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PP-535

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

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

**DISEASE POSSIBILITIES FOR SEPTEMBER**

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Auburn Plant Disease Report-August (J. Mullen)

A variety of diseases were seen on the 135 plant samples received at the lab in August. Virus disease problems were seen on pumpkin, pepper, and peanut. Fusarium vascular wilt was detected on greenhouse ornamental cabbage and chrysanthemum. The Alternaria leaf spot seen on Bradford pear is not a common problem. It was first seen on apple last year. Phytophthora root rot was detected on boxwood, daylily and petunia. Plectosporium blight was observed on pumpkin in DeKalb County. This disease was observed for the first time in Alabama (DeKalb County) last year. Southern blight and sudden death syndrome were noted on soybean in Cullman County.

The pepper sample showed a mosaic discoloration and some abnormal, mild-shoestring leaf formations were noted. ELISA testing detected the presence of cucumber mosaic virus. Control of this virus is difficult due to the rapid aphid transmission of the virus. Sanitation is recommended. Seed should not be saved. Weed control and aphid control will help, but disease will usually continue to spread even when control measures are used. The pumpkin samples showed mosaic patterns and some leaf distortions. Also some fruit mosaic was present. ELISA confirmed the virus to be watermelon mosaic virus. Pumpkin samples were present in research plots in DeKalb and Cullman counties. Disease control is usually not possible due to the rapid aphid transmission. Sanitation is recommended. The peanut sample showed stunting and the mild mottle and ringspots typical of tomato spotted wilt virus (TSWV). ELISA tests on the plant crowns showed positive TSWV results.

Fusarium wilt of the ornamental cabbage showed symptoms of leaf edge scorch and yellowing of lower leaves. Cross-section cutting of the lower stems showed browning of the vascular system. Culture work on the vascular browning produced *Fusarium oxysporum*. Damaged plants should be removed. Cleary's 3336 or Halt may be used as protective drench treatments. The damaged chrysanthemum plants showed yellowing and browning of the lower leaves. The lower stems showed the same vascular browning described above. Culture work produced *Fusarium oxysporum*. Control comments are the same as for the ornamental cabbage. In addition, Banrot may be used on mum as protective treatments.

Alternaria leaf spot on Bradford pear appeared as dark brown, mostly oval leaf spots. Microscopic study showed that Alternaria spores were present. This disease on pear could be confused with Fabraea leaf spot which has similar symptoms. Alternaria leaf spot and Fabraea leaf spot on ornamental pear may be controlled by sanitation and protective fungicide sprays of a mancozeb product such as Protect T/O.

Phytophthora root rot was noted on landscape boxwood, daylily, and petunia. Phytophthora requires the presence of wet soils in order for disease to develop. Infected roots become brown, decayed, and water-soaked. With infected roots, the outer cortex will easily slip away from the inner core of the root when a slight pressure is applied. Plants with root infection will wilt, dieback, and collapse if herbaceous plants. Damaged plants should be removed. Wet conditions must be corrected. When desired (usually in a greenhouse or nursery situation), protective fungicide drenches may be applied. See the AL Pest Management Handbook for specific crop fungicide use.

Plectosporium on pumpkin developed as dry, corky or scabby, light brown lesions on the fruit, peduncles, stems, and leaves. Damage may not significantly affect the over-all development of the plant or fruit. The damage to the fruit does negatively affect the marketability of the crop. This disease has been noted to occur in other states on pumpkin, zucchini, and yellow summer squash. See Ed Sikora for comments on fungicides effective for disease control.

Southern blight and sudden death syndrome are two serious diseases of soybean. Southern blight (*Sclerotium rolfsii*) will cause a crown rot (of many plants) which results in the collapse and death of the infected plants. During humid or wet, hot weather, a white mold will often develop around the base of the stem. Brown or black, round, mustard-seed sized fungal bodies (sclerotia) may also develop in the mold. Disease control is difficult. Deep plowing is one measure that will help. See Ed Sikora for other suggestions. Sudden death syndrome (*Fusarium solani*) develops as a root decay. The tap root becomes dark brown, dry, and decayed. The infected plant develops interveinal scorching of leaves. Stunting and dieback will follow. Like southern blight, the Fusarium fungus is a soil-borne problem and control is difficult. See Ed Sikora for further comments.

Table 1. 2002 August Plant Diseases Seen In the Plant Diagnostic Lab At Auburn.

<u>Plant</u>	<u>Diagnosis</u>	<u>County</u>
Arborvitae	Phomopsis Canker	Limestone
Azalea	Botryosphaeria Canker	Mobile
Bermuda	Bipolaris Leaf Spot & Crown Rot	Houston, Montgomery
	Bipolaris Leaf Spot & Leaf Blight	Chilton
	Brown Patch ( <i>Rhizoctonia</i> )	Calhoun, Chilton, Montgomery
	Drechslera Crown Rot	Autauga
	Exserohilum Crown Rot	Montgomery
Blueberry	Take-All Patch ( <i>Gaeumannomyces graminis</i> cv. <i>graminis</i> )	Elmore, Montgomery
	Botryosphaeria Canker	Autauga
	Suspect Crown Gall ( <i>Agrobacterium</i> )	Autauga
Boxwood	Phytophthora Root Rot	Lauderdale
	Pythium Root Rot	Lauderdale
Cabbage, Ornamental	Fusarium Wilt ( <i>F. oxysporum</i> )	*
Centipede	Brown Patch ( <i>Rhizoctonia</i> )	Autauga, Covington, Mobile, Washington
Chrysanthemum	Fusarium Wilt ( <i>F. oxysporum</i> )	*
Cotton	<i>Alternaria macrospora</i> Leaf Spot	Dallas
Crinum	Cercospora Leaf Spot	Randolph
Daylily	Colletotrichum Crown Rot	Houston
<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Daylily Rust ( <i>Puccinia hemerocallidis</i> )	*

Daylily	Kabatiella Leaf Spot	*
	Phytophthora Root Rot	Houston
Juniper	Pestalotia Blight	Marshall
	Phoma Blight	Marshall
Laurel, Cherry	Blumeriella Leaf Spot	Choctaw
Leyland Cypress	Botryosphaeria Canker	Covington
Oak, Red	Monochaetia Leaf Spot	Montgomery
Okra	Root Knot Nematode	Chilton
Pear, Bradford	Alternaria Leaf Spot	Russell
	Fabraea Leaf Spot	Russell
Peanut	Diplodia Collar Rot	Baldwin
Pecan	Scab ( <i>Cladosporium</i> )	Talladega
Pepper	Cucumber Mosaic Virus	Blount
Petunia	Phytophthora Crown Rot	Lee
	Pythium Crown Rot	Lee
Pine	Pythium Root Rot	Lauderdale
Pumpkin	<i>Alternaria alternata</i> Leaf Spot	Cullman, DeKalb
	Downy Mildew ( <i>Pseudoperonospora</i> )	Cullman
	Plectosporium Blight	DeKalb
<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Powdery Mildew ( <i>Erysiphe</i> or <i>Sphaerotheca</i> )	DeKalb

	Watermelon Mosaic Virus	Cullman, DeKalb
Sorghum	Rhizoctonia Crown & Root Rot	Mobile
Soybean	Southern Blight ( <i>Sclerotium rolfsii</i> )	Pickens
	Sudden Death Syndrome ( <i>Fusarium solani</i> )	Pickens
Viburnum	Southern Blight ( <i>Sclerotium rolfsii</i> )	*
Zoysia	Bipolaris Crown Rot	Montgomery
	Brown Patch ( <i>Rhizoctonia</i> )	Montgomery
	Exserohilum Crown Rot	Russell
Zoysia	Take-All Patch ( <i>Gaeumannomyces graminis</i> var <i>graminis</i> )	Colbert, Montgomery

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

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

August weather was hotter and drier than normal. The reported rainfall total was 1.6 inches at the Birmingham International Airport (1.88 inches below normal). Some of the more unusual diseases seen last month included: southern blight of ajuga, *Mycosphaerella* leaf spot on green ash, root knot nematode on begonia, dodder on butterfly bush, rust on canna, anthracnose on euonymus and Fatsia, Tubakia leaf spot on oak. The lab received 124 samples during the month of August.

