

# TIMELY INFORMATION

## Agriculture & Natural Resources

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PP-636

### **JUNE PLANT DISEASES FROM THE AUBURN PLANT DIAGNOSTIC LAB**

### **JUNE PLANT DISEASES FROM THE BIRMINGHAM PLANT DIAGNOSTIC LAB**

### **JUNE INSECT SAMPLES AT THE AUBURN PLANT DIAGNOSTIC LAB**

### **DISEASE POSSIBILITIES FOR JULY**

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#### Auburn Plant Disease Report-June (J. Mullen)

June continued to be dry in most parts of the state, and especially in the northern half of the state. Consequently, our plant problem sample number of 138 was about half of our usual number for June.

Some diseases seen in June included *Phytophthora* crown & root rot on azalea, take-all patch on Bermuda; *Phytophthora* root rot on red buckeye; *Phytophthora* and *Pythium* root rot on evergreen clematis; *Colletotrichum* leaf spot and *Phytophthora* root rot on cleyera; bacterial stalk rot; corn smut and common rust on corn; *Fusarium* & *Rhizoctonia* root rot on cotton; *Phytophthora* root rot on hydrangea; *Heterosporium* leaf spot on iris; *Alternaria* leaf spot on hydrangea; *Phytophthora* root rot on juniper; *Phytophthora* root rot on ligustrum; tomato spotted wilt virus on pepper; cedar quince rust on quince (flowering); bacterial canker, anthracnose fruit rot, *Fusarium* wilt, southern blight (*Sclerotium rolfsii*), and tomato spotted wilt on tomato; tomato spotted wilt virus on zinnia; ring nematode damage and rust on zoysia.

June 26, Ed Sikora found Asian soybean rust present in a sentinel plot in Baldwin County. The soybean rust team is continuing to monitor for the disease, but no new sites have been found as of July 24.

Table 1. June Plant Diseases Received at the Auburn Plant Diagnostic Lab.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
<i>Aletris farnosa</i>	Fusarium Root Rot	Lee
Azalea	Phytophthora Crown & Root Rot	Bullock
Astragalus	Phytophthora Root Rot	Lee
	Pythium Root Rot	Lee
	Root-Knot Nematode ( <i>Meloidogyne</i> )	Lee
Bermuda	Take-All Patch ( <i>Gaeumannomyces graminis</i> var. <i>graminis</i> )	Mobile
Buckeye, Red	Phytophthora Root Rot	*
Centipede	Secondary Take-All Patch	Tuscaloosa
Cherry	Phoma Twig Blight	Greene
Clematis, Evergreen	Phytophthora Root Rot	*
	Pythium Root Rot	*
Cleyera	Colletotrichum Leaf Spot	Lee
	Phytophthora Root Rot	Lee
Corn	Bacterial Stalk Rot	Dallas
	Corn Smut ( <i>Ustilago maydis</i> )	Escambia, Shelby
	Rust, Common ( <i>Puccinia sorghi</i> )	Baldwin
Cotton	Fusarium Root Rot	Talladega
	Rhizoctonia Root Rot	Macon & Talladega

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Florida Anise	Colletotrichum Leaf Spot	Lee
Hydrangea	Phytophthora Root Rot	Coosa
Iris	Heterosporium Leaf Spot	Lee
Irish Potato	Suspect Scab ( <i>Streptomyces scabies</i> )	Mobile
Juniper, 'Blue Pacific'	Phytophthora Root Rot	Morgan
Ligustrum	Phytophthora Root Rot	Geneva
Lotus	Colletotrichum Leaf Spot	Lee
Pepper	Bacterial Stem Rot ( <i>Pectobacterium carotovorum</i> pv. <i>carotovorum</i> )	Lee
	Sunscald	Butler
	Tomato Spotted Wilt Virus	Lee
Quince, Flowering	Cedar Quince Rust ( <i>Gymnosporangium clavipes</i> )	Lee
	Phytophthora Foliage Blight	*
	Phytophthora Root Rot	*
Rhododendron	Botrytis Blight	*
	Colletotrichum Leaf Spot	*(5)
	Pestalotia Leaf Spot	*(5)
	<i>Phytophthora</i> sp. Leaf Spots (Not <i>P. ramorum</i> )	*
St. Augustine	Take-All Patch ( <i>Gaeumannomyces graminis</i> var. <i>graminis</i> )	Elmore, Mobile(3), Montgomery
Strawberry, Wild Tomato	Rust ( <i>Frommea obtuse</i> ) Bacterial Canker	Lee Geneva

<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Colletotrichum Fruit Rot	Mobile, Montgomery
	Fusarium Wilt ( <i>F. oxysporum</i> )	Russell
	<i>Sclerotium rolfsii</i> Crown Rot	Geneva
	Tomato Spotted Wilt Virus	Jackson, Jefferson, Lee, Mobile, Russell
Zinnia	Fusarium Root Rot	Lamar
	Tomato Spotted Wilt Virus	Escambia
Zoysia	Ring Nematode Damage ( <i>Criconemoides</i> )	Lamar
	Rust ( <i>Puccinia zoysia</i> )	Lamar

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

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

Last month we received only 89 samples, which is about half the normal number of samples we have seen during June of previous years. Drought conditions continued to persist over much of the region during June. However, the first few weeks of July have brought some reprieve from the dry conditions.

