petal Blight**: Blossoms with large, brown, irregular areas, these being covered with a delicate gray webbing during humid weather. CONTROL: See Alabama Pest Management Handbook.

**Azalea Cercospora Leaf Spot:** Dark brown, angular spots about 5 mm diameter; usually associated with stressed plants. CONTROL: Remove fallen leaves; maintain proper fertility and watering schedules; Cleary's 3336 may be applied as a protective spray.

**Azalea Colletotrichum Leaf Spot (Anthracnose):** Olive to dark brown angular spots up to 0.5 cm diameter, usually associated with stressed plants. CONTROL: Remove fallen leaves; maintain proper fertility and watering schedules; Cleary's 3336 may be applied as a protective spray.

**Azalea Exobasidium Gall:** Leaves and blossoms develop often large green-pink-white fleshy galls. CONTROL: See Alabama Pest Management Handbook.

**Azalea Ovulinia Petal Blight:** Flowers first exhibit small white or brown spots which may appear water-soaked. These enlarge rapidly and become slimy. CONTROL: See Alabama Pest Management Handbook.

**Azalea Phomopsis Twig Blight:** Usually small oval, sunken lesions on small branches and twigs. CONTROL: Pruning; improve plant vigor.

**Azalea Phytophthora Crown and Root Rot:** Roots and crown become brown and water-soaked; leaves become chlorotic and wilt. CONTROL: Sanitation; see Alabama Pest Management Handbook.

**Azalea Powdery Mildew:** Individual white, powdery leaf spots may eventually cover the entire leaf surface. CONTROL: Sanitation; Cleary's 3336 or Halt.

**Azalea Rhizoctonia Aerial Blight:** Irregular brown spots on foliage which may involve half or all of the leaf area. Dead leaves will fall. CONTROL: See Alabama Pest Management Handbook.

**Begonia Bacterial Leaf Spot:** Dark, water-soaked leaf spots. CONTROL: Strict sanitation; water at soil level.

**Bentgrass Brown Patch (Yellow Patch) (Rhizoctonia):** Round or irregular patches may become large, light brown areas of turf. Individual blades with tan to dark brown lesions. CONTROL: Reduce nitrogen fertilizer; protective fungicidal treatments.

**Bentgrass Fairy Ring:** Circles or arcs of darker green grass and/or an inner band of thin or dead grass. White mycelium may be evident and there may be associated mushrooms. CONTROL: See ANR-372.

**Bentgrass Pythium Blight:** Irregular areas of turf become water-soaked, then light brown. CONTROL: See ANR-594.

**Bermuda Brown Patch (Rhizoctonia):** Large circular patches of light brown turf; individual blades show brown lesions and/or crowns show brown lesions, rot. CONTROL: See Alabama Pest Management Handbook, ANR-492.

**Bermuda Dreschlera or Helminthosporium Leaf Spots:** Small oval or rectangular brown spots; blight occurs when spotting heavy. CONTROL: See Alabama Pest Management Handbook.

**Bermuda Spring Dead Spot:** Yellow patches develop in early spring. CONTROL: See Alabama Pest Management Handbook and ANR-371.

**Blackberry Orange Rust (*Gymnoconia nitens*):** Young shoots and leaves are stunted and misshapen. Bright orange, powdery blisters on leaf undersurfaces. Infected leaves wither and drop. CONTROL: Sanitation; improve air circulation.

**Blackberry Rosette (Double blossom) (*Cercospora*):** Infected blossoms abnormally large with distorted petals and enlarged sepals. Shoots appear rosetted or witches broom, initially are pale green but become bronze. CONTROL: See Alabama Pest Management Handbook.

**Blueberry Botryosphaeria canker:** Elongate, sunken, cracked, lesions. CONTROL: Prune affected stems.

**Blueberry Mummy Berry (*Monolinia*):** Twig cankers, fruit rot. Berries shrivel and dry into "mummies." CONTROL: Sanitation; see Alabama Pest Management Handbook.

**Boxwood Macrophoma Blight-Stress:** Shrub may take on a reddish tint in winter, then develop a more serious yellowing and blight with tiny black dots scattered on yellowed leaves. Cankers may also develop. This is generally a problem of stressed plants. CONTROL: Pruning; proper maintenance.

**Boxwood Phytophthora root rot:** Roots become light brown, rotted, water-soaked. The outer cortex of the root is easily separated from its core. CONTROL: Sanitation; maintain proper water and fertility. See Alabama Pest Management Handbook.

