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PP-537

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

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

**DISEASE POSSIBILITIES FOR NOVEMBER**

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Auburn Plant Disease Report-October (J. Mullen)

October was a relatively wet month for most of the state, and consequently, Phytophthora root rot and brown patch disease of turf grasses were especially common problems last month. In October, we received 105 plant samples.

The brown patch turf samples showed abundant development of the Rhizoctonia fungus on the foliage due to the moderately warm temperatures of October and the wet conditions. Small areas of foliage blight spread rapidly to involve large areas of lawn. See ANR-492 for disease control comments. Immunox may be more readily available at lawn/plant care centers than some of the other fungicide products labelled for control of brown patch on turf grass.

Damaging levels of nematodes were present on a bermuda and a centipede sample. Nematode damage to homeowner turf is managed by cultural methods for stress control. See ANR-523 for more information.

Bipolaris and Exserohilum (Helminthosporium-type) fungalleaf spots, blight, and crown rots were noted on bermuda grass. Leaf spots are usually small, brown, and elongated, but lesions may coalesce and cause a serious blight. This disease is often seen in the spring and fall with moderate temperatures and

available moisture. Increased disease susceptibility in bermuda may be caused by low potassium levels so a soil test for minerals is a good idea. See ANR-621 for more information.

Anthrachnose leaf spots on trees at this time of year is a common occurrence. Other fungi commonly seen causing fall leaf spots are *Cercospora*, and *Septoria*. Older, mature leaves in the fall tend to show some increased susceptibility to leaf spot diseases. Generally these leaf spots are not a serious problem and the over-all health of the tree is not affected. All fallen leaves should be gathered and removed from the area this fall.

*Botryosphaeria* cankers are common occurrences on weakened trees and some shrubs. The sunken cankers generally are elongate and may show cracking around lesion edges. Control requires pruning out damage with cuts being made 4-5 inches beyond the edge of the canker margin. Shears should be dipped into alcohol or other disinfectant between cuts.

*Phytophthora* and *Pythium* will cause root decay of a wide range of plants when soil conditions are kept continually wet for a prolonged period of time. Of the two fungi, *Phytophthora* is considered to be the more damaging and aggressive pathogen. *Pythium* often develops only on previously weakened/damaged plants. Plants with root rot usually show lower limb dieback with yellowing and browning as initial symptoms. Gradually the browning of limbs will move upward through the tree or shrub. In some situations, upper canopy sections show damage also. Damaged plants should be removed. Water levels in the soil should be reduced. Drainage improvements may be needed. It is a good idea to remove soil attached to damaged roots since the fungal spores will develop in the soil closely associated with the infected roots. Plant replacement with a different plant or cultivar less susceptible to *Phytophthora* infection is a good practice. Protective fungicide drenches may be used with particular plants in some situations of nurseries/greenhouses or large landscape plantings. See the AL Pest Management Handbook.

John Olive in Mobile reported seeing black rot (*Xanthomonas*) on kale and cabbage. Also, he noted *Rhizoctonia* aerial or web blight on Satsuki azaleas and related azaleas and on crenata holly. The black rot begins as black v-shaped lesions at leaf edges. The bacteria gradually spread through veins to the lower stem where a black rot will develop. Aerial blight typically develops as a foliage blight of lower foliage. Mycelial webbing may be present when conditions are humid.

Table 1. 2002 October Plant Diseases Seen In The Auburn Plant Diagnostic Lab.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Bermuda	Bipolaris Leaf Spot	Montgomery
	Brown Patch ( <i>Rhizoctonia</i> )	Montgomery
	Exserohilum Crown Rot	Montgomery

