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PP-578

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

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

**OCTOBER INSECT REPORT FROM THE AUBURN
PLANT DIAGNOSTIC LAB**

DISEASE POSSIBILITIES FOR NOVEMBER

OTHER NEWS*

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Auburn Plant Disease Report-October (J. Mullen)

In October, the Auburn Plant Diagnostic Lab received 110 plant samples. (75 samples were typical client samples; 20 were research-survey samples; 15 were nursery trace forward samples from the AL State Department of Agriculture to be tested for *Phytophthora ramorum* blight (also called SOD - Sudden Oak Death). Some of the diseases seen in October included anthracnose on azalea, camellia, Coreopsis, fig, mondograss, shamrock, and soybean; Helminthosporium (Bipolaris) type blight on bermuda & common bermuda; take-all patch on common bermuda; gummy stem blight on cantaloupe; brown patch on centipede, St. Augustine and zoysia grasses; Pythium root rot on chrysanthemum; Fusarium root rot on collards; Aphelenchoides foliar nematode damage on bird's nest fern; severe Cercospora blight on tassell fern; Phytophthora, Pythium & Fusarium root decay of gardenia; Botrytis blight on geranium; bacterial leaf spot & powdery mildew on hydrangea; Botryosphaeria crown canker on red maple; Pythium crown & root decay along with Tylenchus nematode root damage on dwarf nandina; Phytophthora root rot on nuttall oak; powdery mildew on southern red oak; black spot on rose; bacterial leaf spot on salvia; gray leaf spot & take-all patch on St. Augustine grass; Bipolaris leaf

spot on switch grass; cucumber mosaic virus, tobacco mosaic virus, and tomato spotted wilt virus on tomato; rust and take-all patch on zoysia.

Anthracnose, caused by the fungus *Colletotrichum* and related fungi, is commonly seen in the fall as many plants become pre-senescent or become weakened from other factors. *Colletotrichum* can be a primary disease agent or it can be a very good opportunist, jumping onto a plant previously weakened. In many cases anthracnose develops as a leaf spot disease, but stems or small branches may also be infected in some situations. At this time of year and especially on deciduous plants, the only action needed is to collect & remove all fallen leaves from the area. If anthracnose leaf spots develop on evergreen plants, Cleary's 3336 or Halt may be used if protection is needed.

Botrytis is a cool weather fungus and fall conditions are generally good for development of Botrytis foliage blights or gray mold. See the Alabama Pest Management Handbook for fungicide recommendations.

Bacterial leaf spots (seen on hydrangea & salvia) are often seen in the fall in greenhouse situations where conditions are warm and moist, especially where over-head irrigation is present. Fall cooler temperatures somehow must translate into adjustment periods in the greenhouse setting where conditions become more favorable (more wet) for bacterial development and spread. Control requires strict sanitation of infected plants and, usually, reduced over-head irrigation, if possible. Copper spray materials can provide a level of bacterial protection but control is not 100%.

Poorly growing, mottled tomatoes from Blount County were tested for viruses with Agdia ELISA kits. Our results showed positive reactions for three viruses - cucumber mosaic virus (CMV), tobacco mosaic virus (TMV) and tomato spotted wilt virus (TSWV). CMV is rapidly aphid transmitted; TMV is usually transmitted mechanically by rubbing but not by insects; TSWV is transmitted by thrips. Check with Ed Sikora for more information.

The bird's nest fern showed a brown general discoloration and also a vein limited browning at the petiole end of lower leaves. We initially considered a root problem. Microscopic study showed that the damaged leaf tissues contained the foliar nematode *Aphenenchoides* which is reported to cause this type of unusual foliar damage on bird's nest fern. Foliar nematode typically causes angular, yellow followed by dark, wet-looking leaf spots. Hosta, Verbena, Lantana, chrysanthemum, and some other herbaceous plants are susceptible to foliar nematode damage.

A second nursery in Oregon has been determined to have some plants infected with *Phytophthora ramorum* (also known as Sudden Oak Death). Consequently, USDA has notified state departments of agriculture in states where these potentially infected plants have been shipped. As a result of the 'trace forward' plants now located in Alabama (and other states), stop-sale notices are in place until symptomatic plants can be tested. If plants are tested and results are negative, stop sale notices are removed. If plants test positive in our lab, the plants

(or their DNA) must be sent on to a Beltsville Lab for further testing before final results are determined. If the Beltsville Lab finds the plants positive for *P. ramorum*, USDA/APHIS will notify the PPQ (Plant Protection Quarantine) Regional Office who will then notify the state department of agriculture regulatory officials who will communicate results and regulations to the grower. All this activity is a serious effort to prevent this disease from spreading into the landscapes & forested areas where there is a potential for major damage and mortality of oak trees.