**Boxwood Volutella Blight:** Dieback beyond branch and twig cankers; blighted leaves. Masses of orange spores develop on twigs and leaves in humid conditions. CONTROL: Pruning; remove fallen leaves. See Alabama Pest Management Handbook.

**Cabbage Black Rot (*Xanthomonas*):** V-shaped brown to black lesions at leaf edge; veins at lesions become black; eventually stem and vascular system rot. CONTROL: Sanitation; rotation from crucifers for 2 years.

**Cabbage Downy Mildew (*Peronospora*):** Yellow spots become dark brown. CONTROL: Sanitation; reduce water levels. See Alabama Pest Management Handbook for protective fungicide treatments.

**Cabbage Pythium Damping Off:** Lower stem becomes light brown and water-soaked; stem collapses. CONTROL: Contact Ed Sikora for commercial recommendations. Replant in drier areas in garden situations.

**Camellia Algal Leaf Spot (*Cephaleuros*):** Velvety green, reddish, or brown slightly raised spots develop on upper leaves under wet conditions. Older spots may have white centers and or become grayish green, looking almost lichen-like. CONTROL: See Alabama Pest Management Handbook.

**Camellia Alternaria Leaf Spot:** Small, black felty spots on leaves and petals. Spots may have a chlorotic halo and may coalesce into larger areas. CONTROL: Eliminate water from leaves. Chlorothalonil, Ortho Garden Disease Control, or Immunox.

**Camellia Colletotrichum Leaf Spot (Anthracnose):** Light brown circular spots; under close inspection orange-pink-white-brown sporulation may be seen on the lesions. CONTROL: Sanitation; Cleary's 3336 protective sprays.

**Camellia Exobasidium Gall:** Leaves and blossoms develop soft green then white fleshy galls. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Camellia Phomopsis Leaf Spot:** Yellow or cream blight at leaf edges. CONTROL: Immunox or Fertilome Systemic Fungicide.

**Camellia Ringspot Virus:** Yellow or brown rings on leaves. Plants may be stunted. CONTROL: Maintain proper fertility and water schedules.

**Cedar, Red (Juniper) Cedar-Apple Rust (*Gymnosporangium*):** 1-3 inch round, woody galls on stems which develop orange, jelly-like horns protruding from the entire surface of the gall. CONTROL: Remove galls before protrusions develop. Apply protective fungicides to nearby apple, crabapple, and hawthorn. See Alabama Pest Management Handbook. See ANR-468.

**Cedar, Red (Juniper) Pestalotia Tip Blight:** Tips of twigs turn brown to gray. CONTROL: Maintain proper fertility and watering schedules. Selective pruning.

**Cedar, Red (Juniper) Phomopsis Dieback:** Browened twig tips. Dieback extends further down twig with time; cankers. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Cedar, Red (Juniper) Phytophthora Root Rot:** Dieback. Roots become brown, wet, and rotted, later drying out. CONTROL: Sanitation. Reduce irrigation and improve soil drainage. See Alabama Pest Management Handbook for control in nursery settings.

**Centipede Anthracnose:** An uncommon problem which may be stress-related. Yellow or reddish brown leaf spots, dieback. The crown may also be infected; small patches of plants may yellow and die. CONTROL: Contact Austin Hagan.

**Centipede Brown Patch (*Rhizoctonia*):** Rapidly developing large circular or irregular patches; individual blades show brown lesions, crowns show lesions and rot. CONTROL: See Alabama Pest Management Handbook. See ANR-492.

**Centipede Fairy Ring:** Circles or arcs of darker green grass and/or an inner band of thin or dead grass. White mycelium may be evident and there may be associated mushrooms. CONTROL: See ANR-372.

**Centipede Lesion Nematode (*Pratylenchus sp.*)**: Yellow, declining growth, thinning, wilting, and sometimes death occurs in patches or uniformly through the turf. CONTROL: See ANR-523.

**Centipede Take-all Patch**: Small circular light or reddish brown patches which may coalesce into large areas of dead or declining turf. CONTROL: ANR-823. Bayleton; turf replacement may be necessary.