The most common problems this month were blossom end rot and tomato spotted wilt on home garden tomatoes. Some of the more unusual problems included camphor shoot beetle on Japanese maple and Phytophthora root and crown rot on Persian shield (*Strobilanthes*). The latter disease caused severe damage to a commercial planting of Persian shield. Besides root decay, the affected plants also showed purple to black discoloration of the lower stem, which is often seen with Phytophthora diseases. This is the first significant problem we have seen with *Strobilanthes* in landscape plantings.

Camphor shoot beetle (aka. Camphor shoot borer) was recovered from an established Japanese maple last month. The initial symptoms on the Japanese maple were wilting and dieback that were attributed to drought. Examination of affected branches revealed exit holes and light colored frass. Beetles found within sample stems were >3.5 mm in length, dark brown to black, with unusual shaped elytra. See the web sites listed below for pictures and additional

information on pest biology. The shape and larger size separates it from other ambrosia beetles (including the Asian or granulate ambrosia beetle) found in maples and other hardwood trees. Camphor shoot beetle is another introduced ambrosia beetle and has been found in Alabama, Florida, and Mississippi.

<http://www.barkbeetles.org/browse/subject.cfm?SUB=9579>  
<http://www.doacs.state.fl.us/pi/enpp/ento/twonewxyleborines.html>

Table 2. 2007 June Problems Seen In The Birmingham Plant Diagnostic Lab.

<u>Plant</u>	<u>Problem</u>	<u>County</u>
Azalea	Lacebug	Jefferson
Bentgrass	Ring Nematodes	*
Blackberry	Herbicide Injury	Jefferson
Boxwood, Common	Phytophthora Root Rot	Jefferson
Camellia, Common	Gray Leaf Spot ( <i>Pestalotia</i> )	Jefferson
	Tea Scale	Jefferson
Cherrylaurel	Powdery Mildew	Jefferson
Crape Myrtle	Herbicide Damage	Jefferson
Cypress, Italian	False Spider Mite	Jefferson
	Minute Cypress Scale	Jefferson
Euonymus, Japanese	Euonymus Scale	Jefferson (2)
Euonymus, Winged	Two Spotted Spider Mite	Jefferson
Hackberry	Asian Woolly Hackberry Aphid	Jefferson
Hawthorn	Cedar-Quince Rust	Jefferson
Hawthorn, Indian	Entomosporium Leaf Spot	Jefferson
Holly, Chinese	Tea Scale	Jefferson
Holly, Nellie R. Stevens	Sapsucker Damage	Jefferson

<u>Plant</u>	<u>Problem</u>	<u>County</u>
Hydrangea, Oakleaf	Armillaria Root Rot	Jefferson
Maple, Japanese	Camphor Shoot Beetle ( <i>Xylosandrus</i> )	Shelby
	Japanese Maple Leafhopper	Shelby
Maple, Silver	Woolly Alder Aphid	Jefferson
Mulch	Slime Mold ( <i>Fuligo</i> )	Jefferson
Pear	Fire Blight	Shelby (2)
Persian Shield	Phytophthora Root and Crown Rot	Jefferson
Rose	Powdery Mildew	Jefferson
	Thrips Damage to Flowers	Marion
Tomato	Blossom End Rot	Jefferson (4)
	Fertilizer Injury	St. Clair
	Herbicide Damage	Jefferson
	Tomato Spotted Wilt Virus	Cullman, Jefferson (6), Shelby
Vinca	Phytophthora Blight	Jefferson

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

Auburn Entomology Report-June (C. Ray)

<b>County</b>	<b>Host</b>	<b>Category</b>	<b>Identification</b>	<b>Scientific Name</b>
DeKalb	Information Not Provided	Information Not Provided	Southern Yellow Jacket	<i>Vespula squamosa</i>
DeKalb	Information Not Provided	Information Not Provided	Negro Bugs – Nymphs	Corimelanidae