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

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Azalea	Colletotrichum Leaf Spot	Chilton
Bermuda	Bipolaris Leaf Spot	*
Bermuda, Common	Helminthosporium Leaf Spot	Calhoun
	Take-All Patch (<i>Gaeumannomyces</i>)	Calhoun
Camellia	Anthracnose (<i>Colletotrichum</i>)	Hale
Cantaloupe	Gummy Stem Blight (<i>Mycosphaerella</i>)	Blount
Centipede	Brown Patch (<i>Rhizoctonia</i>)	Jefferson
Chrysanthemum	Pythium Root Rot	Lee
Collards	Fusarium Root Rot	Calhoun
Coreopsis	Colletotrichum Leaf Spot	*
Fern, Bird's Nest	Aphelenchoides Foliar Nematode	*
Fern, Tassell	Cercospora Leaf Spot/Blight	*
	Fusarium Root Rot	*
	Pythium Root Rot	*
<u>Plant</u>	<u>Disease</u>	<u>County</u>
Fig	Anthracnose (<i>Colletotrichum</i>)	Butler

Gardenia	Phytophthora Root Rot	*
	Possible Fusarium Root Rot	*
	Pythium Root Rot	*
Geranium	Botrytis Blight	Lee
Hydrangea	Bacterial Leaf Spot	*
	Powdery Mildew	Tuscaloosa
Maple, Red	Botryosphaeria Crown Rot	*
Mondograss	Anthracnose (<i>Colletotrichum</i>)	Tuscaloosa
Nandina, Dwarf	Pythium Crown & Root Rot	*
	Tylenchus Nematode Root Damage	*
Oak, Nuttall	Phytophthora Root Rot	*
Oak, Southern Red	Powdery Mildew	Montgomery
Rose	Black Spot (<i>Diplocarpon rosa</i>)	Tuscaloosa
Salvia	Bacterial Leaf Spot	*
Shamrock (Oxalis)	Anthracnose (<i>Colletotrichum</i>)	Limestone
Soybean	Anthracnose (<i>Colletotrichum</i>)	Pickens
St. Augustine	Brown Patch (<i>Rhizoctonia</i>)	Choctaw, Jefferson, Mobile
	Gray Leaf Spot (<i>Pyricularia</i>)	Calhoun, Jefferson
	Take-All Patch (<i>Gaeumannomyces</i>)	Calhoun, Choctaw, Henry, Jefferson, Mobile
<u>Plant</u>	<u>Disease</u>	<u>County</u>
Switch Grass	Bipolaris Leaf Spot	Cherokee

Tomato	Cucumber Mosaic Virus	Blount
	Tobacco Mosaic Virus	Blount
	Tomato Spotted Wilt Virus	Blount
Zoysia	Brown Patch (<i>Rhizoctonia</i>)	Montgomery
	Rust (<i>Puccinia</i>)	Jefferson
	Take-All Patch (<i>Gaeumannomyces</i>)	Montgomery

*Locations are not reported for nursery, greenhouse, and golf course samples.

Birmingham Plant Disease Report-October (J. Jacobi)

We received sixty samples during October. Some of the problems seen last month included root rot on boxwood, white peach scale on cherry laurel, *Colletotrichum* leaf spot on pear, and large patch on St. Augustinegrass and zoysiagrass.

Table 2. 2004 October Diseases Seen In The Birmingham Plant Diagnostic Lab.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Arborvitae	Spruce Spider Mites	Jefferson
Azalea	Lacebugs	Jefferson
	Phomopsis Dieback	Jefferson
	Planted Too Deep	Jefferson
Bentgrass	Pythium Root Rot	*
Boxwood, American	Phytophthora Root Rot	Jefferson
	Pythium Root Rot	Jefferson
Camellia, Sasanqua	Camellia Dieback (<i>Colletotrichum</i>)	Jefferson
<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Colletotrichum Leaf Spot	Jefferson

Cherry Laurel	White Peach Scale	Jefferson
Daphne, Winter	Phytophthora Root Rot	Jefferson
Dianthus	Pythium Root Rot	Jefferson
Holly, Chinese	Cottony Camellia Scale	Jefferson
	Tea Scale	Jefferson
Holly, Foster	Two-Lined Spittle Bug Damage	Jefferson
Holly, Japanese	Botryosphaeria Canker	Jefferson
	Southern Red Mites	Jefferson
Ivy, English	Phytophthora Root & Stem Rot	Jefferson
Lantana	Lantana Lacebug	Jefferson(2)
Ligustrum	Oedema	Jefferson
Maple, Sugar	Anthracnose	Tuscaloosa
Pansy	Pythium Root Rot	Jefferson(2)
Pea, Snow	Damping-Off (<i>Pythium</i>)	Shelby
Pear, Bradford	Colletotrichum Leaf Spot	Jefferson
Pecan	Leaf Spot (<i>Gnomonia</i>)	Tuscaloosa
Poppies, Iceland	Rhizoctonia Root Rot	Jefferson
Rhododendron	Cercospora Leaf Spot	Jefferson
St. Augustinegrass	Large Patch (<i>Rhizoctonia</i>)	Jefferson
Zoysiagrass	Dollar Spot (<i>Sclerotinia</i>)	Jefferson
<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Large Patch (<i>Rhizoctonia</i>)	Jefferson

*Locations are not reported for nursery, greenhouse, and golf course samples.