Anthracnose on euonymus is a fairly common problem. Leaf spots are generally small with dark borders and light tan to gray centers. Lesions may also occur on stems causing dieback. Tiny cracks in the surface of leaf spots and stem cankers are the fruiting bodies of the fungus. Thiophanate-methyl and chlorothalonil are registered for control of anthracnose. Severe cases of anthracnose result in defoliation and stem dieback.

Tubakia (formerly *Actinopelte*) leaf spot occurs in mid- to late summer on oaks. Symptoms include round to irregular reddish-brown spots or blotches on leaves. Fortunately, little damage results from this disease and no chemical control action is recommended in landscape situations. Collect and dispose of fallen leaves.

The question of the month was ‘What are the small white bits of flying fuzz’. The answer was Asian woolly hackberry aphids. These insects were extremely common in areas with hackberry and other hosts (*Celtis* spp.). A secondary sooty mold problem developed in

many cases on plants growing in proximity to the infested trees. An excellent circular about the insect can be found at <http://doacs.state.fl.us/~pi/enpp/ento/circ/Entcirc392.pdf>.

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

<u>Plant</u>	<u>Problem</u>	<u>County</u>
Ajuga	Southern Blight	Jefferson
Aucuba	Scale	Jefferson
	Sooty Mold	Jefferson
Ash, Green	Mycosphaerella Leaf Spot	Jefferson
Azalea	Lacebugs	Jefferson
Begonia	Pythium Crown and Root Rot	Tuscaloosa
	Root Knot Nematode ( <i>Meloidogyne</i> )	Cullman
Bentgrass	Pythium Root Rot	*(2)
Bermudagrass	Dollar Spot	Jefferson (2)
	Helminthosporium Leaf Spot	Jefferson
	White Grubs	Jefferson
Birch, River	Anthrachnose ( <i>Colletotrichum</i> )	Jefferson
Boxwood	Boxwood Leaf Miner	Jefferson
	Phytophthora Root Rot	Jefferson (2)
Butterfly Bush	Dodder	Jefferson
<u>Plant</u>	<u>Problem</u>	<u>County</u>
Camellia	Tea Scale	Jefferson (2)
Cedar, Eastern Red	Spider Mites	Jefferson
Cherry, Japanese Flowering	Cercospora Leaf Spot	Jefferson

Coleus	Mealbugs	Jefferson
Cypress, Leyland	Bagwood	Shelby
Dogwood	Cercospora Leaf Spot	Jefferson
Euonymus	Anthracnose ( <i>Colletotrichum</i> )	Jefferson
Fatsia	Anthracnose ( <i>Colletotrichum</i> )	Jefferson
Hackberry	Asian Woolly Hackberry Aphids	Jefferson (2)
Holly, Japanese	Black Root Rot	Jefferson
Hydrangea, Oakleaf	Armillaria Root Rot	Jefferson
	Bacterial Leaf Spot	Jefferson
Ice Plant	Pythium Root Rot	Jefferson
Jasmine, Night Flowering	Mealybugs	Cullman
Ligustrum, Japanese	Cercospora Leaf Spot	Jefferson
Lantana	Foliar Nematodes	Jefferson
Lily, Canna	Larger Canna Leaf Roller	Jefferson
	Lesser Canna Leaf Roller	Jefferson
	Rust ( <i>Puccinia</i> )	Jefferson
Liriope	Phytophthora Crown Rot	Jefferson
<u>Plant</u>	<u>Problem</u>	<u>County</u>
Magnolia	Algal Leaf Spot	Jefferson
Oak, Post	Tubakia Leaf Spot	Jefferson
Oak, Southern Red	Monochaetia Leaf Spot	Jefferson
Peach	Peach Scab/Red Spot	Chilton

Rose	Mosaic/Black Spot/Mites	Jefferson
Spruce, Oriental	Phytophthora Root Rot	Jefferson
St. Augustinegrass	Gray Leaf Spot	Cullman
Tomato	Fusarium Wilt, Early Blight	Shelby
Zoysia	Curvularia Blight	Jefferson
	Dollar Spot	Jefferson
	Leaf Rust	Jefferson

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\*Counties are not reported for samples from commercial nurseries, greenhouses, and golf courses.

#### Disease Possibilities For September

Thus far in September, we have seen dry conditions with occasional rain in some sections of the state. Wet conditions with frequent rains have occurred in some sections especially southern areas. Day temperatures have been slightly lower than August, and nights have been very slightly cooler with temperatures in the 60-70°F range.

Seasonably cooler conditions are favorable for powdery mildew and downy mildew. Both of these diseases cause yellow blotches to occur on dicot leaves. With powdery mildew, blotches may be more diffuse and a white dusty layer may be visible on the upper and/or lower leaf surfaces. With downy mildew, yellow spots may begin as more definitive angular yellow spots. These spots may merge resulting in large yellow areas. On lower leaf surfaces when weather is wet, humid and temperatures are in the 60-80°F, a brown-gray colored webbing may be present on lower leaf surfaces. These diseases are often confirmed in the lab by microscopic observation of characteristic spores.

Evidence of bacterial scorch disease may occur in September. Scorch disease, caused by the bacteria *Xylella*, causes leaf edge scorch and dieback of elm, oaks (red and black oaks including northern red, pin, scarlet, southern red, laurel, shingle, and water oaks), sycamore, mulberry, and red maple. Initial symptoms of scorch may first occur in mid-late June, but disease is often not noticed until late summer or early fall when symptoms are more pronounced. Generally, leaf symptoms progress from older to younger leaves, with leaves at branch tips often showing no symptoms. Scorched leaves curl upward and remain attached. Infected trees develop a progressive dieback and general (usually slow, over many years) decline. Scorch can be confirmed with an ELISA test. Disease symptoms may be confused with drought or root problems. In August of last year, this disease was confirmed in a sycamore sample from Barbour County and in a plum sample from Mobile County.

Many fungal leaf spot diseases will develop on pre-senescent shade tree foliage in September. Generally these spots are of no concern. It is, however, always a good idea to remove fallen spotted foliage from the area later this fall or winter.