County	Host	Category	Identification	Scientific Name
DeKalb	Information Not Provided	Information Not Provided	Honey Bees	<i>Apis mellifera</i>
Russell	Information Not Provided	Miscellaneous	A Jumping Spider	<i>Anasaitis canosa</i>
Mobile	Tomato	Row Crops	Tomato Fruitworm Damage	Noctuidae
Marengo	Tulip Poplar	Ornamental	Lady Beetle Pupal Cases	Coccinellidae
Lee	Willow Oak	Ornamental	False Spider Mites	<i>Brevipalpus</i> sp.
Sumter	Human	Medical	American Dog Tick	<i>Dermacentor variabilis</i>
Choctaw	Swimming Pool	Miscellaneous	False Chinch Bug (Several) & a Big-Eyed Bug	<i>Nysius raphanus</i> & <i>Geocoris uliginosus</i>
Cullman	Stone Wall	Miscellaneous	Bark Lice	Psocoptera
Tallapoosa		Miscellaneous	An Ant	Too Damaged For Specific ID
Tuscaloosa	Wood	Household-Structural	A False Powderpost Beetle	<i>Sinoxylon anale</i>
Chambers	Home	Household-Miscellaneous	Seed Bugs – Nymphs	Lygaeidae – Probably <i>Nysius raphanus</i>
Jefferson	Italian Cypress	Ornamental	False Spider Mites and Minute Cypress Scale	<i>Brevipalpus</i> sp. And <i>Carulaspis minima</i>
Calhoun	Oak	Ornamental	Oak Apple Gall	<i>Amphibolips confluenta</i>
Elmore	Tomato	Row Crops	Tomato Fruitworm	Noctuidae
Geneva	Fabric	Household- Stored Product	Plaster Bagworm	<i>Tineola walvinghami</i>
Montgomery	Human	Medical	American Dog Tick	<i>Dermacentor variabilis</i>
Montgomery		Miscellaneous	Bordered Plant Bug	<i>Largus succinctus</i>
Tallapoosa	Home	Household-Miscellaneous	A “Powder Post” Cerambycid	<i>Smodicum cucujiforme</i>

County	Host	Category	Identification	Scientific Name
Baldwin	Trap	Miscellaneous	Black Scavenger Flies	Scatopsidae
Lee	Loblolly Pine	Forest Crops	Woolly Pine Scale	<i>Pseudophilippia quaintancii</i>
Madison	Human	Medical	Buck Moth Caterpillar	<i>Hemileuca</i> sp.
Mobile	Home	Household – Stored Products	Book Lice	Psocoptera
Montgomery	Bermudagrass	Turfgrass	Sod Webworms	Noctuidae
Escambia	Various Row Crops	Row Crops	False Chinch Bug	<i>Nysius raphanus</i>
Talladega	Commercial Building	Household – Miscellaneous	False Chinch Bug	<i>Nysius raphanus</i>
Mobile	Human	Medical	Gulf Coast Tick	<i>Amblyomma maculata</i>
Baldwin	Cockscomb Flowers	Ornamental	False Chinch Bug	<i>Nysius raphanus</i>
Tallapoosa	Home	Household-Miscellaneous	Mud Dauber Larvae	Sphecidae
Tallapoosa	Lawn	Miscellaneous	Bordered Plant Bug Nymphs	<i>Largus</i> sp.
Pike	Home	Household-Stored Product	Drugstore Beetle & Larger Cabinet Beetle	<i>Stegobium paniceum</i> & <i>Trogoderma inclusum</i>
Baldwin	Soybeans	Row Crops	Red Banded Stinkbug	<i>Piezodorus guildinii</i>
Baldwin	Soybeans	Row Crops	Southern Green Stinkbug	<i>Nezara viridula</i>
Lee	<i>Astragalus membranaceus</i>	Row Crops	Possible Three-Cornered Alfalfa Hopper Damage	
Marshall	Boxwood	Ornamental	False Spider Mites and Latania Scale	<i>Brevipalpus</i> sp. & <i>Hemiberlesia lataniae</i>
Baldwin	Information Not Provided	Information Not Provided	May Beetle Larva	<i>Phyllophaga</i> sp.

County	Host	Category	Identification	Scientific Name
Mobile	Home	Household-Structural	Drywood Termite Fecal Pellets	
Shelby	Information Not Provided	Information Not Provided	An Anobiid Beetle	<i>Ernobius</i> sp.
Montgomery	Countertop	Household-Medical	A Flesh Fly	Sarcophagidae
Mobile	Euonymous	Ornamental	Euonymous Scale	<i>Unaspis euonymi</i>

### Disease Possibilities For July

In July we usually continue to see our ‘June’-summer diseases. Table 3 lists some of the diseases which arrived in our lab during previous Julys. Brief comments on disease symptoms and control recommendations are included. For specific disease control recommendations, see the Alabama Pest Management Handbook. Also remember that sanitation is a necessary component of most disease control programs.