**Cherry Botryosphaeria Canker**: Elongate, cracked cankers. CONTROL: Sanitation.

**Cherry Septoria Leaf Spot**: Brown, angular leaf spots up to 1 cm, may lead to defoliation. CONTROL: Sanitation.

**Cherry Laurel Blumeriella Leaf Spot**: Control: Sanitation; Cleary's 3336.

**Cherry Laurel Bacterial Leaf Spot (*Xanthomonas*)**: Initially brown to purple spots, sometimes with a light green halo. Older spots dry and fall out leaving a "shot-hole" appearance. CONTROL: Sanitation; basic copper sulfate may provide protective control. See Alabama Pest Management Handbook.

**Cherry Laurel Cercospora Leaf Spot**: Irregular brown spots of variable size. CONTROL: Sanitation of leaves in the fall.

**Cherry Laurel Pestalotia Leaf Spot**: Brown leaf spots or blotches which may have small black specks. CONTROL: None necessary.

**Cherry Laurel Phomopsis Leaf Spot**: Irregular, reddish leaf spots. CONTROL: Sanitation; Cleary's 3336, Immunox, or Fertilome Systemic Fungicide.

**Cherry Laurel Phytophthora sp. Leaf Spot**: Brown, water-soaked leaf spots or blotches. CONTROL: Sanitation.

**Cherry, Yoshina Phytophthora Root Rot**: Older leaves may yellow, branch dieback, wilt; roots brown, water-soaked, decayed. CONTROL: Remove tree, reduce water levels, replant with *Phytophthora*-resistant plant.

**Chrysanthemum Rhizoctonia Root Rot**: Roots become brown, dried, decayed. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Cleyera Anthracnose (*Colletotrichum*)**: Reddish round or irregular spots about 5 mm. diameter scattered on leaves. CONTROL: Sanitation. Cleary's 3336 or Domain protective sprays.

**Corn Pythium Seedling Disease**: Lower stem turns light brown, becomes water-soaked, and collapses. CONTROL: None.

**Corn Rhizoctonia Stem Rot**: Stems develop dry, brown cankers. CONTROL: Sanitation.

**Cotton Rhizoctonia Stem and Root Rot:** Dry brown, sunken lesions on stem and roots. CONTROL: See Alabama Pest Management Handbook.

**Crabapple Cedar-Apple Rust:** Pale yellow leaf spots up to 1 cm; leaves fall if spots are numerous. CONTROL: See Alabama Pest Management Handbook.

**Crabapple Fire Blight:** Blossom blight, rapid dieback; cankers form at end of dieback. CONTROL: Prune 12 inches beyond dieback. See ANR-542 and Alabama Pest Management Handbook.

**Crape Myrtle Phytophthora Root Rot:** Wet-rotted, brown roots; foliage dieback. CONTROL: Remove damaged plants; reduce water levels, replant with *Phytophthora*-resistant plant.

**Crape Myrtle Powdery Mildew:** Initially a white dusting on upper leaf surfaces; leaves turn brown, may be curled or distorted. CONTROL: See Alabama Pest Management Handbook.

**Cryptomeria Botryosphaeria Canker:** Sunken branch lesions, sometimes with cracking around the edges. CONTROL: Pruning 3-4 inches beyond lesions, dipping shears in alcohol between cuts.

**Cryptomeria Phytophthora Root Rot:** Lower limbs dieback first, roots brown, water-soaked, rotted. CONTROL: Remove infected plants; improve water levels. Contact Austin Hagan for control in commercial settings.

**Daffodil Fusarium Bulb Rot:** A brown discoloration at the base of the bulb. Leaves of bulb develop a dry rot; occasionally a pink mold can be seen beneath the scales. CONTROL: Remove damaged bulbs and replace soil in the area. Rotate crops for several years.

**Daylily Kabatiella Leaf Spot and Streak:** Numerous 5 mm brown leaf spots surrounded by yellow streaking. CONTROL: Sanitation.

**Daylily Rust:** Orange pustules evident early; elongate yellow-brown leaf spots. CONTROL: Sanitation. See TI PP-506. Immunox or Fertilome Systemic Fungicide.

**Dogwood Spot Anthracnose (Elsinoe):** Small reddish brown spots with reddish borders occur on leaves, bracts, and young twigs; spotting may be severe with foliage death. CONTROL: Sanitation; see Alabama Pest Management Handbook.

**Elm Botryosphaeria Canker:** Dry, sunken, brown, possibly cracked cankers. CONTROL: Prune affected branches 3 inches beyond canker edge.

**Euonymus Powdery Mildew:** White dusting on upper leaf surfaces, some leaf deformity. CONTROL: See Alabama Pest Management Handbook.