Auburn Entomology Report-October (C. Ray)

County	Crop	Category	Specimen Name
DeKalb			Navel Orangeworm
Choctaw	Greens	Row Crops	Diamond Back Moth Larvae
Choctaw	Greens	Row Crops	Diamond Back Moth
Elmore	Home	Household- Miscellaneous	Blowfly Larvae
Blount	Holly	Ornamental	Tea Scale
Covington	Poultry	Medical/Veterinary	Gamasid Mite Tritonymphs
Montgomery	Garden Pond	Ornamental	Blood Worms (Chironomidae Larvae)
Geneva	Nuttall Oak	Ornamental	Cicada Damage
Limestone	Yaupon Holly	Ornamental	Tortricidae, poss. Oblique Banded Leaf Roller
Lee	Hickory Stump	Miscellaneous	<i>Philomycus</i> sp. slug
Choctaw	Home	Household- Miscellaneous	Hatching cockroaches, <i>Periplaneta</i> sp.
Pickens	Home	Medical/Veterinary	Male Brown Recluse Spider
Hale	Azalea	Ornamental	Azalea Lace Bug, Southern Red Mite, False Spider Mites
Mobile		Miscellaneous	Scarlet-Bodied Wasp Moth

Disease Possibilities For November

Typically in November, we see *Helminthosporium* (*Bipolaris*, *Drechslera*, and *Exserohilum*) leaf spots on small grains and grasses. Rust may be seen on small grain crops. A

variety of pansy diseases may be seen. Turnips and other related plants often develop *Cercospora* leaf spots. Greenhouse crops may develop *Botrytis* and a variety of other fungal and bacterial diseases.

The list below includes some common disease problems received in the lab during November of the past few years. Comments on control practices are brief. Refer to the Alabama Pest Management Handbook or appropriate fact sheet for details on disease control.

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

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Alfalfa	Leptosphaerulina Leaf Spot	Leaf spots on young leaves and petioles; small, black, pepper spots or 1-3mm eyespots with tan centers, dark brown borders and diffuse halos.	None.
Ajuga	Rhizoctonia Crown & Root Rot	Crowns & roots develop a brown, dry decay.	Sanitation. Cleary's 3336 will provide protective disease control.
Allspice (<i>Pimenta dioica</i>)	Rust	Yellow-brown leaf spots sometimes with red-orange powdery spore masses.	Sanitation.
Anise, Japanese	Phytophthora Root Rot	Dieback. Roots are dying, brown, & soft rotted.	Sanitation. Reduce soil water levels.
Arbor-vitae	Pestalotiopsis Tip Blight	Branch tips turn brown; browning gradually progress down the branch.	Pruning. Halt may provide some disease control.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phytophthora Root Rot	Roots become brown, decayed. When disease is active, roots are water-soaked.	Sanitation; protective fungicide drenches. See AL Pest Management Handbook.
	Pythium Root Rot	Dieback. Affected small roots become	slightly brown and soft rotted.

Sanitation. Reduce water levels in soil.	See fungicides in AL Pest Management	Handbook under Arbor-vitae and	Phytophthora.
Asparagus	Helminthosporium Stem Spots	Brown elongated, usually about ½ inch long, somewhat rectangular stem lesions.	Sanitation. Mancozeb fungicides.
Azalea	Phomopsis Dieback	Sunken, elliptical, necrotic lesions on branches with dieback of distal branch segments.	Sanitation. See the AL Pest Management Handbook.
	Powdery Mildew (<i>Microsphaeria</i>)	Whitish powdery dusting on leaves; some leaf deformity if infection occurs on new growth; infected leaves eventually become yellowed.	See the AL Pest Management Handbook.
Azalea (Cuttings, Liners)	Aerial Web Blight (<i>Rhizoctonia</i>)	Lower leaves become brown spotted or blighted; when conditions are humid, a delicate mycelial webbing may occur on infected leaves; eventually, infected, blighted leaves drop.	See the AL Pest Management Handbook.
	Phytophthora Root Rot	See Arbor-vitae.	See Arbor-vitae comments.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Azalea (Cutting)	Rhizoctonia Cutting End Rot	Cutting ends develop brown lesions which may completely encircle the stem. Plant death results.	Sanitation.
Barley	Net Blotch (<i>Drechslera</i>)	Narrow, dark brown, longitudinal and transverse net-like streaks on leaves and leaf sheaths. Severely infected leaves may completely die.	Rotation.