Table 3. Brief Disease Descriptions and Control Recommendations for Diseases Often Seen in July.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Ajuga	Cercospora Leaf Spot	Brown, circular or irregular leaf spots.	Cleary’s 3336.
	Rhizoctonia Aerial Blight	Leaves/stems turn brown. Mycelial webbing may be present.	Cleary’s 3336.
	<i>Sclerotium rolfsii</i>	Plant wilt and collapse. Decay of the lower stems with the appearance of a white mold at the soil level when conditions are wet and hot. Small, round, mustard seed sized white-brown-black sclerotia may develop.	Sanitation. Deep turn soil or soil removal if practical. Solarization will help.
Aloe	Fusarium Stem Rot	A dry decay of stem sections.	Cleary’s 3336.
Alfalfa	Common ( <i>Pseudopeziza</i> ) Leaf Spot	Small (1-3 mm diameter), circular, brown-black spots with	Early harvest.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		ragged margins; defoliation.	
	Leptosphaerulina Leaf Spot	Small black “pepper” spots or 1-3 mm “eyespot” which have light brown centers and dark brown borders.	---
	Rust ( <i>Uromyces</i> )	Red-brown powdery pustules on leaves, petioles, stems, defoliation.	Regular harvesting.
	Summer Black Stem & Leaf Spot ( <i>Cercospora</i> )	Circular-irregular red-brown or brown spots (2-6 mm diameter). When humidity high, spots become gray; defoliation.	Regular harvesting.
Anise, Florida	Phytophthora Root Rot	Plant wilt and dieback. Roots become brown, and water-soaked and easily pull apart.	Remove diseased plants. Deep turn or replace root area soil. See AL Pest Management Handbook for nursery disease control.
Apple	Apple Blotch ( <i>Alternaria mali</i> )	Brown circular or oval spots which sometimes appear slightly zonate.	See AL Pest Management Handbook.
	Bitter Rot on Fruit ( <i>Gloemerella-Gloeosporium</i> )	Small, circular, light-brown spots on the fruit. Spots enlarge and become sunken in the center. Concentric rings of pink pustules may occur. Rotted flesh is watery but not mushy.	Regular fungicide sprays.
	Black Rot ( <i>Botryosphaeria</i> )	<u>Fruit</u> : a brown spot on fruit that enlarges and usually becomes black; rotted flesh is firm. <u>Leaf</u> : brown or yellowish-brown spots (1/8-1/4 inch diameter) with purple margins and irregular shape. <u>Canker</u> : lesions on branches or trunk are slightly sunken, reddish-brown and show concentric	Sanitation; recommend fungicide treatments.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		rings of cracked bark.	
	Cedar Apple Rust ( <i>Gymnosporangium juniperae-virginiana</i> )	Bright yellow spots on apple leaves. Orange (aecial) cups on lower leaf surfaces in yellow spots; defoliation.	See ANR-468.
	Fly Speck on Fruit ( <i>Microthyriella</i> )	Numerous, tiny, circular, black spots appear grouped together on a section of the apple skin.	Regular fungicide sprays.
	Scab ( <i>Venturia inaequalis</i> )	Olive-green to brown, slightly raised circular or slightly irregular spots (which may coalesce) on leaves and fruits; tissue distortion may result; early leaf, fruit drop may result from severe infection.	Follow spray recommendations in spray guide; sanitation.
	Sooty Blotch ( <i>Gloeodes pomigena</i> )	Superficial infection which appears as though someone placed a sooty fingerprint on apple fruit surface.	Regular fungicide sprays.
	White Rot ( <i>Botryosphaeria dothidea</i> )	White or light brown, water rot of fruit.	Sanitation; recommended fungicide treatments.
Ash	Anthraco nose ( <i>Apiognomonina</i> )	Irregular brown blotches of variable sizes occur along leaf edges and along leaf veins mostly.	Sanitation.
Aster	Pythium Root Rot	Roots light brown and water-soaked, pull apart easily.	Sanitation; reduce water levels.
	Southern Blight ( <i>Sclerotium</i> )	Decay of stem at soil line; white mycelium (sometimes with brown-black mustard-seed-sized sclerotia may be present) often at soil line.	Soil solarization.
Aster, Stokes	Tomato Spotted Wilt Virus	Stunting of new growth; ring spots.	Sanitation; thrips control.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Aucuba	Botryodiplodia ( <i>Botryosphaeria</i> ) Canker/Dieback	Black cankers on stems.	Pruning; Cleary's 3336.
	Phytophthora Root Rot	Roots become water-soaked and a brown color during early stages of disease.	Sanitation. Reduce water in the area. See ANR-571 and the AL Pest Management Handbook.
Azalea	Anthrachnose	Small, circular, brown spots.	Sanitation. See the AL Pest Management Handbook.
	Bacterial Leaf Spot	Black irregular spots; water-soaked spot edges.	Strict sanitation. Do not water over-head.
	Botryosphaeria Canker	Sunken lesion with cracked edges.	Sanitation.
	Colletotrichum Leaf Spot	Small, circular brown leaf spots.	Sanitation; protective sprays of Cleary's 3336.
	Phomopsis Dieback (Stress-Related)	Sunken cankers that cause dieback of individual branches.	Pruning; eliminate stress.
	Phytophthora Root Crown/Rot	Brown, water-soaked areas on crown and roots; outer root cortex slips easily away from inner tissues.	Sanitation; Good drainage; Fungicide drenches.
	Powdery Mildew	White powdery dusting on leaf surfaces; some leaf distortion; some necrosis.	Sanitation; See AL Pest Management Handbook.