<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Exserohilum Leaf Spot & Crown Rot	Montgomery
	Ring Nematode ( <i>Criconemoides</i> )	Calhoun
	Take-All Patch ( <i>Gaeumannomyces graminis graminis</i> )	Montgomery
Boxwood	Macrophoma Blight	Lawrence
	Phytophthora Crown & Root Decay	Wilcox
	Volutella Blight	Lawrence
Centipede	Brown Patch ( <i>Rhizoctonia</i> )	Baldwin, Elmore, Henry, Houston, Montgomery, Pike
	Nematode Problem-Sheath & Ring ( <i>Hemicycliophora &amp; Criconemoides</i> )	*
	Take-All Patch ( <i>Gaeumannomyces graminis graminis</i> )	Pike
Collards	Cercospora Leaf Spot	Franklin
Cryptomeria	Phomopsis Tip Blight	Cullman
Fatsia Japonica	Botryosphaeria Canker	Montgomery
	Phytophthora Crown & Root Rot	
Fern	Anthracnose	Choctaw
Fescue (Forage, Fungus-Free)	Anthracnose	Marion
Holly	Botryosphaeria Canker	Tuscaloosa

Holly Fern	Phomopsis Canker	*
Hydrangea, Oak Leaf	Cercospora Leaf Spot	Cullman
Jasmine	Phytophthora Root Rot	Covington
Juniper	Phoma Needle Blight	Tuscaloosa
<u>Plant</u>	<u>Disease</u>	<u>County</u>
Leyland Cypress	Botryosphaeria Canker	Montgomery
Maple, Trident	Anthracnose ( <i>Colletotrichum</i> )	*
Oak, Overcup	Fusiforme Rust ( <i>Cronatium quercuum</i> f. sp. fusiforme)	*
Oak, Willow	Anthracnose ( <i>Colletotrichum</i> )	*
Pacysandra	Anthracnose	Montgomery
Palm	Colletotrichum Leaf Spot	Choctaw
Pansy	Anthracnose ( <i>Colletotrichum</i> )	*
Pecan	Powdery Mildew	Pike
	Pythium Crown Rot	*
	Sooty Mold	Pike
Ryegrass	Brown Patch ( <i>Rhizoctonia</i> )	Autauga
	Gray Leaf Spot ( <i>Piricularia</i> )	Choctaw
Soybean	Anthracnose ( <i>Colletotrichum</i> )	Escambia
	Cercospora Leaf Spot	Escambia
	Stem Canker ( <i>Diaporthe phaseolarum</i> )	Escambia

Spirea	Phytophthora Root Decay	*
St. Augustine	Brown Patch ( <i>Rhizoctonia</i> )	Geneva, Montgomery
	Take-All Patch ( <i>Gaeumannomyces graminis graminis</i> )	Mobile
Tea Olive	Cercospora Leaf Spot	Wilcox
Tomato	Septoria Leaf Spot	Cullman
<u>Plant</u>	<u>Disease</u>	<u>County</u>
Turnip	Colletotrichum Leaf Spot	Washington
Vinca	Phytophthora & Pythium Root Rot	Mobile
Willow	Anthrachnose ( <i>Colletotrichum</i> )	Autauga
Wax Myrtle, Southern	Botryosphaeria Canker	Montgomery
	Phytophthora Root Rot	Montgomery

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

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

October weather was unusually cloudy and rainy creating favorable conditions for several fungus diseases. The reported rainfall total was 5.46 inches at the Birmingham International Airport (2.23 inches above normal). Measurable rainfall occurred on 16 days during the month. Some of the more significant disease problems seen last month: Pythium blight on amaranth, Rhizoctonia stem rot on basil, Pythium and sting nematodes on bermudagrass, Cercospora leaf spot and Phytophthora stem and root rot on pansy, and Pythium Blight on ryegrass. The lab received 109 samples during the month of October.

Pythium damping-off of amaranth (*Amuranthus* spp.) grown for salad or microgreens was the most unusual problem seen last month. Vegetable amaranth is grown in short cropping cycles and the seedlings are sold as greens for salads and other uses. Pythium damping-off is one of the major disease problems associated with production.

The soilborne fungus *Phytophthora nicotiana* causes Phytophthora crown and root rot on pansy. Wet conditions during late September and October were very conducive to rapid spread of the disease. As crown and root rot develop, plants show symptoms of wilt and dieback. Stunting and yellowed foliage are additional symptoms of the disease. Remove and destroy infected plants. Practice good sanitation in the greenhouse. Fungicide drenches with etridiazole (Truban) etridiazole + thiophanate-methyl (Banrot), fosetyl-Al (Aliette), menfenoxam (Subdue), or propamocarb (Banol) may be applied in some situations. Refer to the label for specific instructions, restrictions and use. See extension publication ANR-1214, Diseases of Pansies and Their Control, for additional information.