Bentgrass	Pythium Blight/Root Rot	Foliage becomes yellowed and then brown as a result of the decaying roots which appear brown and watersoaked.	See the AL Pest Management Handbook for recommendations.
	Rhizoctonia Aerial Blight	Foliage develops brown spots and blight areas. Dieback.	See the AL Pest Management Handbook.
Bermuda	Bipolaris Leaf Spot	Small elongated spots; spot coalescence and blight of whole leaf blades when disease is severe.	See the AL Pest Management Handbook.
	Pythium Root Rot	Foliage turns yellow and dieback follows. Roots become light brown and soft rotted.	See the AL Pest Management Handbook.
Boxwood	Macrophoma Blight	Leaves are yellow with tiny black specks.	Collect all fallen leaves and remove them from the area; identify and eliminate stress factors; Cleary's 3336 or Halt may be used if desired.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	<i>Nectria cinnabarina</i> Canker	Sunken lesions on branches, sometimes with orange pin-point bodies of the fungus; dieback.	Pruning at least 3 inches beyond the canker edge.
	Phytophthora Root Rot	Lower foliage turned yellow and brown; roots are rotted with tissues water-soaked and brown.	Remove plants. Improve soil drainage. See the AL Pest Management Handbook if a large planting or nursery.
	Pythium Root Rot	This is often a secondary problem on plants previously weakened by other factors. Roots	become light brown and soft rotted. Lower foliage will initially turn yellow and brown. Foliage

browning will gradually spread upward through the plant.

Remove dying plants; improve soil drainage; reduce water levels in soil. Eliminate stress.

Broccoli, Cabbage

Black Rot
(*Xanthomonas*)

Yellow or brown V-shaped patches occur at leaf edges. Later, leaf veins in the yellowed areas become black. The black leaf veins extend down the leaf and eventually the vascular elements in stem become black.

Hot water seed treatment or plant certified disease-free seeds. When disease is present, rotate area away from crucifers for 2-3 years.

Camellia

Phyllosticta Leaf Spot

Dark purple-brown circular-oval leaf spots.

Sanitation in the fall. Protective fungicide sprays (Cleary's 3336) if disease appears early in the season.

Plant

Disease

Description

Control

Camellia, Sasanqua

Anthracnose Leaf Spot (*Colletotrichum*)

Gray-brown, usually circular leaf spots.

Sanitation of fallen leaves. Cleary's 3336 or Halt protective fungicide sprays will help.

Centipede

Brown Patch (*Rhizoctonia*)

A light brown circular patch; crowns and leaf blades become brown and dead.

See AL Pest Management Handbook.

Ring Nematode (*Criconemoides* sp.)

Patches of lawn show yellowing and thinning.

See ANR-523.

Cherry Laurel 'Otto Lukin'

Botryosphaeria Canker

Elongated sunken branch lesions, often with cracks along the margin.

Sanitation.

Chrysanthemum

Pythium Root Rot

Roots brown and water-soaked. Foliage yellows and shows poor growth, dies.

Sanitation; protective fungicide drench treatments; see AL Pest Management Handbook.

Collards

Anthracnose

White-cream, circular-irregular leaf

spots.