Bahagrass	Dollarspot ( <i>Sclerotinia</i> )	Bleached-out lesions with dark borders develop on grass blades; disease begins in small patches which can enlarge.	Maintain adequate fertility.
	Ergot ( <i>Claviceps paspali</i> )	Seed heads replaced with masses of black teleospores.	Sanitation; crop rotation.
Bean, Garden	Alternaria Leaf Spot	Oval-circular brown (sometimes zonate) leaf spots.	Chlorothalonil or maneb product.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Anthrachnose ( <i>Colletotrichum</i> )	Black, sunken lesions (½ inch diameter) on pods, cotyledons and stems. When spores are produced, the lesions are orange-colored. On leaves, spots are small and reddish-brown. Veins on lower leaf surfaces may be discolored red-brown in sections.	Protective fungicide sprays. Rotation.
	Cercospora Leaf Spot	Irregular, gray-brown spots with red-brown margins; leaf drop.	Regular fungicide sprays.
	Charcoal Rot ( <i>Macrophomina</i> )	Lower stem near soil line becomes weakened/ shredded. Split stem has tiny black dots sprinkled throughout.	Regular fungicide sprays.
	Cucumber Mosaic Virus	Green-yellow mottle; abnormally shaped leaves; abnormally small leaves.	Control aphids and cucumber beetles; do not save seed; control weeds.
	Fusarium Crown Rot	Stem at the soil line becomes decayed with a dry-type rot.	A long rotation or soil solarization.
	Fusarium Wilt	Lower leaves turn yellow; plants wilt and grow poorly; brown streaks in vascular system in lower stem.	Rotate out of beans for 6-10 years. Plant resistant varieties.
	Pythium Crown Rot	Lower stem develops a soft, wet, brown rot.	Sanitation; decrease irrigation practices.
	Rhizoctonia Aerial Blight	Brown, necrotic blotches on leaves.	See AL Pest Management Handbook.
	Rhizoctonia Sore Shin	Lower stem develops a dry, brown rot lesions.	Sanitation; See AL Pest Management Handbook.
	Southern Blight ( <i>Sclerotium</i> )	See Aster.	Soil solarization. Crop rotation or deep plowing.
Begonia	Phytophthora Crown & Root Rot	Plant wilt and dieback. Roots become brown and water-soaked.	Sanitation. Improve drainage. Remove root area soil if practical.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
			See the AL Pest Management Handbook for control in greenhouses.
	Pythium Root Rot	Roots become soft, brown and water-soaked.	Sanitation; See the AL Pest Management Handbook.
	Rhizoctonia Aerial Blight	Leaves become brown spotted, blighted and shredded.	Cleary's 3336. Domain, benomyl products labeled for ornamentals; sanitation.
Bentgrass	Anthracnose ( <i>Colletotrichum</i> )	Leaf spot/blight often secondary.	See control recommendations for brown patch.
	Black Layer	Leaves turn yellow and plants dieback; a black soil layer is present about one inch below the soil surface.	Soil renovation is required.
	Brown Patch ( <i>Rhizoctonia</i> )	Foliage Blight	See the AL Pest Management Handbook.
	Curvularia Blight	Yellow spotting of leaves; typically seen during hot, stressful conditions. Usually a minor problem.	Fungicides usually not needed. Remove stressful conditions. Fungicides labeled for control of brown patch may help.
	Dollar Spot	Silver dollar-sized pale yellow or white circular areas in lawn. Individual grass blades usually have white leaf spots that develop as bands across the whole leaf blade. Spots have dark borders.	See ANR-493 and the AL Pest Management Handbook.
	Fairy Ring	Yellow or brown areas that occur in ring-like patterns. Mushrooms may develop at outer sides of ring areas.	See ANR-372.
	Nematodes, Stunt, Ring & Sheath	Plants grow poorly, yellow, dieback.	See ANR-523.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Pythium Root Rot	Plants yellow and dieback. Infected areas may appear wet, water-soaked. In wet conditions, a white fluffy mold may develop.	See ANR-594.
Bermuda	Brown Patch ( <i>Rhizoctonia</i> )	Foliage Blight.	See AL Pest Management Handbook.
	Dollar Spot ( <i>Sclerotinia</i> )	Irregularly shaped bleached patches of grass; white spots with dark borders on grass blades.	Collect grass clippings; Fungicides.
	“Helminthosporium” Leaf Spot & Bipolaris Leaf Spot & Exserohilum Leaf Spots & Drechslera Leaf Spots	Leaf lesions are irregularly shaped and brownish-green. Old lesions become tan or white with dark brown borders.	Sanitation; fungicide treatments.
	Pythium Blight	Foliage develops brown, wet-looking blotches; necrosis.	See ANR-594 and the AL Pest Management Handbook.
	Root-Knot Nematode ( <i>Meloidogyne</i> )	Plant grow poorly.	Culture practices to eliminate root stress. Plant nematode resistant crops; solarization. See AL Pest Management Handbook if golf course or commercial situation.
	Ring Nematode ( <i>Criconeoides</i> )	Plants grow poorly. Yellowing, dead patches may develop in scattered areas.	See AL Pest Management Handbook for commercial or golf course situation.
	Rust ( <i>Puccinia</i> )	Leaves become reddish-orange and eventually die.	See ANR-621 or the AL Pest Management Handbook.
	Slime Mold	Black, powdery masses of sporangia.	Conditions dry out.
	Spring Dead Spot ( <i>Gaeumannomyces</i> )	Dead areas in spring.	See AL Pest Management Handbook.
	Sting Nematode ( <i>Belonolaimus</i> )	Plants grow poorly. Yellowing dead patches may develop in scattered	See AL Pest Management Handbook for commercial or golf