Cercospora leaf spot is a very common leaf spot on pansy in Alabama. This disease is favored by wet conditions and warm temperatures and is most common in fall and spring. Spots are purple to dark charcoal gray and have a feathered margin. Lower leaves become infected first, turn yellow and fall from the plant. Remove severely diseased plants and clean up plant debris. Applying chlorothalonil (Daconil), mancozeb (Fore, Protect), azoxystrobin (Heritage) or other labeled fungicides can reduce disease development and spread. Additional information can also be found in ANR-1214.

Pythium blight was seen on bermudagrass in late October. Affected bermudagrass had a dark color and a greasy appearance. This is an unusual disease occurrence for bermudagrass. Weather conditions during this time period were 2-3 days of moist weather and with night time temperatures near 70°F. Damage to ryegrass by Pythium blight was also seen at the same time. On other warm season grasses (St. Augustinegrass and Zoysiagrass), brown patch continued to be a significant problem because of the very favorable weather for disease development.

Table 2. 2002 October Diseases Seen In The Birmingham Plant Diagnostic Lab.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Ageratum	Aphids	*
Amaranth (salad greens)	Pythium Dampling-Off	*
Azalea	Lacebugs	Jefferson (2)
	Tip Midge	Jefferson
Basil	Rhizoctonia Stem Rot	*
Bentgrass	Pythium Root Rot	*(2)
Bermuda	Black Layer	*

	Fall Armyworms	Jefferson
	Helminthosporium Leaf Spot	* (3)
	Pythium Blight	*
	Sting Nematodes ( <i>Belonolaimus</i> sp.)	*
	White Grubs	Jefferson
Bird of Paradise	Pythium Root Rot	Jefferson
Black-eyed Susan	Bacterial Leaf Spot	Jefferson
Boxwood	Leafminers	Jefferson
<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Macrophoma Leaf Spot	Jefferson, Tuscaloosa
Centipede	Brown Patch	Jefferson
	White Grubs	Jefferson (2)
Cherry, Ornamental	Cercospora Leaf Spot	Jefferson (2)
Cypress, Leyland	Cercospora Needle Blight	Shelby
Dahlia	Botrytis Blight	Jefferson
English Ivy	Anthracnose	Jefferson
	Phytophthora Stem & Root Rot	Chilton, Jefferson
Euonymus, Japanese	Euonymus Scale	Jefferson
Hickory, Pignut	Ambrosia Beetle (secondary)	Jefferson
Maple, Japanese	Phyllosticta Leaf Spot	Jefferson
Pansy	Cercospora Leaf Spot	*

	Phytophthora Crown Rot	*
Ryegrass, Perennial	Pythium Blight	Jefferson
St. Augustinegrass	Brown Patch	Jefferson
Sunflower	Powdery Mildew	Jefferson
Turnip Greens	Cercospora Leaf Spot	Jefferson
Zoysia	Dollar Spot	Shelby
	Fall Armyworms	Jefferson
	Take-All Root Rot	Jefferson

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

Disease Possibilities For November

Rainfall has been ample so far this month, and temperatures are dropping. With the lower temperatures, we expect to see plant problems and disease reduced as plants and turf goes into winter dormancy. Of course, southern sections of the state usually remain active with warm temperatures. Forages and small grains may show some problems. Diseases continue to develop in greenhouse and nursery plants.

Helminthosporium-type (Bipolaris, Drechslera, Exserohilum) leaf spots on small grains and grasses may be seen in November. Also, rust diseases may be seen on wheat and other small grains. A variety of pansy diseases are often seen. Black rot and Cercospora leaf spot may be seen on turnips and other crucifers. Greenhouse poinsettias may develop a variety of disease problems.

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 Ala. 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 1-3 mm	eyespots with tan centers, dark brown borders and diffuse halos.

None.

Allspice (*Pimenta dioica*)

Rust

Yellow-brown leaf spots sometimes with red-orange powdery spore masses.

Sanitation.