Copper	fungicides.		
	Black Rot (<i>Xanthomonas</i>)	See Broccoli.	---
	Cercospora Leaf Spot	Light brown irregular spots (about 0.6 cm or ¼ inch diameter), sometimes with a darker brown border.	Sanitation.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Coneflower	Aster Yellows (Suspect)	Plants become stunted with green flowers and some abnormal foliage development.	Sanitation.
Daylily	Rust (<i>Puccinia hemerocallidis</i>)	Yellowing spots and blight of leaves. Orange powder may wipe off on fingers.	See the AL Pest Management Handbook.
Dianthus	Bacterial Leaf Spot (<i>Xanthomonas</i>)	Small, black, angular, wet-looking spot.	Sanitation; Kocide may help.
	Colletotrichum Leaf Spot	Irregular brown, sometimes circular spots.	Sanitation; protective sprays of Cleary's will help.
Fescue, Tall	Pythium Blight	Brown, water-soaked lesions, blight on foliage.	Reduce watering schedule. Apply protective fungicides. See the AL Pest Management Handbook and ANR-1168.
	Rust (<i>Puccinia</i>)	Yellowing spots and blight of leaves. Orange powder may wipe off on fingers.	See the AL Pest Management Handbook.
Gardenia	Phytophthora Root Rot	Brown discolored, decayed, water-soaked roots.	Sanitation; reduce soil moisture; Banrot or Banol may be used-- usually in a nursery situation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Gardenia, Dwarf	Pythium Root Rot	Lower foliage becomes yellow and then brown. Foliage damage spreads upward. Roots become light brown and wet-rotted. This fungus usually is a problem only on weakened plants.	Remove damaged plants. Improve soil drainage. Reduce water levels in the soil. See AL Pest Management Handbook if fungicide treatment is needed.
Geranium	Oedema	Corky brown spots (2-3 mm) on lower leaf surfaces. Corresponding upper leaf surfaces become yellow spotted.	Reduce watering schedule when weather is cool and cloudy.
Helleri Holly liners and containers	Black Root Rot (<i>Thielaviopsis</i>)	Roots develop black tips and black lesions and sections.	Sanitation; See AL Pest Management Handbook.
	Rhizoctonia Aerial Blight	Lower leaves become spotted and blighted. Leaf fall occurs.	See AL Pest Management Handbook.
Holly	Pythium Root Rot	Lower foliage becomes yellow and then brown. Foliage damage spread upward. Roots become light brown and wet-rotted. This fungus usually is a problem only on weakened plants.	Remove damaged plants. Improve soil drainage. Reduce water levels in the soil. See AL Pest Management Handbook if fungicide treatment is needed.
Holly, Compacta and Helleri	Colletotrichum Leaf Spot	Brown-black circular spots.	Sanitation. Cleary's 3336 may be used as a protective treatment.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phytophthora Root Rot	Lower foliage becomes yellowed and brown. Foliage damage spreads upward in plant. Roots become brown rotted & water-soaked. The outer root cortex can be easily slipped off of the inner central root cylinder.	Remove damaged plants. Correct water problem in soil. See the AL Pesticide Handbook; Sanitation.
Hydrangea	Anthracnose	White-cream colored irregular-oval leaf spots.	See the AL Pest Management Handbook. See ANR-1212.
	Powdery Mildew	Patchy leaf areas with white dusty coating. Necrosis develops later.	See the AL Pest Management Handbook. See ANR-1212.
Indian Hawthorne	Entomosporium Leaf Spot	Black spots with red borders develop on the foliage.	Sanitation; protective fungicide sprays. See the AL Pesticide Handbook.
Ivy, English	Nectria Canker	Sunken lesions on branches/stems; sometimes diagnostic red pin-point fruiting bodies are present.	Pruning lesions making cuts at least 3 inches beyond lesions edges. Cleary's may help.
Juniper	Phomopsis Tip Blight	Dieback.	Sanitation. See the AL Pest Management Handbook.
	Phytophthora Root Rot	See Arbor-vitae.	See Arbor-vitae comments.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Kalanchoe	Powdery Mildew (<i>Sphaerotheca</i>)	Leaves and stems are covered with a white powdery dusting.	Some distortion of new growth may be present. Some foliage

yellowing and browning may be present.

Sanitation. Maintain even day-night temperatures if possible. Apply protective sprays of a recommended fungicide. See AL Pest Management Handbook.

Lavender

Fusarium Stem Rot/Pythium

Stems develop brown decay areas.

Sanitation. Reduce water levels in the area. Move lavender to a new area.

Leucothoe

Phytophthora Root Rot

Lower foliage becomes yellowed and brown. Foliage damage spreads upward in plant. Roots become brown rotted & water-soaked.

Remove damaged plants. Correct water problem in soil. Apply Subdue if a protective fungicide treatment is desired.

Powdery Mildew

Leaves develop white superficial dusting on surfaces. Affected leaf areas later turn brown.

Improve air circulation. See the AL Pest Management Handbook.

Leyland Cypress

Botryosphaeria Canker

Small-large sunken, cracked branch/trunk lesions.

Sanitation - pruning.

Cercosporidium Blight

Lower foliage becomes pale green and then brown.

Sanitation; Improve air circulation; See the AL Pest Management Handbook for protective fungicide treatments.

Plant

Disease

Description

Control

Seiridium Canker

Small-large elongated, sunken lesions with oozing sap.

Pruning. See the AL Pest Management Handbook.

Phytophthora Root Rot

Roots become brown, and wet-rotted. Plants show dieback.