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

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Alfalfa	Summer Black Stem and Leaf Spot ( <i>Cercospora</i> )	Small brown spots become larger (2-6 mm diam.) and reddish brown or smoky brown. During humid conditions, spots become ashy-gray with spores. Lesions occur on stems; small stems and petioles may die from girdling lesions.	Maintain appropriate fertility; harvest frequently.
Ajuga	Cercospora Leaf Spot	Medium brown, circular-irregularly shaped leaf spots of varying sizes.	Sanitation. Cleary's 3336 or Halt may be used.
Althea	Rust ( <i>Puccinia</i> or <i>Kuehneola</i> )	Orange, powdery specks on small yellow leaf spots appear.	Sanitation.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Apple	Bitter Rot ( <i>Colletotrichum</i> )	Initially small gray or brown spots appear on the fruit. These spots enlarge into medium brown circular lesions. Orange spores often develop in concentric rings.	Sanitation. See the Spray Guide for Fruit Crops.
	Black Rot ( <i>Botryosphaeria</i> )	On young fruit, tiny red flecks appear. As fruit matures lesions become large black	and irregular sometimes with a red halo. Sometimes alternating rings of

brown & black develop. Limb cankers are red-brown, slightly sunken, cracked. Leaf spots are brown with a purple border (4-5 mm diam.)

Sanitation. See the Spray Guide for Fruit Crops.

	Fly Speck ( <i>Schizothyrium</i> )	Tiny black dots occur in patches (usually) on the surface (only) of apple fruit.	Sanitation. See the Fruit Spray Guide.
	Sooty Blotch ( <i>Gloeodes</i> )	Medium gray spots which resemble sooty smudges appear on surface layer of apple skin only.	Sanitation. See the Fruit Spray Guide.
Aucuba	Lasiodiplodia Canker	Black sunken spots or sunken areas on aucuba stems. Dieback of foliage results.	Cleary's 3336, or Domain protective sprays labelled for ornamentals; sanitation.
Azalea	Cercospora Leaf Spot	Small dark brown-black, usually circular spots (1-2 mm) scattered over leaf surface.	Sanitation. See the AL Pest Management Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phomopsis Canker/ Dieback	Elongated, sunken, elliptical cankers on twigs and branches with resulting dieback.	Sanitation; protective sprays of Cleary's 3336 may help.
	<i>Phytophthora</i> Crown and Root Rot	Lower stem near soil and roots become brown and water-soaked.	Sanitation and proper soil or potting mix drainage are important. See Alabama Pest Management Handbook and/or ANR-571.
	<i>Rhizoctonia</i> Aerial Blight	Brown, irregular spots and lesions begin on	lower leaves. Whole leaves may become

blighted; leaf drop occurs.	Sanitation; See Ala. Pest Management Handbook.		
Azalea, Native	Cercospora Leaf Spot	Small, brown, circular spots develop.	Sanitation. Cleary's or Halt may be used.
Bahia Grass	Dollar Spot ( <i>Sclerotinia</i> )	Pale, cream-colored, silver dollar-sized spots appear in grass area. Individual grass blades show cream colored spots with brown-black borders.	Sanitation. See the AL Pest Management Handbook.
	Helminthosporium-type Leaf Spot	Tiny (2-3 mm), elongated brown spots may cover leaf and stem, stolon surfaces. Severe spotting may cause foliage death.	Maintain appropriate fertility; harvest as frequently as possible.
Beans, Garden	Anthrachnose ( <i>Colletotrichum</i> )	Black, sunken cankers on pods which become red-orange when spores are produced. Similar spots are found on stems. Foliage symptoms	See the Ala. Pest Management Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		involve black, dead portions of veins on the underside of the leaf. Infections of older plants cause damage primarily to pods.	
	Pythium Lower Stem Rot	Lower stems near soil-line show brown, wet rot.	See Ala. Pest Management Handbook.
	Rhizoctonia Lower Stem Rot	Lower stems near soil-line have dried brown lesions.	See Ala. Pest Management Handbook.
	Root-Knot Nematode ( <i>Meloidogyne</i> )	Roots develop round-irregularly shaped	galls; plants become yellowed; wilt during

dry periods.

Rotate to dwarf french marigolds for 1 year or grasses (such as bahia or centipede) for 3-4 years or solarization.

Uromyces Rust

Reddish-brown powdery pustules on all above ground plant parts, especially lower leaf surfaces.

Protective fungicide sprays. See the Ala. Pesticide Handbook.

Begonia

Phytophthora Crown Rot

Crown tissues are dark and wet-rotted.

Sanitation. Reduce watering.

Phytophthora & Pythium Root Rot

Roots become brown and water-soaked, decayed.

Sanitation. Reduce watering. See the Ala. Pest Management Handbook.

Rhizoctonia Root Rot

Brown, dry, decayed roots.

Sanitation. Banrot protective drenches.

Root-Knot Nematode (*Meloidogyne*)

Galls on roots; plants stunted and wilted.

Solarization.

Tomato Spotted Wilt Virus

Yellow mosaic and ring spots present. Sometimes brown spots also present.

Thrips control. Sanitation.

Plant

Disease

Description

Control

Bentgrass

Bipolaris Leaf Spot

Tiny brown leaf spots that will coalesce to cause large areas of leaves to be blighted.

See ANR-621 or the AL Pest Management Handbook.

Nematode Damage from Ring (*Criconeoides*) and Sting (*Belonolaimus*) Nematodes

Thinned, blighted, yellowed turf areas.

See ANR-523.

Pythium Root Rot

Roots become light brown, wet, and rotted; foliage dies.

See ANR-594 and the Ala. Pest Management Handbook.

Bermuda, Coastal

*Bipolaris* (*Helminthosporium*) Leaf Spot

Tiny (2-3 mm), elongated brown spots may cover leaf

and stem, stolon surfaces. Severe spotting may cause

foliage death.	Maintain appropriate fertility; harvest as frequently as possible.		
Bermudagrass	<i>Bipolaris</i> Leaf/Stem Spot & Blight	See Bermuda, Coastal.	Collect grass clippings; See Ala. Pest Management Handbook.
	Dollar Spot ( <i>Sclerotinia</i> )	Pale, cream-colored, silver dollar-sized spots appear in grass area. Individual grass blades show cream colored spots with brown-black borders.	Sanitation. See the Ala. Pest Management Handbook.
	<i>Rhizoctonia</i> Brown Patch	Symptoms may vary slightly depending upon the situation. Typically, light-medium brown, large, circular patches occur on lawns. Individual grass blades develop small to large brown lesions. Lesions may involve the whole leaf blade or whole plants.	Collect grass clippings; See Ala. Pest Management Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Fairy Ring	Large rings or half rings of dead grass with an outer border of dark green turf. When conditions are wet, mushrooms will form in the dark green ring area.	See ANR-372.
	Take-All ( <i>Gaeumannomyces</i> )	Spots or areas in turf become yellowed and thinned. Roots become decayed in spots.	See ANR-823.
Bermuda, Tifeagle	Curvularia Blight	Large leaf areas become blighted. This fungus usually develops as a	secondary event.

See AL Pest Management Handbook for brown patch recommended fungicides.