Arbor-vitae

Pestalotiopsis Tip Blight

Branch tips turn brown; browning gradually progress down the branch.

Pruning. Halt may provide some disease control.

Phytophthora Root Rot

Roots become brown, decayed. When disease is active, roots are water-soaked.

Sanitation; protective fungicide drenches. See Ala. Pesticide Handbook.

Plant

Disease

Description

Control

Asparagus

Helminthosporium Stem Spots

Brown elongated, usually about 1/2 inch long, somewhat rectangular stem lesions.

Sanitation. Mancozeb fungicides.

Azalea

Powdery Mildew (*Microsphaeria*)

Whitish powdery dusting on leaves; some leaf deformity if infection occurs on new growth; infected leaves eventually become yellowed.

See the Ala. Pest Management Handbook.

Azalea (Cuttings, Liners)

Aerial Web Blight (*Rhizoctonia*)

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 Ala. Pest Management Handbook.

Phytophthora Root Rot

See Arbor-vitae.

See Arbor-vitae comments.

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 water-soaked.	See the Ala. Pest Management Handbook for recommendations.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Rhizoctonia Aerial Blight	Foliage develops brown spots and blight areas. Dieback.	See the Ala. Pest Management Handbook.
Bermuda	Helminthosporium-Type Leaf Spot	Small elongated spots; spot coalescence and blight of whole leaf blades when disease is severe.	See the Ala. 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.
	<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.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Broccoli, Cabbage	Black Rot ( <i>Xanthomonas</i> )	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.
Centipede	Brown Patch ( <i>Rhizoctonia</i> )	A light brown circular patch; crowns and leaf blades become brown and dead.	See Ala. Pest Management Handbook.
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 Ala. Pest Management Handbook.
Collards	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.
Cypress, Leyland	Botryosphaeria Canker	Elongated sunken branch lesions, often with cracks along the margin.	Sanitation. See the AL Pest Management Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Cercospora Blight	Lower foliage becomes pale green and then brown.	Sanitation; Improve air circulation; See the AL Pest Management Handbook for protective fungicide treatments.
	Seiridium Canker	Small-large elongated, sunken lesions with oozing sap.	Pruning. 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 Ala. Pest Management Hand-

book and ANR-594.

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.
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.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
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 Ala. Pest Management Handbook.
	Rhizoctonia Aerial Blight	Lower leaves become spotted and blighted. Leaf fall occurs.	See Ala. 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.
	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 Ala. Pesticide Handbook; Sanitation.
Indian Hawthorne	Entomosporium Leaf Spot	Black spots with red borders develop on the foliage.	Sanitation; protective fungicide sprays. See the Ala. Pesticide Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
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 Ala. Pest Management Handbook.
	Phytophthora Root Rot	See Arbor-vitae.	See Arbor-vitae comments.
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 Ala. Pest Management Handbook.
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.

Ligustrum

Cercospora Leaf Spot

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 water-soaked.

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Plant

Disease

Description

Control

Rhizoctonia Root Rot

Roots become brown and dried.

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Magnolia, Southern

Algal Leaf Spot (*Cephaleuros*)

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 Ala. Pest Management Handbook.

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.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	<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 Ala. Pest Management Handbook.
Pansy	Anthrachnose ( <i>Colletotrichum</i> )	Small, cream-colored, circular spots with dark borders.	Sanitation; See the Ala. Pest Management Handbook.
	Black Root Rot ( <i>Thielaviopsis</i> )	Black root tips and black root lesions and areas.	Cleary's 3336; See Ala. Pest Management Handbook.
	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.

	Myrothecium Crown Rot	Collapse of petioles or lower stems. Tiny black and white pin-head sized bodies on collapsed tissues.	Sanitation. Daconil protective sprays.
	Phytophthora Crown Rot	Crowns, roots become brown and water-soaked.	Sanitation. See the Ala. Pest Management Handbook.
	Pythium Crown/Root Rot	Crowns, roots become brown and water-soaked.	See the Ala. Pest Management Handbook.
	Rhizoctonia Crown Rot	Crowns develop a dry, brown, sometimes shriveled decay.	Sanitation. Cleary's 3336 would provide some protection.
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.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	<i>Fabraea</i> ( <i>Entomosporium</i> ) Leaf Spot	Leaf spots are usually black and somewhat circular. May be confused with black rot leaf spots.	Sanitation. See Ala. Pest Management Handbook.
Periwinkle	Rhizoctonia Crown Rot	Crowns, roots become dried, brown, rotted.	Sanitation. See the Ala. 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	Ploioderma ( <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 Ala. Pest Management Handbook.