**Fern, Boston Colletotricum Leaf Spot:** Brown spots or blotches on fronds. CONTROL: Sanitation; Cleary's 3336 protective sprays.

**Gardenia Phytophthora Root Rot:** Roots become brown, brittle; plants show general decline. The disease may spread to adjacent plants. CONTROL: Remove diseased shrubs and replace with *Phytophthora*-resistant plants. See ANR-571.

**Geranium Botrytis Blight:** Brown leaf spots, blight of blossoms and leaves. Stem blight. CONTROL: See Alabama Pest Management Handbook.

**Geranium Fusarium Root Decay:** Dieback, lower foliage yellows, roots decayed. CONTROL: Sanitation; see Alabama Pest Management Handbook.

**Holly Botryosphaeria Leaf Spot:** Round black leaf spots; cankers may develop. CONTROL: Remove damaged and fallen leaves. Cleary's 3336 may be used as protectant.

**Holly Colletotrichum Leaf Spot:** Small brown circular leaf spots. CONTROL: Cleary's 3336 may be used as protectant.

**Holly Pestalotia Leaf Spot:** Irregular gray or brown blotches. CONTROL: Sanitation.

**Hosta Pythium Crown Rot:** Brown water-soaked decay on stem near soil line. CONTROL: Sanitation; improve soil drainage; rotate from Hosta; Subdue 2E after a test treatment.

**Hydrangea Fusarium Canker:** Small, sunken, brown stem lesions. CONTROL: Prune out infected limbs 3 inches beyond canker.

**Hydrangea, Oakleaf Armillaria Root Rot:** Black threadlike structure may be present around root or crown areas; thin white fungal mats may appear under bark. Control: Remove affected plants and surrounding soil; replant away from hydrangea.

**Hydrangea, Oakleaf Bacterial Leaf Spot:** Dark, angular leaf spots up to 5 mm; CONTROL: Sanitation; water at soil level.

**Hydrangea, Oakleaf Phytophthora Crown Rot:** Lower trunk brown and wet-rotted. CONTROL: Sanitation; see Alabama Pest Management Handbook.

**Hydrangea, Oakleaf Phytophthora Root Rot:** Primarily a problem in container-grown plants. Initially, a sudden wilting of foliage, also yellowing, stunting, or leaf fall. Feeder roots brittle and brown. CONTROL: Remove all plants with damaged foliage, reduce excess water from area and improve drainage; Subdue, Banrot, or Banol may be applied to adjacent plants as a protectant and may be effective on roots with low level of infection.

**Impatiens Alternaria Leaf Spot:** Brown to black angular leaf spots. CONTROL: Sanitation; Kocide 101.

**Impatiens Impatiens Necrotic Spot Virus:** Irregularly shaped black spots up to 5 mm, black ring spots may also be present. CONTROL: Control thrips; sanitation.

**Indian Hawthorn Entomosporium Leaf Spot:** Reddish leaf spots with black centers. CONTROL: Sanitation. Protective fungicide sprays.

**Iris, Bearded Heterosporium Leaf Spot:** Brown elliptical spots may be up to 2 cm. Spots may have a halo. CONTROL: Sanitation. Cleary's 3336 protective sprays.

**Iris Fusarium Root Decay:** Yellowing, wilt, dieback. Roots brown, dry, decayed. CONTROL: Remove infected plants; rotate from iris and related plants.

**Ivy Anthracnose:** Irregular brown spots often occurring along veins. CONTROL: Sanitation; Cleary's 3336 or Domain. See Alabama Pest Management Handbook.

**Ivy Botryosphaeria Canker:** Elongate, sunken, cracked stem lesions. CONTROL: Pruning; protective sprays of Cleary's 3336.

**Ivy Phytophthora Root Rot:** Roots initially brown and water-soaked, then dry. Foliage wilts, dieback. CONTROL: Sanitation, reduce irrigation. See Alabama Pest Management Handbook and ANR-1148.

**Jasmine Phomopsis Leaf Scorch/Twig Dieback:** Twig cankers, dieback. CONTROL: Prune affected limbs 3 inches beyond edge of dieback. Protective sprays of Cleary's 3336, Halt, or OHP 6672 may be used.

**Jasmine Pythium Root Rot:** Small roots light brown, wet-rotted; foliage dieback. CONTROL: Remove severely infected plants; improve water relations.