Sanitation; tree Ligustrum	removal; correct Cercospora Leaf Spot	water problems. Relatively large, circular, dark brown leaf spots develop.	Collect & remove all fallen leaves from the area. Apply Cleary's 3336 or Halt for protective disease control.
Lupin	Pythium Root Rot/Seedling Disease	Roots become brown and watersoaked.	---
	Rhizoctonia Root Rot	Roots become brown and dried.	---
Magnolia, Southern	Algal Leaf Spot (<i>Cephaleuros</i>)	Green or reddish- colored, slightly raised, usually circular or oval spots with wavy margins develop on upper leaf surfaces.	Sanitation.
Marigold Plugs	Alternaria Leaf Spot	Small, dark brown, irregular spots (1-3 mm) on leaves and stems.	See AL Pest Management Hand- book.
Mustard	Cercospora Leaf Spot	Light brown irregularly-shaped leaf spots.	Sanitation. See the AL Pest Management Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Oak	Ganoderma Wood/Root Rot	Tree dieback. Conks developing on the trunks of infected trees are non-gilled, poroid, with or without a lateral stalk, with a distinctive reddish-brown or gray-brown varnish- like crust on the upper surface.	Sanitation.
	Powdery Mildew (<i>Phyllactinia</i>)	Powdery white dusting on upper leaf surfaces with blight	following.

Sanitation. If tree is	small, protective	sprays of Cleary's	3336.
Oak, Red	Powdery Mildew (<i>Phyllactinia</i>)	Leaves develop white superficial dusting on surfaces. Affected leaf areas later turn brown.	Improve air circulation. See the AL Pest Management Handbook.
Oats	Crown Rust (<i>Puccinia coronata</i>)	Bright orange, round to oblong, powdery pustules on leaves, sheaths, stems, and panicles.	Resistant cultivars.
	<i>Drechslera avenae</i> Leaf Spot	Small brown flecks become longitudinal strips of dead tissue. Outer edges of the brown strips have diffuse areas of yellow or red which may involve the entire leaf blade. Diseased leaves often die.	Rotation; deep plowing; resistant cultivars. See AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Okra	Root Knot Nematode (<i>Meloidogyne</i>)	Plants grow poorly and may be stunted. Roots contain irregularly shaped galls.	Crop rotation, solarization, or use of resistant varieties will help. See ANR-30.
Pansy	Anthracnose (<i>Colletotrichum</i>)	Small, cream-colored, circular spots with dark borders.	Sanitation; See the AL Pest Management Handbook; also ANR-1214.
	Black Root Rot (<i>Thielaviopsis</i>)	Black root tips and black root lesions and areas.	Cleary's 3336; See AL Pest Management Handbook and ANR-1214.
	Cercospora Leaf Spot	Gray-black round leaf spots about ¼-½ cm.	Sanitation. Daconil or Cleary's 3336 may be used for protective disease control, also ANR-1214.

	Myrothecium Crown Rot	Collapse of petioles or lower stems. Tiny black and white pin-head sized bodies on collapsed tissues.	Sanitation. Daconil protective sprays. See ANR-1214.
	Phytophthora Crown Rot	Crowns, roots become brown and water-soaked.	Sanitation. See the AL Pest Management Handbook and ANR-1214.
	Pythium Crown/Root Rot	Crowns, roots become brown and water-soaked.	See the AL Pest Management Handbook and ANR-1214.
	Rhizoctonia Crown Rot	Crowns develop a dry, brown, sometimes shriveled decay.	Sanitation. Cleary's 3336 would provide some protection. See ANR-1214.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Pear, Bradford	Black Rot (<i>Botryosphaeria obtusa</i>)	Leaf spots are black or brown, sometimes with a dark border. May be confused with <i>Fabraea</i> leaf spot.	Sanitation. Protective sprays of Cleary's 3336 will help.
	<i>Fabraea</i> (Entomosporium) Leaf Spot	Leaf spots are usually black and somewhat circular. May be confused with black rot leaf spots.	Sanitation. See AL Pest Management Handbook.
Periwinkle	Rhizoctonia Crown Rot	Crowns, roots become dried, brown, rotted.	Sanitation. See the AL Pest Management Handbook.
Phlox	Black Root Rot (<i>Thielaviopsis</i>)	See Pansy.	See Pansy.
Photinia	Entomosporium Leaf Spot	Black spots with dark red borders; spot coalescence; leaf drop.	Protective fungicide sprays; sanitation.
Pine, Virginia	Ploiderma (<i>Lophodermium</i>)	Needle Cast	Older needles become yellow and then

brown in spots; eventually whole needles turn brown and drop. Small black football shaped lesions (1-2 mm long) develop on brown needles.

Protective fungicide sprays. See the AL Pest Management Handbook.

Fusarium Pitch Canker

Elongated cankers. Some resin flow.

Sanitation. See comments in the AL Pest Management Handbook.

Plant

Disease

Description

Control

Rhizosphaeria Needle Cast

Needles turn brown. Tiny black dots (fruiting bodies) occur in a linear arrangement on browning needles.

Plum

Brown Rot (*Monilinia*)

Fruit tissues become brown & rotted. A gray mold may develop on the fruit surface.

Sanitation. Captan. See Ed Sikora.

Poa trivialis

Pythium Blight

Grass leaves become wet, brown, and decayed.