Blackberry	Rust ( <i>Gymnoconia</i> )	Lower leaf surfaces are covered with orange powdery masses of spores; witches brooms may develop. Plants stunted; a systemic disease.	Remove infected plants.
	Septoria Leaf Spot	Reddish-brown, angular leaf spots.	See the Ala. Pest Management Handbook.
Boxwood	Phytophthora Root Rot	Brown, water-soaked roots.	See AL Pest Management Handbook.
Boxwood, American	Macrophoma Leaf Spot	Yellow-brown blotches or areas, sometimes with small black specks that are the fungus fruiting bodies.	Correct stress conditions. Cleary's 3336 or Halt may be used.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Celosia	Phytophthora, Pythium, Fusarium Lower Stem Rot & Root Rot	Roots brown and decayed.	Sanitation. Reduce watering. Improve soil drainage.
Centipede	Brown Patch ( <i>Rhizoctonia</i> )	See Bermudagrass.	--
	Dollar Spot	Pale, cream-colored, silver dollar-sized spots appear in grass area. Individual grass blades show cream colored spots with brown-black borders.	Sanitation. See the AL Pest Management Handbook.
	Ring & Spiral	Nematode Damage	Patches or areas

become yellowed and dieback.	See ANR-523.		
Cherry	Septoria Leaf Spot	Small (0.5 cm or less in diam.), angular brown spots.	Sanitation in the fall.
Cherry, Kwanzan	Anthracnose	Brown spots and blotches along leaf veins and along leaf edges.	Sanitation. Cleary's 3336 or Halt may be applied.
Cherry Laurel	Phytophthora Root Rot/Overwatering	Roots become brown, wet, decayed.	Sanitation; correct excess water problem.
Chrysanthemum	Phytophthora Blossom Blight	Brown, wet blotches and blight on flowers.	Sanitation.
	Phytophthora Root Rot	Roots become brown, wet, decayed.	Sanitation; correct excess water problem. See AL Pest Management Handbook.
Cleyera <u>Plant</u>	Phytophthora Root <u>Disease</u>	See Boxwood. <u>Description</u>	Sanitation. Improve soil drainage. <u>Control</u>
Collards	<i>Alternaria</i> Leaf Spot	Gray-black, sooty spots with ring patterns on older leaves; disease of seedlings is severe.	Sanitation.
	Black Rot ( <i>Xanthomonas</i> )	Dark V-shaped lesion at leaf edge; blackening of leaf veins; black vascular ring if stem is cut cross-wise.	Rotation for 2-3 years; solarization may help.
	Rhizoctonia Wire Stem	The lower stem and major root becomes thin and discolored brown with a dry rot. Plants decline and die.	Remove damaged plants; see the Ala. Pest Management Handbook.
Coral Bells	Cylindrocladium Root	Rot	Brown-black root

decay.	Sanitation. Cleary's 3336 or Halt drenches for protective action.		
	Pythium Root Rot	Roots become light brown, decayed, and water-soaked.	Sanitation. Reduce water levels in the area.
Corn	Charcoal Rot ( <i>Macrophomina</i> )	Gray lesions develop on lower stems and roots. Under the epidermis, numerous resting structures and fruiting bodies are scattered throughout the stem and root tissues which become dried and separate easily. These tissues appear as though they were sprinkled with finely-ground pieces of charcoal.	Maintain healthy plants with proper fertilization and watering if possible, crop rotation.
Cotton	Alternaria Leaf Spot	Irregular, or circular, slightly zonate brown leaf spots/blotches.	See Ed Sikora.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Cercospora Leaf Spot	Irregularly shaped brown leaf spots develop.	See Ed Sikora.
	Root-Knot Nematode ( <i>Meloidogyne</i> )	Plants grow poorly; roots have galls.	Crop Rotation. See Ed Sikora.
Crape Myrtle	Cercospora Leaf Spot	Irregular shaped brown leaf spots develop.	Sanitation. See the AL Pest Management Handbook.
Cypress, Leyland	<i>Cercospora</i> Blight (formerly <i>Cercospora</i> )	Needle and twig blight that usually begins on lower foliage.	Sanitation. Cleary's 3336 protective sprays.
	Phytophthora Crown Rot	Brown, wet lower trunk decay.	Sanitation. See AL Pest Management Handbook.

	Pythium Feeder Root Rot	Light brown feeder root decay.	Sanitation. See AL Pest Management Handbook.
	Seiridium Canker	Elongated, sunken lesions with oozing sap.	Sanitation; pruning; protective sprays of Cleary's 3336.
Daylily	Daylily Rust ( <i>Puccinia hemerocallidis</i> )	Leaves develop small orange, powdery spots and affected leaf areas become yellow, then brown.	Sanitation. Protective fungicide treatments of Banner Maxx or Heritage are available for commercial situations. Spectracide Immunox or Fertiloam System Fungicide may be used in homeowner situations.
Dianthus	Phytophthora Stem Blight	Brown, water-soaked cankers.	Sanitation. Reduce water levels.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Pythium Root Rot	Slightly brown, water-soaked root decay.	Sanitation. Reduce water levels. Subdue may be used.
Dogwood	Botryosphaeria Canker	Slightly sunken lesion, sometimes with cracks along the margin.	Sanitation.
	Cercospora Leaf Spot	Angular-irregular tan-brown lesions (2-6 mm diam.) sometimes with a thin yellow halo.	Usually sanitation is the only control measure needed.
	Powdery Mildew ( <i>Oidium</i> ; <i>Microsphaera</i> or <i>Phyllactinia</i> )	White, powdery patches on leaves; affected areas become blighted.	See AL Pest Management Handbook. Sanitation.
	Septoria Leaf Spot	Angular, brown spots, about 1 cm or less in	diam; may be confused with

Cercospora leaf spot.	Collect and remove fallen leaves this fall.		
Dusty Miller	Alternaria Leaf Spot	Dark, angular spots	Sanitation; Cleary's 3336.
Eleagnus	Phytophthora Root Rot	Brown, wet root decay.	Sanitation. Improve soil drainage.
Euonymus	Anthracnose ( <i>Colletotrichum</i> )	Small brown spots (about 5 mm or smaller) on foliage.	Sanitation; See the Ala. Pest Management Handbook for protective fungicide recommendations.
Fern	Anthracnose ( <i>Colletotrichum</i> )	Gray-brown irregular blotches on fronds. Orange spore masses may be present in humid weather.	Sanitation; See the Ala. Pest Management Handbook under leaf spot.
	Rhizoctonia Aerial Blight	Gray or brown irregular blotches on fronds; some 'shot-hole'.	Sanitation; See the Ala. Pest Management Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Fescue	Brown Patch ( <i>Rhizoctonia</i> )	See bermudagrass.	See bermudagrass.
	Helminthosporium Leaf Spot	Tiny, elongate brown leaf spots that may be numerous, coalesce and cause blight of entire leaf blade.	See ANR-621 or Ala. Pest Management Handbook.
Fig	Cercospora Leaf Spot	Gray-brown irregular spots, blotches.	Sanitation of leaves in the fall.
Gardenia	Phytophthora Crown Rot	Lower stem/trunk at the soil line develops wet decay.	Sanitation. (See the Ala. Pest Management Handbook under Root Rot for protective treatment.)
Grape	Cercospora Leaf Spot	Angular medium brown leaf spots.	Recommendations for anthracnose should help.
Hickory	Scab ( <i>Cladosporium</i> )	Small, dark brown, slightly raised leaf	spots.

Sanitation in the fall.