	Fusarium Pitch Canker	Elongated cankers. Some resin flow.	Sanitation. See comments in the Ala. Pest Management Handbook.
	Rhizosphaeria Needle Cast	Needles turn brown. Tiny black dots (fruiting bodies) occur in a linear arrangement on browning needles.	---
Plum	Brown Rot	Fruit tissues become brown & rotted. A gray mold may develop on the fruit surface.	Sanitation. Captan. See Ed Sikora.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
<i>Poa trivialis</i>	Pythium Blight	Grass leaves become wet, brown, and decayed.	Decrease irrigation. See the Ala. Pesticide Handbook and A. Hagan.
Poinsettia	Phytophthora Root Rot	See Pythium Root Rot.	See Pythium Root Rot.
	Pythium Stem and Root Rot	Lower stem and roots become brown, soft, water-soaked, and rotted.	See Ala. Pest Management Handbook; sanitation.
	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 Ala. Pest Management Handbook.

	Rhizoctonia Crown Rot & Root Rot	Lower stems develop dry, medium-dark brown surface lesions; roots may become brown and dried.	See Ala. 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 Ala. Pest Management Handbook.
Rye	<i>Bipolaris sorokiniana</i> Leaf Spot	Brown, elongated spots on leaf blades.	None.
Snapdragon	Pythium Root Rot	Roots become water-soaked and light brown.	Sanitation. See the Ala. Pest Management Handbook.
St. Augustine	Brown Patch ( <i>Rhizoctonia</i> )	See Centipede.	See Centipede.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	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 Ala. Pest Management Handbook.
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 Ala. Pest Management Handbook.
	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 (*F. solani*) (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 (*Monilochaetes*)

A superficial brown-black spotting and blotch of the storage root periderm.

See the Ala. Pest Management Handbook.

Plant

Disease

Description

Control

Tomato

Anthracnose (*Colletotrichum*) (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 Ala. Pest Management Handbook.

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 ¼ inch or less diam.), angular, black, water-soaked with no halo.

Leaf spots may coalesce and some leaf tearing may occur.

See the Ala. 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 ½ inch or 1.2 cm diam. with a target board pattern of concentric rings. Spotted leaves become yellow and then brown. Fruit spots are

See the Ala. Pest Management Handbook.

Plant

Disease

Description

Control

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.

*Fusarium solani*  
Damping-Off.

Seedling lower stem rot.

Sanitation.

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.

Turnip

Alternaria Leaf Spot

Gray-Brown Leaf Spots, irregular in shape.

See the Ala. Pest Management Handbook.

Black Rot  
(*Xanthomonas*)

*campestris* pv. *campestris*)

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 Ala. Pest Management Handbook. Also, Benlate recently obtained a label for Cercospora on turnips.

Pythium Root Rot

Roots become brown and water-soaked.

Reduce irrigation, if possible. Improve soil drainage. Crop rotation for 1 year.

Plant

Disease

Description

Control

Wheat

*Bipolaris sorokiniana*  
Leaf Spot

Brown elongated spots and strips on leaf blades.

See Ala. Pest Management Handbook.

Leaf Rust (*Puccinia recondita*)

Orange-red dots and patches of spore masses on leaves. Plants yellow and show poor growth/head production if infection is severe.

See Ala. Pest Management Handbook.

Zoysia

Brown Patch (*Rhizoctonia*)

Leaf blades and sometimes crowns become blighted and decayed. Often, patches of brown foliage develop in lawn area.

See Ala. Pest Management Handbook and ANR-492.

Rust (*Puccinia*)

Orange powdery dusting (spores) gives an orange tint over green or green-yellow blotched leaves.

See Ala. Pest Management Handbook.