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		areas.	course situation.
	Take-All Patch ( <i>Gaeumannomyces</i> )	Patchy areas thin out with individual plants becoming yellow and then dieback follows.	See ANR-823.
Blackberry	Orange Rust ( <i>Gymnoconia nitens</i> )	Stunted plants; orange pustules develop on lower leaf surfaces.	Removal of plants.
	Cane Blight ( <i>Leptosphaeria</i> )	Dark red or purple cankers develop around wounds. Old lesions become gray.	Sanitation. Pruning.
	Rosette ( <i>Cercospora</i> )	Shoot proliferation or witches brooms develop. Blossoms become distorted and look double.	Sanitation. See the AL Pest Management Handbook.
Blueberry	Botryosphaeria Canker	Sunken, cracked, lesions on branches.	Sanitation.
Bougainvillea	Anthrachnose ( <i>Colletotrichum</i> )	Light brown, circular leaf spots.	Sanitation. Protective sprays of Cleary's 3336 or Halt may be applied.
Boxwood	Macrophoma Leaf Spot	Brown leaf spots with small black specks in spots. This fungus often develops on weakened plants.	Sanitation of fallen leaves; remove stress situations; Cleary's 3336 may be applied as a protective treatment if desired.
	Phomopsis Leaf Blight	Brown, leaf blotches & brown leaves.	Sanitation; alleviate stresses; Cleary's 3336, if desired as a protective treatment.
	Phytophthora Root Rot	Root decay which appears water-soaked and brown. Plants develop yellowing that begins with older growth. Dieback also occurs.	Reduce water levels in the area. Remove damage plants. See ANR-571 and the AL Pest Management Handbook.
	Pythium Root Rot	Feeder roots decay when conditions are kept continually wet. Plants develop yellowing that begins with older	Reduce water levels in the area. Remove damaged plants. See AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		growth. Dieback also occurs.	
	Volutella Blight	Leaves and branches dieback from canker lesions on branches; orange masses of spores may be present on cankers.	Sanitation; alleviate stresses; Cleary's 3336, if desired as a protective treatment.
Calla Lilly	Southern Blight ( <i>Sclerotium</i> )	Crown rot, white mold.	Sanitation. Solarization or deep turn soil may help. See A. Hagan.
Camellia	<i>Phytophthora nicotiana</i> Leaf Spot	Brown leaf spots and blotches.	Sanitation. See the AL Pest Management Handbook.
Camellia	<i>Sclerotium rolfsii</i> Crown Rot	Dieback. Decay of lower trunk at the soil level. A white mold with small, round white-brown-black sclerotia may develop.	Sanitation. Deep turn soil. See the AL Pest Management Handbook.
Cantaloupe	Alternaria Leaf Spot	Circular-oval, sometimes zonate spots.	See the AL Pest Management Handbook.
	Anthrachnose ( <i>Colletotrichum</i> )	Circular brown leaf spots.	See the AL Pest Management Handbook.
	Bacterial Wilt ( <i>Erwinia</i> )	Individual leaves become wilted and die; gradually the whole stem section dies.	Control cucumber beetles.
	Cucumber Mosaic Virus	Plants are stunted. New growth is stunted. Leaves show abnormal shape (shoestring) mosaic, and puckering. Symptoms may be mild or severe.	Remove damaged plants. Controlling aphids may help some.
	Fusarium Melon Rot	Melon develop a soft rot; eventually a white fluffy mold develops.	Avoid wounds.
	Fusarium Wilt	Lower leaves yellow and plant gradually wilts from the bottom up.	Rotation or fumigation.