Decrease irrigation. See the AL Pesticide Handbook and A. Hagan.

Poinsettia

Alternaria Leaf Spot

Gray-brown, circular leaf spots; zonate pattern possible.

Sanitation. Exotherm Termil may provide protective control.

Botrytis Blight

Bracts and leaves develop gray lesions and areas. Elongated lesions may occur on stems. A gray web may develop on surface of lesions when

conditions are humid.

See AL Pest Manage-

ment Handbook.

Phyllosticta Leaf Spot

Gray-brown, circular leaf spots; tiny black specks (fungal bodies) may be scattered on leaf spot surfaces.

Sanitation. Cleary's 3336 or Halt will provide protection.

Phytophthora Root Rot

See Pythium Root Rot.

See Pythium Root Rot.

Plant

Disease

Description

Control

Pythium Stem and Root Rot

Lower stem and roots become brown, soft, water-soaked, and rotted.

See AL Pest Management Handbook; sanitation.

Rhizoctonia Crown Rot & Root Rot

Lower stems develop dry, medium-dark brown surface lesions; roots may become brown and dried.

See AL Pest Management Handbook; sanitation.

Rose, Miniature

Cylindrocladium Root Rot

Roots show black lesions and rotted areas.

Sanitation.

Ryegrass

Pythium Blight

Crowns and leaf blades become wet and greasy-looking.

See AL Pest Management Handbook.

Rye

Bipolaris sorokiniana Leaf Spot

Brown, elongated spots on leaf blades.

None.

Snapdragon

Pythium Root Rot

Roots become water-soaked and light brown.

Sanitation. See the AL Pest Management Handbook.

Soybean

Anthracnose (*Colletotrichum truncatum*)

Irregularly shaped brown blotches on stems, pods, leaves sometimes with tiny black specks. This disease can cause a reduced yield.

Use disease free seed. Deep plow crop residues.

Soybean Cyst

Nematode

Plants are stunted,

yellowed.
Resistant cultivars & crop rotation. Reduce plant stress by cultural management. See Ed Sikora.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Stem Canker (<i>Diaporthe phaseolarum</i> var. <i>caulivora</i>)	Small red-brown stem lesions, usually near a leaf node; lesions become large and black, sunken cankers. Leaves develop interveinal yellowing-necrosis; plants die.	Check with Ed Sikora.
St. Augustine	Brown Patch (<i>Rhizoctonia</i>)	See Centipede.	See Centipede.
	Take-All Patch (<i>Gaeumannomyces</i>)	Black decay areas on stolons and roots. Yellowing and dying of plants.	See AL Pest Management Handbook and ANR-823.
Strawberry	Botrytis Fruit Rot	Fruit tissue becomes brown and watery, decayed. A gray mold may develop on fruit surface.	Sanitation. See the AL Pest Management Handbook.
	Phytophthora Root & Crown Rot	Crowns and roots become brown and soft-rotted. Plants develop yellowed lower leaves, dieback, and wilt.	See the AL Pest Management Handbook and ANR-906.
Sweet Potato	Black Rot (<i>Ceratocystis</i>)	Gray-black, slightly sunken lesions or blotches. Underlying tissues between periderm and vascular system become black, firm, dry.	See AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Fusarium Surface Rot (<i>F. oxysporum</i>) (A Storage Decay)	Surface lesions are initially circular, light-dark brown, firm and dry. Decay usually stops at the vascular ring. Roots with lesions in storage may become shrunken and hardened.	Avoid wounding roots; harvest when soils are dry and temperatures are above 55°F. Follow proper curing procedures.
	Fusarium Root Rot (<i>F. solani</i>) (Primarily a Storage Decay)	Symptoms often appear similar to Fusarium surface rot except that lesions and decay will extend beyond the vascular ring. If infected roots are planted, the fungus may spread into the sprout causing a stem canker.	Avoid wounding roots. See comments above for Fusarium surface rot. Do not take cuttings from infected roots.
	Scurf (<i>Monilochaetes</i>)	A superficial brown-black spotting and blotch of the storage root periderm.	See the AL Pest Management Handbook.
Tomato	Anthrachnose (<i>Colletotrichum</i>) (Usually, a Ripe Fruit Disease)	Lesions are colorless, circular, slightly sunken and may develop to a size of ½ inch (1.2 cm). Just below the skin, there is a thin layer of white, dry tissue. The center of the lesion may become black, and orange spore masses may develop during moist conditions.	See the AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
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Bacterial Speck
(*Pseudomonas*)

Immature, green fruit tissue is most susceptible. Small (1 mm diam.), slightly raised black specks develop on green or ripe fruit. Spots on leaves & stems are small (2-3 mm or $\frac{1}{8}$ inch or less diam.), angular, black, water-soaked with no halo. Leaf spots may coalesce and some leaf tearing may occur.