Holly, Blue Maid	Botryosphaeria Canker	Brown or black sunken, cracked lesions (cankers) on branches.	Sanitation. Protective sprays of Cleary's 3336, Domain or a WP benomyl labelled for ornamentals.
	Phytophthora Root Rot	Feeder roots become water-soaked, decayed.	See the Ala. Pest Management Handbook.
Holly, Helli	Rhizoctonia Aerial Blight	Lower foliage becomes blighted.	Sanitation. See the AL Pest Management Handbook.
Hosta	Anthraco	Brown, circular-oval leaf spots; may show some zonation.	Sanitation; Cleary's 3336 will provide some control.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Hydrangea	Armillaria Root Rot	Sudden dieback; white, thin fungal layer may be present under bark; black thread-like structures may be present over or under bark near roots; honey-colored mushrooms may be present near base of shrub.	Sanitation.
	Cercospora Leaf Spot	Relatively large (0.5-1.0 cm) dark brown circular spots with reddish borders.	Sanitation. See the Ala. Pest Management Handbook.
	Phytophthora & Pythium Root Rot	Roots become brown and water-soaked.	Sanitation. See the Ala. Pest Management Handbook.
Impatiens	Alternaria Leaf Spot	Small circular or angular dark brown spots.	

Sanitation; a mancozeb product such as Duosan or Zyban.

Indian Hawthorn	Cercospora Leaf Spot; Possible Bacterial Leaf Spot Involvement	Angular, vein-bound brown-red leaf spots.	Sanitation.
Iris	Bacterial Soft Rot	Soft, wet, watery rot of rhizome.	Sanitation. Control insect problems.
	Fusarium Rhizome Rot	Areas of the rhizome exhibit a dry, brown rot.	Sanitation. See the AL Pest Management Handbook.
Ivy, English	Alternaria Leaf Spot	Round or oval, brown leaf spots.	Sanitation. Protect T/O or other labelled mancozeb product.
	Anthracnose	Circular or irregularly-shaped brown leaf spots develop.	Sanitation. See the AL Pest Management Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phytophthora Crown & Root Rot	Tissues dark and water-soaked.	Sanitation; reduce irrigation or improve drainage.
	Pythium Root Rot	Light brown rotted roots.	See Phytophthora Root Rot.
Juniper	Cercospora (formerly Asperisporium and Cercospora) Blight	Blight of needles beginning with lower foliage.	Sanitation. Cleary's 3336 protective sprays.
	Pestalotia Needle Blight	Lower foliage needle blight associated with plant stress.	Sanitation.
	Phomopsis Dieback	Juniper branch tips become brown. Cankers develop on twigs and dieback continues down the twig.	See the Ala. Pest Management Handbook.

	Phytophthora Root Rot	See Holly.	See Ala. Pest Management Handbook.
Ligustrum	Cercospora Leaf Spot	Brown irregular spots (about 1 cm diam.) on foliage; when leaf spot is severe, defoliation may result.	Sanitation; See the Ala. Pest Management Handbook.
Liriope	Anthracnose ( <i>Colletotrichum</i> )	Brown irregular blotches on leaf blades; often, leaf tip areas are involved.	Sanitation; See the Ala. Pest Management Handbook.
Loripetalum	Pythium Root Rot	Light brown, water-soaked, rotted roots.	Sanitation. Reduce irrigation or improve soil drainage.
Maple	Anthracnose ( <i>Kabatella</i> )	Brown spots and blotches on foliage; enlarged spots may involve more than half of individual leaves.	Sanitation. See the Ala. Pest Management Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phyllosticta Leaf Spot	Gray circular spots (¼ inch diam., approx.) with dark brown or reddish brown borders.	Sanitation.
Maple, Red	Botryosphaeria Canker	Elongated, sunken, often cracked lesions.	Sanitation. Remove stress factors.
Marigold	Alternaria Leaf Spot	Small (0.2-0.3 cm diam.) dark brown-black spots. Numerous spots cause death of plants.	Sanitation. See the Ala. Pest Management Handbook.
	Phytophthora Crown Rot	Crowns become brown, decayed, water-soaked.	Sanitation. See the AL Pest Management Handbook.
	Pythium Crown Rot	Crowns become brown, decayed,	water-soaked.

Sanitation. See the AL Pest Management Handbook.

Rhizoctonia Crown Rot

Tissues become brown and dry rotted.

Sanitation. Banrot may be used as a protective treatment.

Millet

*Piricularia* Leaf Spot

Irregular, 3-6 mm diameter gray-brown leaf spots.

Crop rotation.

Mondograss

Anthracnose

Light brown blotches, leaf spots on leaves; often spots have dark brown borders.

Cut foliage back. Cleary's 3336 will help.

Plant

Disease

Description

Control

Muscadine

Anthracnose (*Colletotrichum*)

Circular or angular, brown lesions on leaves or stems, which may coalesce. Centers of lesions may become gray-white. Lesion borders are dark purple-brown-black. Cracking may occur. Similar-looking lesions may occur on fruit. Fruit lesions extend into fruit pulp.

Sanitation. See Ala. Pest Management Handbook.

Black Rot (*Guignardia*)

Brown circular spots with dark brown borders on foliage and fruit. Spots may coalesce to involve large area of tissue.

See the Ala. Pest Management Handbook.

Mustard

*Cercospora* Leaf Spot

Irregularly-shaped brown leaf spots.

Sanitation.

Nandina	Cucumber Mosaic Virus	Plants show stunted new growth; some mosaic, leaf distortion, mottle and/or curling/puckering may be present.	Sanitation; aphid control may help a small amount.
Nectarine	Brown Rot	Brown, soft rot sometimes with gray spore masses.	Sanitation. See Ala. Pest Management Handbook under 'peach'.
	Phomopsis Canker	Brown, sunken, dry decay lesions on twigs and branches.	Sanitation. See Ala. Pest Management Handbook under 'peach'.
Oak	Bacterial Scorch	Inner leaves first develop a leaf edge scorch. Gradually all foliage becomes scorched; dieback follows.	Removal of infected trees.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Hypoxylon Canker	Bark cracking and sloughing off; gray or black hard stroma layer develops under bark layer.	Sanitation.
	Oak Leaf Blister ( <i>Taphrina</i> )	Brown puckered spots.	Sanitation.
	Powdery Mildew ( <i>Microsphaera</i> )	White dusty coating on upper leaf surfaces. Some distortion of new leaves.	Collect and remove fallen leaves this fall.
Oak, Pin	Xylella Scorch	Lower and oldest leaves show leaf edge scorch; problem progresses upward through the tree canopy. Dieback develops; eventual tree death.	Remove dying trees.
Oak, Red	Tubakia Leaf Spot	Round or irregular-round spots or blotches.	Sanitation of fallen leaves in the fall.