**Juniper:** See Cedar, Red.

**Kudzu Bacterial Leaf Spot:** Small black spots with yellow halo. CONTROL: None recommended.

**Lavender Botrytis Blight:** Brown leaf spots and foliage blight. Blossoms may also have these symptoms. CONTROL: Remove symptomatic plant parts. Reduce humidity and water levels.

**Lemon Phytophthora Root Rot:** Foliage dieback, wilt, yellowing; roots become dark, wet-rotted. CONTROL: Remove dying plants and associated soil; control excess water.

**Leyland cypress Botryosphaeria Canker:** Cracked, elongate, sunken lesions or cankers on branches or trunk. CONTROL: Sanitation; prune affected branches 3 inches beyond canker edge.

**Leyland cypress Cercospora/Cercospora Blights:** Blight usually starts on lower inner leaves. CONTROL: Pruning, sanitation. Cleary's 3336 can be used as protective spray. See ANR-1196.

**Leyland cypress Seiridium Canker:** Elongate, sunken cankers with sap flow. CONTROL: Sanitation; see Alabama Pest Management Handbook, ANR-1160.

**Liriope Fusarium Crown Rot:** Dry rot of lower stem. CONTROL: Avoid plant stress. Cleary's 3336 as protective spray.

**Liriope Rhizoctonia Crown Rot:** Lower stems brown and dry. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Logquat Botryosphaeria Canker:** Sunken, elongate cankers with cracked edges. CONTROL: Sanitation; prune out affected branches.

**Lupin Sclerotinia Blight:** Chlorotic or bleached leaves, wilt, dieback; may see bare limbs with just seed pods, crown rot. CONTROL: None.

**Magnolia Black Mildew:** Black mold on undersurfaces of leaves. CONTROL: None.

**Magnolia Cercospora Leaf Spot:** Brown circular or irregular leaf spots. CONTROL: Sanitation, Cleary's 3336.

**Magnolia Phyllosticta Leaf Spot:** Round circular spots up to 1 cm. See Alabama Pest Management Handbook under "Leaf Spot."

**Maple, Red Botryosphaeria Canker:** Dry, cracked, dark branch lesions. CONTROL: Prune out cankers.

**Maple, Red or Japanese Phyllosticta Leaf Spot:** Small, circular, light brown leaf spots with darker brown or purplish borders. CONTROL: Sanitation of fallen leaves. See Alabama Pest Management Handbook.

**Oak Botryosphaeria Canker:** Sunken lesions with cracked margins. CONTROL: Pruning.

**Oak Hypoxylon Canker:** Thick, hard, black fungus layer under the bark. CONTROL: Prune out cankers.

**Oak, Shumard Fusiform Canker:** Very small yellow to brown leaf spots; dark, hair-like structures on undersurface of leaf spots. CONTROL: Damage to oaks is not significant; remove loblolly and slash pines in area. This canker is also found on **Red and Water Oaks**.

**Oats Black Loose Smut:** Smutted plants generally shorter; seed heads filled with dark, sooty spore masses. CONTROL: Fungicide seed dressing before planting; no control in field.

**Oats Barley Yellow Dwarf Virus:** Older foliage becomes yellow to red in color; plants become stunted with excess tillering. CONTROL: Control difficult and not necessarily cost effective. Control aphids. Eliminate grassy weeds near field.

**Oats Crown or Leaf Rust:** Bright yellow or orange pustules on leaves, sheathes, panicles, or stem. CONTROL: Deep plowing.

**Oats Helminthosporium Leaf Spot:** Small, elongate, reddish-brown leaf spots. CONTROL: None, damage is usually minimal.

**Pachysandra Volutella Blight:** Sunken brown stem lesions. Orange dots may be seen on surface of lesions. CONTROL: Prune out damaged areas.

**Palm Fusarium Crown Rot**: Branch dieback; dry rot decay of lower trunk. CONTROL: Sanitation; Cleary's 3336 protective drench.

**Pansy Anthracnose**: Round white to gray leaf spots. CONTROL: See Alabama Pest Management Handbook.

**Pansy Fusarium Stem and Crown Cankers**: Lower stem develops a reddish brown decay. CONTROL: Sanitation.

**Peach Armillaria Trunk/Root Rot**: Trees do not leaf out in spring, or if they do they dieback a few weeks later. Black thread-like structures and/or white mycelial mats may be present under the bark near the soil line. CONTROL: Sanitation of infected plants including roots.

**Peach Black Knot**: Green or black elongated swellings along branches. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Peach Crown Gall**: Brown irregular swellings at lower trunk or upper roots. CONTROL: Sanitation; crop rotation. Contact Ed Sikora.