See the AL Pest Management Handbook.

Early Blight
(*Alternaria*)

On seedlings, rapid plant death may occur as a result of crown rot. On older plants, spots occur on leaves, stems, fruits. Leaf spots usually occur first on oldest leaves. These spots are circular, brown, up to $\frac{1}{2}$ inch or 1.2 cm diam. with a target board pattern of concentric rings. Spotted leaves become yellow and then brown. Fruit spots are brown-black, up to 2.4 cm or 1 inch in diam., firm, depressed, usually with concentric rings. Typically fruit spots develop at the stem end of the fruit.

See the AL Pest Management Handbook.

Fusarium solani
Damping-Off.

Seedling lower stem rot.

Sanitation.

Plant

Disease

Description

Control

Gray Wall (Blotchy Ripening)
(Environmental)

Stresses Involved)

Green fruit has gray-brown blotches; internal wall tissue is

	brown. As fruit ripens, brown blotches become yellow on the reddish fruit.	Remove stress situations. Avoid high nitrogen levels and low potassium levels.		
		Powdery Mildew	Foliage develops faint white dusty patches which later become necrotic.	----
		Target Spot (<i>Corynespora</i>)	Gray-brown, zonate, oval leaf spots.	Sanitation. See Ed Sikora.
Turnip		Alternaria Leaf Spot	Gray-Brown Leaf Spots, irregular in shape.	See the AL Pest Management Handbook.
		Black Rot (<i>Xanthomonas campestris</i> pv. <i>campestris</i>)	Leaf edges develop v-shaped brown-black lesions. Leaf veins darken near lesions. Eventually, lower stems develop control soft rot.	Sanitation. Rotate away from cole crops for 2-3 years.
		Cercospora Leaf Spot	Light brown irregularly-shaped spots (about 0.6 cm or ¼ inch diameter) sometimes with a darker brown margin.	See the AL Pest Management Handbook. Also, Benlate recently obtained a label for Cercospora on turnips.
		Pythium Root Rot	Roots become brown and watersoaked.	Reduce irrigation, if possible. Improve soil drainage. Crop rotation for 1 year.
Wheat		<i>Bipolaris sorokiniana</i> Leaf Spot	Brown elongated spots and strips on leaf blades.	See AL Pest Management Handbook.
<u>Plant</u>		<u>Disease</u>	<u>Description</u>	<u>Control</u>
		Leaf Rust (<i>Puccinia recondita</i>)	Orange-red dots and patches of spore masses on leaves. Plants yellow and show poor growth/head production if infection is severe.	See AL Pest Management Handbook.

Zoysia	Brown Patch (<i>Rhizoctonia</i>)	Leaf blades and sometimes crowns become blighted and decayed. Often, patches of brown foliage develop in lawn area.	See AL Pest Management Handbook and ANR-492.
	Ring Nematode (<i>Criconemoides</i> sp.)	Areas of the lawn develop spots with yellowing and thinning.	See ANR-523.
	Rust (<i>Puccinia</i>)	Orange powdery dusting (spores) gives an orange tint over green or green-yellow blotched leaves.	See AL Pest Management Handbook.
	Take-All (<i>Gaeumannomyces</i>)	Yellowing and dieback. Roots develop black lesions.	See ANR-823.

OTHER NEWS*

Recent Southern Plant Diagnostic Network Meeting and First Detector Educators. Jim Jacobi, Charles Ray, Jonathan Davis, & I recently attended the SPDN meeting in Atlanta. APHIS & CSREES is encouraging you First Detector Educator agents to go into the SPDN website and download or view the National Plant Diagnostic Network First Detector Educator Training Manual and associated power point presentations. You can use these materials as aids for you in presenting this information to your client groups. The information and power point presentations can be adapted and modified as appropriate for your audience.

When I inquired about those of you who could not attend one of the First Detector Educator Meetings last year, the response was that you needed to attend the meeting in order to have access to the training materials and education presentations. Consequently, we will be scheduling another 'First Detector Educator' meeting early this spring—possibly March—in an attempt to include those of you who could not attend one of the meetings last year.

Training on the Alabama Plan for Landscape Sampling for the Possible Presence of *Phytophthora ramorum* in Susceptible Landscape Shrubs and Oaks. This is a nationally directed and outlined program designed to help find any *P. ramorum* infected plants that might have been unknowingly sold during the past 3 years. Our state is part of this program because we have confirmed the presence of this disease in Alabama. You will be receiving more information in January on the training program from Kerry Smith & myself. Jim Jacobi, Austin Hagan, Tomm Johnson (Alabama Department of Agriculture), Jim Hyland (US Forestry Service), Ken Tilt, and

Dave Williams are also major participants in the development of this program.