Pansy	Anthracnose ( <i>Colletotrichum</i> )	Small, round, light brown, cream-colored spots.	Sanitation. Cleary's 3336.
	Myrothecium Crown Rot	Dieback; decayed crowns.	Sanitation; See A. Hagan.
	Phytophthora & Pythium Root Rot	Brown, wet-rotted roots.	Sanitation. See Ala. Pest Management Handbook.
	<i>Phyllosticta</i> Leaf Spot	Relatively small (2-3 mm diam.) medium brown, roughly circular spots. Spot centers may become gray.	Sanitation. Protective sprays of Cleary's 3336, Domain, or a benomyl WP labelled for ornamentals.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phytophthora Root Rot	Roots become brown and water-soaked.	Sanitation. See the Ala. Pest Management Handbook.
	Pythium Root Rot	Roots become brown and water-soaked.	Sanitation; See the Ala. Pest Management Handbook.
	Thielaviopsis Root Rot	Roots become covered with black spots/ lesions.	Sanitation; Cleary's, or Domain protective drenches.
Peanut	Early Leaf Spot ( <i>Cercospora</i> )	Brown spots with halos develop on lower leaf surfaces; spore production usually on upper leaf surface.	Protective fungicide sprays. See Peanut Spray Guide and Timely Information PP-350 on Foliar.
	Late Leaf Spot ( <i>Cercosporidium</i> )	Brown to black spots, sometimes difficult to distinguish from early leaf spot unless spores are observed microscopically; spore production usually on lower leaf surface.	Protective fungicide sprays. See Peanut Spray Guide and PP-350.

Lesion Nematode Pod Damage ( <i>Pratylenchus</i> )	Pods shrivelled, sunken lesions.	See A. Hagan.
Rust ( <i>Puccinia</i> )	Orange pustules on foliage.	--
Peanut Mottle Virus	Plants stunted with regular green, light green color pattern.	See A. Hagan.
<i>Rhizoctonia</i> Limb Rot	Oval to elliptical, brown spots develop on stems. Young spots may have a target ring pattern. Whole limbs or stems become blighted.	See Ala. Pest Management Handbook and PP-350; Careful water management.

Plant

Disease

Description

Control

<i>Rhizoctonia</i> Pod Rot	Dull, light or dark brown, sunken lesions. Dark brown fungal threads (hyphae) may be seen on seed surface and inside wall of the shell.	See <i>Rhizoctonia</i> Limb Rot.
Root-Knot Nematode ( <i>Meloidogyne</i> )	Plants are stunted and grow poorly; galls develop on roots.	Crop rotation. See Timely Information, Nematode Suppressive Crops, PP-341.
Southern Blight (White Mold)	Soft decay spots on stems near the soil usually become covered with white mold that sometimes contains tiny black spherical fungal bodies.	See the Ala. Pest Management Handbook.
Tomato Spotted Wilt Virus	Stunted plants; leaves show ring spot and mosaic patterns; new leaves small with abnormally shortened	internodes.

Control thrips and weeds; Sanitation.

Pear, Apple

Bitter Rot  
(*Colletotrichum*)

Brown, circular spots develop on the fruit surface. Orange dots of spore masses in a circular pattern develop on the surface of the discolored fruit skin. A brown rot extends through the fruit in a v-shaped area.

Sanitation. See Ala. Pest Management Handbook for fungicide sprays. Follow recommendations for Black Rot.

Plant

Disease

Description

Control

Black Rot  
(*Botryosphaeria obtusa*)

Brown, circular lesions (4-5 mm diam.) with purple borders on leaves; leaf yellowing and drop may occur; surface lesions on fruit show black-brown concentric rings which remain firm. Branch cankers may be small, long (5 m), sunken and/or cracked, superficial or deep.

Sanitation; See Ala. Pest Management Handbook for fungicide sprays.

Pear, Bradford

Alternaria Leaf Spot

Oval or round, brown leaf spots.

Sanitation of leaves in the fall. Protect T/O will help provide protective disease control.

Fabraea Leaf Spot

Black circular spots (about 0.2-0.4 cm diam.)

Sanitation of fallen leaves in the fall. Regular spray schedule may help. See AL Pest Management Handbook.

Peas, Southern	<i>Fusarium</i> Wilt	Vascular tissues of lower stem are discolored reddish-brown.	Rotate peas out of the area for 10+ years.
	Mosaic Virus	Leaves show a yellow-green mosaic color pattern; sometimes green bands occur along the veins; plants are stunted.	Sanitation; control insects. Use resistant varieties such as Corona, Pinkeye Purplehull-BVR, Texas Pinkeye, Genegreen, Grant Blackeye or Royal Blackeye.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Pecan	Scab ( <i>Cladosporium</i> )	Small, circular, olive-green or black, slightly raised spots develop on leaves, petioles, and nut shuck tissue. Lesions may coalesce causing terminals to die.	See the Pecan Spray Guide; Sanitation.
	Zonate Leaf Spot ( <i>Cristulariella</i> )	On upper leaf surfaces, gray-brown concentric-ring spots (up to 2 cm diam.) appear. On lower leaf surfaces, spots are paler brown with dark brown borders.	Sanitation; protective fungicide sprays. See the Pecan Spray Guide.
Peony	Botrytis Leaf Spot	Irregularly-shaped brown-gray blotches.	Sanitation. Pruning to increase air circulation. Cleary's 3336, Halt.
Pepper	Bacterial Blight	Leaves develop dark brown angular spots which are often water-soaked along the edges. Leaf	yellowing and drop often occurs on spotted leaves.

See Ala. Pest Management Handbook.

Pepper & Other Vegetables

Southern Blight (*Sclerotium rolfsii*)

Initially a dark brown lesion forms on the stem just below the soil surface. Plants wilt and turn yellow. The lower stem rot may also become a root rot. Coarse white fungal threads develop at the soil line around the stem. Eventually small, tan, spherical fungal (mustard seeds) develop around and in

Use Terraclor 75WP on pepper. See Alabama Pest Management Handbook.

Plant

Disease

Description

Control

bodies (resembling the coarse white fungal threads.

Petunia

Myrothecium Crown Rot

Crowns become decayed, brown and soft.

Sanitation. Protective sprays of Daconil may be used.

Phytophthora Aerial Blight

Stems & leaves develop brown, water-soaked decay.

Sanitation. Reducing water levels. See the AL Pest Management Handbook.

Phytophthora Crown & Root Rot

Crowns & roots become decayed and water-soaked.

Sanitation. See the AL Pest Management Handbook.

Pythium Crown Rot

Crown water-soaked and decayed.

Sanitation. Reduce water in the area. See the AL Pest Management Handbook.

Photinia

*Armillaria* Root Rot

Plant may decline slowly or suddenly; lower trunk under the bark and roots may be covered with closely appressed white fungal mat with black,

threadlike structures.

Sanitation. See ANR-907.

	<i>Phytophthora</i> Root Rot	See Azalea.	--
Pine, Virginia	<i>Lophodermium</i> ( <i>Ploioderma</i> ) Needle Cast	Older needles turn brown and drop; very small (1-2 mm or 1/32 inch) football shaped, black fruiting bodies develop on brown needles.	Protective fungicides spray. See Ala. Pest Management Handbook.
	<i>Rhizosphaeria</i> Needle Cast	Needles become gray-brown. Twig blight may develop.	Sanitation. See the Ala. Pest Management Handbook.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Pittosporum	Southern Blight ( <i>Sclerotium rolfsii</i> )	Lower trunk becomes rotted and softened. White mycelial mats and tiny black spherical bodies (sclerotia) may be present on trunk at soil surface.	Sanitation.
Plum	Black Knot ( <i>Plowrightia morbosum</i> )	Branches exhibit elongated black-surfaced, irregular galls that may involve a long (10 cm or more) distance of the branch.	Sanitation of galls. See Ala. Pest Management Handbook.
Poinsettia	<i>Rhizoctonia</i> Stem Rot & Root Rot	Lower stems develops dry medium-dark brown surface lesions; roots may become brown and dried.	See Ala. Pest Management Handbook.
	<i>Pythium</i> Root Rot	Roots become medium brown, soft, water-soaked and rotted.	See Ala. Pest Management Handbook.
	<i>Rhizopus</i> Stem Rot	Stem sections become glassy and water-soaked; a delicate	black mass of fungal threads and small black spherical

structures may develop over the lesions.