	Papaya Ringspot Virus	See symptoms for CMV.	See CMV control comments.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phytophthora Root Rot	Roots become brown and water-soaked.	Ridomil 2E. See Handbook.
	Powdery Mildew	White, powdery layer on upper leaf surface of plants; necrosis follows.	See the AL Pest Management Handbook.
	Watermelon Mosaic Virus	See symptoms for CMV.	See CMV control comments.
Centipede	Brown Patch ( <i>Rhizoctonia</i> )	Irregular or circular patches of grass develop brown blotches on leaf blades or possibly on stolons. Usually a foliage blight.	See AL Pest Management Handbook or ANR-492.
	Dollar Spot ( <i>Sclerotinia</i> )	Small, circular areas the size of a silver dollar become yellowed.	See ANR-493 and the AL Pest Management Handbook.
Cherry, Flowering	Armillaria Root Rot	Dieback; mushrooms may develop.	See ANR-907.
Cherry Laurel	Botryosphaeria Dieback	Sunken, cracked lesions on branches.	Sanitation.
	Shot Hole ( <i>Xanthomonas</i> )	Reddish, angular spots develop; centers fall out.	See AL Pest Management Handbook.
Chrysanthemum	Bacterial Leaf Spot	Angular, small, black leaf spots.	See AL Pest Management Handbook.
	Fusarium Crown Rot	Lower stem becomes brown and dried; plants wilt and die.	Rotate area out of mums for 6-10 years.
	Phoma Leaf Spot/Blight	Brown spots/blotches.	Sanitation. Cleary's 3336 of Halt may help.
	Phytophthora & Pythium Root Rot	Roots become brown with water-soaked decay.	See AL Pest Management Handbook.
	Pythium Stem Rot	Dark brown soft stem rot.	Sanitation. See the AL Pest Management Handbook.
Cloeme	Rhizoctonia Root Rot	Roots develop a brown, dried decay. Foliage wilts, yellows and dies back.	Sanitation; crop rotation; deep turn soil.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Collard	Alternaria Leaf Spot	Round or oval brown spots.	Sanitation. See the AL Pest Management Handbook.
	Black Rot ( <i>Xanthomonas campestris</i> )	Black v-shaped lesions start at leaf edges. Stem becomes black & wet rotted.	See ANR-859. See AL Pest Management Handbook.
Cone Flower	Aster Yellows	Green blooms; stunting; deformity.	Sanitation.
Coreopsis	Bacterial Leaf Spot	Angular, black, water-soaked leaf spots.	Sanitation. Do not water overhead.
Corn	Aspergillus Ear Rot	Brown, decay of kernels. Yellow-green spore masses may be present.	Avoid stress. Maintain soil moisture.
	Bacterial Stalk Rot ( <i>Erwinia</i> )	Brown, wet, often foul-smelling areas on stalk.	Maintain balanced fertility; avoid drought stresses early in the growing season.
	Charcoal Rot ( <i>Macrophominia phaseolina</i> )	A dry decay of lower stalks. Inner tissues of lower stalks are gray from the presence of masses of tiny black fungal sclerotia.	Usually this is not a severe problem; hot and dry conditions favor disease; some hybrids show resistance.
	Common Rust ( <i>Puccinia sorghi</i> )	Yellow-orange brown-black dusty pustules scattered over upper and lower leaf surfaces. When disease is severe, leaves yellow and turn brown.	Resistant hybrids.
	Downy Mildew ( <i>Sclerophthora macrospora</i> )	Yellow streaks in leaves; crazy top.	Rotation.
	Fusarium Ear Rot	A brown, dry rot of kernels. A pink coloration from spore masses may help.	Sanitation; avoid stress.
	Gray Leaf Spot ( <i>Cercospora</i> )	Gray-colored, elongated leaf spots.	Resistant varieties.
	Smut ( <i>Ustilago</i> )	A thin, white layer of plant-tissue covers a ball	Resistant varieties; maintain balanced