**Peach Botryosphaeria Canker, Gummosis**: Oval sunken lesions on bark with cracked edges and resin exudate. CONTROL: Sanitation.

**Peach Leaf Curl (*Taphrina*)**: Thickened, puckered leaves which may turn reddish-green. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Peach Phomopsis Twig Blight**: Oval, sunken cankers; branch cankers may result in dieback and wilting; discoloration evident when outer bark is removed. CONTROL: Sanitation. Contact Ed Sikora.

**Peach Root Knot Nematode**: Dieback, trees have poor growth, root galls. CONTROL: Sanitation; crop rotation or fumigation. Contact Ed Sikora.

**Pear Botryosphaeria Canker**: Small, oval, cracked cankers on branches and trunk. CONTROL: Sanitation.

**Pear Entomosporium Leaf Spot**: Small black leaf spots. CONTROL: Sanitation.

**Pear, Bradford Fireblight (*Erwinia*)**: Black dieback, blossom blight; twigs may have a shepherd's crook appearance. CONTROL: See Alabama Pest Management Handbook.

**Pecan Hypoxylon Canker**: Hard, brown, patches on trunk where bark falls off. CONTROL: Sanitation; prune affected branches. When the canker occurs on the main trunk the tree must be removed to prevent spread to other trees.

**Peony Anthracnose**: Round, light brown leaf spots up to 3 mm. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Pepper Bacterial Leaf Spot:** Dark, angular leaf spots up to 5 mm with wet edges. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Periwinkle Phytophthora Blight:** Brown stem and leaf lesions. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Periwinkle Pythium Root Rot:** Roots brown and water-soaked. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Petunia Crown Rot (*Phytophthora parasitica*):** Cankers and blight develop on foliage. CONTROL: Sanitation. Daconil, Echo, Thalonil, and Aliette are labeled.

**Phlox (and other Ornamentals) Powdery Mildew:** Light-colored powdery patches on leaves and stems; some distortion of new growth. CONTROL: Cleary's 3336.

**Phlox (and other Ornamentals) Rhizoctonia Blight:** Brown blotches on lower leaves; whole leaves and stems may be affected. CONTROL: Sanitation, Cleary's 3336.

**Photinia Armillaria Root Rot:** Plant decline. A thin, white mycelial layer may be found under the bark or on roots as well as black thread-like rhizomorphs on roots. Honey-colored mushrooms may be present. CONTROL: Sanitation of plants and roots. Crop rotation. See ANR-907.

**Photinia Entomosporium Leaf Spot:** Dark red spots or blotches on both leaf surfaces. CONTROL: Pruning; fungicide treatment. See ANR-392. See Alabama Pest Management Handbook.

**Pine, Loblolly Fusiform Rust (*Cronartium quercuum f. sp. fusiforme*):** Elliptical swellings on branches and trunks with a rusty, powdery coating. CONTROL: Sanitation. Protective sprays in nursery settings. See Alabama Pest Management Handbook.

**Pine, Loblolly Needle Rust (*Coleosporium*):** Cream-colored, 2-3 mm pustules along needle edges. CONTROL: none.

**Pine, Longleaf seedlings Rhizoctonia Root Rot:** Brown lesions, often shriveled, on roots. CONTROL: Sanitation.

**Pine, Virginia Fusarium Pitch Canker:** Pine resin covers sunken oval lesions on branches and trunks. CONTROL: Sanitation.

**Pine, Virginia Needle Rust (*Coleosporium*):** Cream-colored, 2-3 mm pustules along needle edges. CONTROL: none.

**Plum Black Knot:** Green, swollen, elongated galls in spring become black in summer. CONTROL: Pruning; see ANR-1055. Apply Captan at green tip stage.

**Plum Brown Rot:** Gray mold on blossoms, profuse gumming at margin between healthy and diseased twig tissue, circular necrotic lesions on fruit. CONTROL: See Alabama Pest Management Handbook.

**Poa trivialis Pythium Blight:** Yellow to brown irregular or circular areas in turf; dieback. CONTROL: See Alabama Pest Management Handbook and ANR-594.

**Privet Cercospora Leaf Spot:** Round or irregular leaf spots up to 1 cm. CONTROL: See Alabama Pest Management Handbook.