Sanitation.

Bacterial Stem Rot (*Erwinia*)

Black, water-soaked spots or lesions on stems. Lesions may girdle stems.

Sanitation; pot-level irrigation; See Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Pumpkin	Downy Mildew ( <i>Pseudoperonospora</i> )	Yellow spots/blotches develop on upper leaf surfaces; gray spots appear on corresponding areas of lower leaf areas. When temperature are cool-moderate and humid, a gray mycelium/spore layer will develop on lower leaf surface spots.	See the Ala. Pest Management Handbook.
	Mosaic Virus	Leaves develop a yellow mosaic pattern on dark green background. New growth is stunted.	Sanitation. Control insects. Do not save seed.
	Plectosporium Blight	Cream-colored, raised, scabby lesions on stems, leaves, fruit, and peduncles.	Sanitation. Check with Ed Sikora.
	Root Knot Nematode ( <i>Meloidogyne</i> )	Plants become stunted. Roots are galled.	Sanitation. Solarization. See ANR-713.
Raspberry	Septoria Leaf Spot	See Blackberry.	--
Red Cedar	Phomopsis Tip Blight	Tips of twigs become	yellowed and

browned. Dieback may spread down the twig-branch. Lower foliage is affected first.

Sanitation. See the Ala. Pest Management Handbook.

Rhododendron

Phytophthora Root Rot

Dieback; roots become brown, water-soaked initially then dried, decayed.

Sanitation; correct excess water problem; see Ala. Pest Management Handbook under azalea.

Plant

Disease

Description

Control

Rose

Botrytis Blight

Brown-gray irregular blotches develop on leaves.

Sanitation. See AL Pest Management Handbook.

Phytophthora Root Rot

Dieback; active infections are wet-rotted; old infections are dried.

Sanitation; reduce watering.

Rosemary

Phytophthora Root Rot

Roots become brown, decayed, water-soaked.

Sanitation. Reduce watering.

Rhizoctonia Web Blight

Lower foliage becomes blighted.

Sanitation. Increase air circulation.

Salvia

Rhizoctonia Crown Rot

Crowns become brown & dry-rotted.

Sanitation. Cleary's 3336 or Halt may be used.

Schip Laurel

Bacterial Leaf Spot (*Xanthomonas*)

Angular brown spots with water-soaked margins; shot-holes develop.

Sanitation.

Scuppernong

Black Rot (*Guignardia*)

Vines & fruit develop black decay/rot. Leaves develop brown, irregular spots with circles of small black specks.

Sanitation. See AL Pest Management Handbook under grapes.

Sesame

Cercospora Leaf Spot

Brown circular-

angular spots.

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Snapdragon	Cercospora Leaf Spot	Pale brown angular leaf spots of variable size.	Cleary's 3336, Domain, or a benomyl labeled for ornamentals.
Sorghum, Grain	Anthrachnose (Red Rot) ( <i>Colletotrichum</i> )	Red spots and lesions on leaves and stalks. Heads may become infected, reddish and rotted.	Sanitation.
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	<i>Fusarium</i> Head Blight	Entire seed head may rot and become covered by cream-pink fungal spore masses.	Sanitation.
	Gloeocercospora Blight (Zonate Leaf Spot)	Zonate spots on leaves; red-purple bands alternate with yellow bands.	Sanitation.
Soybean	Aerial Blight ( <i>Rhizoctonia</i> )	Small spots or large areas of leaves, stems, or pods may become brown and blighted; leaves may become tattered; leaf drop; disease favored by high humidity.	See Soybean Spray Guide.
	Anthrachnose ( <i>Colletotrichum</i> )	Large, irregular, brown areas on stems, pods, petioles.	Deep plow.
	Brown Spot ( <i>Septoria</i> )	Irregular dark brown spots (1-4 mm diam.) on upper and lower leaf surfaces. Usually spots begin on lower leaves first.	See Soybean Spray Guide.
	Charcoal Rot ( <i>Macrophomina</i> )	A light grey discoloration of tap root and lower stem. Inner stem tissues appear shredded and gray as if sprinkled with finely powdered charcoal. A disease of hot, dry conditions.	Rotation; proper fertilization.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Pod and Stem Blight ( <i>Diaporthe</i> , <i>Phomopsis</i> )	Stems, petioles, pods, seeds become just slightly discolored. During wet, warm conditions, linearly arranged black dots (fruiting bodies) appear on infected tissues.	See Soybean Spray Guide.
	Root-Knot Nematode ( <i>Meloidogyne</i> )	Irregularly-shaped galls appear on roots. Plants grow poorly.	Rotation; Fumigation; See Soybean Spray Guide.
	Stem Canker ( <i>Diaporthe</i> )	Reddish brown, slightly sunken cankers that girdle stems and kill plants.	See the Soybean Control Recommendations ANR-413.
	Sudden Death Syndrome ( <i>Fusarium solani</i> )	Leaves become yellowed and then browned in interveinal areas; browned leaves fall from plants; the tap roots and often lateral roots become browned and decayed. Rotting may extend to the crown area at the Soil line.	Sanitation and deep plowing of plant residue; rotation; call Ed Sikora if more information is needed.
Squash, Summer	Cercospora Leaf Spot	Irregular medium-brown spots (0.2-0.6 cm diam., usually).	See the Ala. Pest Management Handbook.
	Cucumber Mosaic Virus	Plants develop mosaic, stunting, and abnormal shoestring leaves.	Sanitation. Aphid control may help a little.
	Papaya Ringspot Virus	Plants develop mosaic and stunting.	Sanitation. Aphid control may help a little.
	Watermelon Mosaic Virus II	Pronounced mosaics of green and yellow.	Sanitation. Aphid control may help a little. Virus may be transmitted mechanically.

Control weeds.  
WMV is not seed transmitted.

	Zucchini Yellow Mosaic Virus	Foliage and fruit develops mosaic and may be stunted.	Sanitation. Aphid control may help a little.
St. Augustine	Brown Patch ( <i>Rhizoctonia</i> )	See Bermudagrass.	–
<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Grey Leaf Spot ( <i>Piricularia</i> )	Small spots usually develop into large 4-8 mm diam.), brown or gray lesions with purple or brown borders. A yellow halo or general chlorosis may develop around spots. When severe entire foliage may turn gray-brown.	Collect clippings; See A l a . P e s t M a n a g e m e n t Handbook.
	Take-All Patch ( <i>Gaeumannomyces</i> )	Spots/areas of turf become thinned and yellowed. Eventually plants die and the problem area becomes larger.	See Timely Information PP-312.
St. John's Wart	Pythium Root Decay	Roots are slightly brown, water-soaked, rotted; tissues pull apart easily.	Sanitation; correct excess water problem.
Strawberry	Anthrachnose ( <i>Colletotrichum</i> )	Lesions on stolons are brown-black, longitudinal and sunken. During high humidity cream-pink spore masses may form on lesions. Crown rot appears as reddish-brown firm rot or streaks of rot; plants wilt and die when crown rot is severe.	Protective fungicide sprays; Sanitation.
	Phomopsis Leaf Blight	Brown spots/blotches often associated with	leaf edges.