**Quince Fireblight (*Erwinia amylovora*):** Blossom blight followed by rapid dieback. CONTROL: Severe pruning.

**Rhododendron, Azalea Botryosphaeria Canker:** Elongate sunken brown cankers, often with cracked margins. CONTROL: Sanitation.

**Rhododendron Cercospora Leaf Spot:** Usually round, brown spots up to 1 cm. CONTROL: Sanitation; Cleary's 3336 or Domain protective sprays.

**Rhododendron Pestalotia Leaf Spot:** Gray-brown leaf blotches, often occurs on cold-stressed or injured leaves. CONTROL: Sanitation.

**Rose Black Spot (*Diplocarpon rosa*):** Round black spots with feathery edges. CONTROL: See ANR-505 and Alabama Pest Management Handbook.

**Rose Common Canker:** Red to yellow spots in the bark become light brown cankers with a dark brown margin, becomes shrunken and cracked. CONTROL: Avoid injury to canes; prune the affected canes with sharp tools immediately above the node and at an angle.

**Rose Powdery Mildew (*Sphaerotheca spp.*):** White powdery coating on leaves and stems. CONTROL: See Alabama Pest Management Handbook and ANR-407.

**Snapdragon Anthracnose:** Small brown circular leaf spots. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Snapdragon Downy Mildew:** White spots up to 3 cm on leaf undersurface become dark brown, leaf death. CONTROL: Sanitation, avoid prolonged leaf wetness.

**Snapdragon Pythium Irregular Crown and Root Rot:** Light brown, water-soaked roots. Leaves, especially lower foliage, may wilt and dieback. CONTROL: Remove damaged plants. Reduce soil moisture and improve drainage. Replacement of some soil may be helpful.

**St. Augustinegrass Brown Patch:** Brown blotches on individual blades; whole blade may become brown. CONTROL: See Alabama Pest Management Handbook.

**St. Augustinegrass Gray Leaf Spot:** Gray spots and blotches which may become large, foliage dieback. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**St. Augustinegrass Ring Nematode:** Circular to irregular patches of thin, chlorotic, wilted turf. CONTROL: Promote rigorous root growth.

**St. Augustinegrass Take-All Patch (*Gaeumannomyces*)**: Circular light to reddish-brown patches of turf. CONTROL: Maintain soil pH between 5.5-6.0; use ammonium forms of nitrogen.

**Strawberry Anthracnose Fruit Rot (*Colletotrichum*)**: Dark rotting develops on fruit. Older spots may produce orange spores. CONTROL: See Alabama Pest Management Handbook or Spray Guide Bulletin for Small Fruit.

**Strawberry Botrytis Fruit Rot**: Gray-brown rotted areas often with fluffy mycelial growth. CONTROL: Sanitation. See Alabama Pest Management Handbook or Spray Guide Bulletin for Small Fruit.

**Strawberry Mycosphaerella (Common) Leaf Spot**: Symptoms vary by variety and temperature. 2-3 mm round leaf spots may have light centers and purple margins. Spots may coalesce causing leaf death. CONTROL: See Alabama Pest Management Handbook.

**Strawberry Phytophthora Crown, Root, and Petiole Rots**: Inner crown may be reddish. Crown and roots may be wet, brown, rotten. Petioles become brown and decayed. CONTROL: Sanitation. Reduce irrigation and/or improve drainage. See Alabama Pest Management Handbook.

**Sweet Potato Black Rot (*Ceratocystic fimbriata*)**: Initially small dark spots appear on roots. The rot tends to remain firm and shallow. CONTROL: Sanitation. See Alabama Pest Management Handbook for a commercial crop.

**Thrift (*Phlox subulata*) Anthracnose (*Colletotrichum*)**: Small brown or reddish-brown spots develop and may coalesce. CONTROL: Sanitation. Cleary's 3336 or Domain protective sprays may be used.

**Tomato Bacterial Leaf Speck**: Small, angular, black leaf spots, sometimes with a halo. CONTROL: See Alabama Pest Management Handbook.

**Tomato Bacterial Leaf Spot (*Xanthomonas axonopodis*)**: Round black, water-soaked leaf spots. CONTROL: See Alabama Pest Management Handbook and ANR-71.

**Tomato Bacterial Wilt**: Green plants suddenly wilt; vascular tissue yellow to light brown, darker as disease progresses. CONTROL: Rotate away from solanaceous crops or fumigate soil.

**Tomato Fusarium Wilt**: Lower leaves yellow, wilted; this progresses up stem. Lower stem vascular tissue develops brown color. CONTROL: Sanitation; rotate away from tomatoes 10 or more years. Some resistant tomato varieties are only resistant to 2 of the 3 common races of this fungus.