See the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Sweet Potato	Fusarium Surface Rot on Roots	Lesions are circular, light-dark brown, firm, and dry; rot does not extend beyond vascular ring. In storage lesions eventually become shrunken, cracked; roots dry out.	Avoid wounding.
	Scurf ( <i>Monilochaetes</i> )	A brown patchy discoloration of the root which usually begins as small, brown specks or spots. The discoloration is entirely superficial, but cracks will cause roots to dry out.	See Ala. Pest Management Handbook.
Thrift	Rhizoctonia Blight	Stem and leaf browning.	Sanitation; Cleary's 3336.
Tomato	Bacterial Leaf Spot ( <i>Xanthomonas</i> )	Dark, water-soaked, irregular and somewhat circular leaf spots (usually 1-3 mm diameter).	Sanitation. See the Ala. Pest Management Handbook.
	Bacterial (Pith Necrosis) Canker ( <i>Pseudomonas</i> )	Sunken, dark-colored, dried or water-soaked cankers appear on (usually) lower stems. When the stem is split lengthwise, the hollow stem shows a network of cross tissue 'threads'.	Adventitious root initials may develop on surface areas of cankers.

Sanitation. See Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Bacterial Wilt ( <i>Ralstonia</i> )	Plants wilt rapidly. Lower stem vascular system and surrounding tissues may be brown. Ooze is visible from cut lower stem suspended in water.	Sanitation. Crop rotation away from susceptible crops. See ANR-797.
	Cladosporium Leaf Mold	A dark gray surface mold develops on leaves in blotches areas.	Sanitation. See the AL Pest Management Handbook.
	Cucumber Mosaic Virus	Plants stunted with mosaic, leaf distortions.	Sanitation. Aphid control may help a small amount.
	Double Virus Streak (Combination of Tobacco Mosaic Virus and Potato Virus X)	Leaves first show a light green mottle followed by numerous small (2 mm) gray-brown spots; severely damaged leaves may die. Later, leaves become dwarfed, curled, yellowed with small brown spots. Narrow, dark brown streaks develop on petioles and stems. Shoot tips may die; Plants are stunted. Fruit set reduced; fruits develop greasy, brown lesions.	Sanitation.
	Late Blight ( <i>Phytophthora</i> )	<i>infestans</i> )	Dark brown-black blotches/spots on

leaves/stem.

See the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phytophthora (Buckeye) Fruit Rot	Medium-brown, slightly sunken, zonate patterned with concentric rings, small to large spots develop on fruit. Brown discoloration may extend to fruit center.	Keep fruit away from the ground; See Ala. Pest Management Handbook.
	Potato Virus Y	Plants stunted with some mosaic patterns, vein clearing.	Sanitation. Aphid control may help a small amount.
	Root Knot Nematode ( <i>Meloidogyne</i> )	Plants are stunted. Roots are galled.	Sanitation. Resistant varieties or solarization.
	Septoria Leaf Spot	Small gray circular-angular spots.	See the Ala. Pest Management Handbook.
	Tobacco Etch Virus	Plants stunted with some mosaic patterns, vein clearing, yellowing, sometimes necrotic rings.	Sanitation. Aphid control may help a small amount.
	Tomato Spotted Wilt Virus	New growth stunted, leaves spotted and/or with ring spots; whole plant stunting and wilting; ringspots on fruit.	Sanitation. Thrips control will help in some situations.
Turnip	Black Rot ( <i>Xanthomonas</i> )	See Collards.	--
	<i>Cercospora</i> Leaf Spot	Irregular gray-brown	leaf spots with

whitish centers and brown margins.	See Ala. Pest Management Handbook.		
Verbena	Anthracnose ( <i>Colletotrichum</i> )	Circular black spots on foliage.	Sanitation; Cleary's 3336.
<u>Plant</u>	Pythium Lower Stem Rot <u>Disease</u>	Brown water-soaked lesions. <u>Description</u>	Sanitation; reduce irrigation. <u>Control</u>
Vinca (Annual Periwinkle)	Anthracnose ( <i>Colletotrichum</i> )	Brown irregular areas, blotches develop on leaves and stems.	Sanitation. Protective sprays of Cleary's or Domain or a WP benomyl labelled on ornamentals may help.
	Phytophthora Stem Rot and/or Crown/Root Rot	Stems and/or lower stems near soil line and roots become browned and water-soaked.	Sanitation; improve soil drainage.
	Pythium Root Rot	Roots become brown decayed and water-soaked.	Sanitation. Reduce watering schedule. Rotate to different crop.
	Rhizoctonia Aerial Blight	Lower leaves become blighted; a thin mycelial webbing may develop.	Sanitation; Cleary's, Domain or a WP benomyl labelled on ornamentals may help.
Watercress	Cercospora Leaf Spot	Brown, circular-irregular leaf spots.	Sanitation.
	Pythium Stem & Root Rot	Stems and roots develop brown, water-soaked lesions.	Sanitation.
Watermelon	Fusarium Wilt	Plants show wilt & leaf yellowing beginning at base of plant.	Sanitation. Resistant varieties.
	Gummy Stem ( <i>Mycosphaerella</i> )	Leaves develop black spots at leaf edges. Stem develop oozing, gummy cankers.	See Ala. Pest Management Handbook.

Papaya Ringspot Virus	Leaves develop a mosaic (yellow-green); stunting.	Sanitation. Control of aphids may help a small amount.
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<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Wax Myrtle	Anthracnose ( <i>Colletotrichum</i> )	Brown, irregular spots, blotches develop on leaves.	Sanitation; if disease is severe, protective sprays of Cleary's 3336 or Domain or a WP benomyl may help.
	Gummy Stem Blight ( <i>Mycosphaerella</i> )	Black lesions/spots at leaf edges; elongate cracking on stem with amber-colored ooze.	See Ala. Pest Management Handbook.
Willow	Cercospora Leaf Spot	Irregularly shaped brown spots.	Sanitation of leaves in the fall.
Zoysia	Brown Patch ( <i>Rhizoctonia</i> )	See Bermudagrass.	--
	Dollar Spot ( <i>Sclerotinia</i> )	Small spots in lawn (silver-dollar sized) become a white-gray colored. Individual grass blades develop dark water-soaked irregular spots which become whitish-gray with dark borders.	See the Ala. Pest Management Handbook or ANR-493.
	Rust ( <i>Puccinia</i> )	Small (1-3 mm), yellow-orange-red flecks on grass blades; yellow-orange-red powder will wipe off on fingers. When severe, leaf blades will yellow and eventually die.	This is usually only a problem in shaded areas; fungicides may be applied when disease is severe; See the Ala. Pest Management Handbook or ANR-621.

Take-All Patch  
(*Gaeumannomyces*)

Individual plants  
yellow, wither, die;  
black lesions on roots  
and stolons.

Keep soil pH at 5.5-  
6.0; use only  
ammonium-based  
fertilizer; avoid  
frequent irrigation.