**Tomato Leaf Mold**: Gray to pale green leaf blotches; leaves may curl and fall. CONTROL: See Alabama Pest Management Handbook.

**Tomato Pythium Root Rot**: Roots discolored and water-soaked. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Tomato Rhizoctonia Crown Rot:** The crown becomes brown, dried, and rotted. CONTROL: Crop rotation; possibly soil solarization.

**Tomato Tomato Spotted Wilt Virus:** Yellow to brown leaf spots, plants wilted stunted. CONTROL: Sanitation. Control thrips.

**Tomato Target Spot:** Round or irregular brown spots, sometimes with a target. CONTROL: Sanitation. See Alabama Pest Management Handbook.

**Tulip Fusarium and Penicillium Bulb Rots:** Dry, sunken, brown-gray lesions develop on bulbs. *Penicillium* sporulation may occur as blue-gray mold on lesion surface. CONTROL: Sanitation; bulb dips. See Alabama Pest Management Handbook.

**Turnip Cercospora Leaf Spot:** Irregular cream to brown leaf spots, up to 1 cm diameter. CONTROL: Sanitation. See Alabama Pest Management Handbook or Spray Guide Bulletin for Vegetables.

**Verbena Phytophthora and Pythium Crown Rots:** Lower stems brown and wet-rotted. CONTROL: Sanitation. Subdue may be used in commercial settings.

**Vinca, Annual Rhizoctonia Stem Rot:** Dried, dark brown sunken stem lesions; dieback of affected stems. CONTROL: Sanitation; remove damaged plants. Protective sprays of Domain, Chipco 26019, or Cleary's 3336. See Alabama Pest Management Handbook.

**Watermelon Fusarium Root Rot:** Lower leaves yellow; wilt and yellowing continue up stem. CONTROL: Crop rotation or plant resistant varieties.

**Watermelon Gummy Stem:** Brown spots which may cause leaf blight; round tan to black spots may appear on stems; brown exudates may come from stem lesions. CONTROL: See Alabama Pest Management Handbook or Southeastern Vegetable Crop Handbook.

**Wheat Bacterial Blight (Black Chaff) (Xanthomonas):** Elongated blackish lesions may develop on foliage early in the season. Glumes later become spotted with brown to black lesions; these may be confused with Septoria glume blotch. CONTROL: None, except deep plow or crop rotation.

**Wheat Barley Yellow Dwarf Virus:** Yellowing and reddening of older leaves; excessive tillering, stunting. CONTROL: None except aphid control.

**Wheat Leaf Rust (Puccinia):** Orange to dark red pustules on leaf blades and sheaths. CONTROL: See Alabama Spray Guide.

**Wheat Loose Smut:** Blackened heads. CONTROL: Rotate crop for at least one year.

**Wheat Powdery Mildew (Erysiphe):** White to gray fluffy mycelium on upper surface of leaf blades. See Alabama Spray Guide.

**Wheat Septoria Blotch**: Yellow flecks on lower leaves become irregular, brownish lesions up to 5 by 15 mm sometimes developing gray centers. CONTROL: Generally no control is necessary.

**Wheat Take-All (*Gaeumannomyces*)**: Stem and root at soil line become decayed and blackened. CONTROL: Crop rotation for 1 year to oats, corn, or legumes.

**Wheat Tan Spot**: Brown oval or round leaf spots. CONTROL: None.

**Wheat Wheat Soilborne Mosaic Virus**: Stunted plants; leaf streaks or yellowish mosaic lesions. CONTROL: Crop rotation.

**Zoysia Brown Patch (*Rhizoctonia*)**: Rapidly developing large circular or irregular patches; individual blades show brown lesions, crowns show lesions and rot. CONTROL: See ANR-492.

**Zoysia Dollar Spot**: White or yellow silver dollar-sized spots in turf. Spots may coalesce. CONTROL: See ANR-493.

**Zoysia Nematode Damage**: Areas of thinning turf, dieback, poor root system. CONTROL: See Alabama Pest Management Handbook.

**Zoysia Rust**: Orange-brown, powdery spots on leaves. CONTROL: See Alabama Pest Management Handbook or ANR-621.

**Zoysia Take-All**: Individual plants yellow and die, brown or black lesions on roots. CONTROL: See Alabama Pest Management Handbook and ANR-312.