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		of black, greasy or powdery spores. Abnormal balls (smut balls) (4-5 inches diameter) occur on ears, tassels and nodes.	fertility; avoid wounds; destroy galls before they break open.
	Southern Corn Leaf Blight ( <i>Bipolaris maydis</i> )	Small, brown, elongated leaf spots; spots may coalesce to cause a blight.	See Austin Hagan.
	Southern Rust ( <i>Puccinia polysora</i> )	Yellow-golden and light brown pustules are scattered mostly over the upper leaf surfaces. Infected leaves turn yellow and dry out.	Resistant hybrids.
Cotton	Alternaria Leaf Spot	Light or medium brown, irregular-shaped leaf spots develop.	Disease usually not severe enough to require control measures; sanitation.
	Fusarium Root Rot	Lower stems show a brown or red-brown discoloration and decay. Plants wilt and dieback.	Refer to Ed Sikora.
	Phoma, Phomopsis Leaf Spot	Brown, circular-irregular leaf spots.	Refer to Bill Gazaway.
	Pythium Root Rot	Plants collapse. Roots become slightly brown and wet rotted.	See AL Pest Management Handbook.
	Root-Knot Nematode ( <i>Meloidogyne</i> )	Roots develop small-large irregular galls. Plants are stressed.	Refer to Ed Sikora.
Crabapple	Cedar-Apple Rust ( <i>Gymnosporangium</i> )	Large (3-5 mm), bright yellow spots; on underside of leaf spots, orange pustules may be present.	See AL Pesticide Handbook.
	Fireblight ( <i>Erwinia amylovora</i> )	Rapid dieback.	See ANR-542.
Crape Myrtle	Cercospora Leaf Spot	Red-brown colored, circular leaf spots.	Sanitation; See AL Pest Management Handbook.
	Powdery Mildew	White, powdery coating on upper leaf surfaces	Sanitation; See AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		mostly; new growth may become distorted; leaf necrosis will follow.	
Cucumber	Anthrachnose ( <i>Colletotrichum</i> )	Round or irregularly round brown leaf spots.	See the AL Pest Management Handbook.
	Bacterial Wilt ( <i>Erwinia</i> )	Leaf and petiole wilting and eventual death.	Control the cucumber beetle.
	Cercospora Leaf Spot	Irregular, light-brown spots.	See AL Pest Management Handbook.
	Mosaic Viruses	Mosaic pattern of alternating green and yellow patches on foliage and fruit. Reduced growth.	Control aphids; Do not save seed; control weeds.
	Powdery Mildew	White, powdery dusting on leaves, stems.	See AL Pest Management Handbook.
Cypress, Arizona	Kabatina Blight	Inner needles turn brown and drop.	---
Daylily	Anthrachnose ( <i>Colletotrichum</i> )	Irregular brown blotches that occur throughout leaf area.	Sanitation; Cleary's 3336 would give protective disease control.
	Kabatiella Streak	Yellow spots and streaks.	Sanitation. Cleary's 3336 will provide some protective disease control.
	Pythium & Phytophthora Crown Rot	Crowns become wet, brown, and water-soaked.	Sanitation. Protective treatments of Subdue may be applied.
	Rust ( <i>Puccinia hemerocallidis</i> )	Reddish brown leaf spots. When severe, entire leaves become blighted.	Sanitation. Protective sprays of Heritage, Banner Maxx or Fertilome System Fungicide.
	Rhizoctonia Crown Rot	Crowns become dried, brown, decayed.	Sanitation. Cleary's 3336 may help give protective disease control.
	Southern Blight ( <i>Sclerotium rolfsii</i> )	Crown rot; white mold at crown.	Sanitation; rotation to turf; solarization. See

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
			A. Hagan.
Delphinium	Fusarium Root Rot	Roots become brown and dried.	Crop rotate away from Delphineum, Zinnia.
Dithanus	Fusarium Crown & Root Rot	Roots become brown and dry rotted.	Sanitation. Crop rotation or deep turn soil.
	Pythium Root Rot	Roots become brown with water-soaked decay.	Keep area well drained.
Dogwood	Botrytis Leaf Spot/Blight	Brown-gray leaf spots/blotches.	Cleary's, Domain.
	Cercospora & Septoria Leaf Spots	Round-angular, brown spots (2-4 mm).	Sanitation; See AL Pest Management Handbook.
	Powdery Mildew	White powdery coating on leaves, both upper and lower leaf surfaces.	Sanitation of leaves in the fall. Cleary's 3336 sprays may be applied as protective sprays if trees are small.
	Pythium/Phytophthora Root Rot	Root infection begins as water-soaked root decay. Dead roots dry out.	Sanitation. See the AL Pest Management Handbook.
	Septoria Leaf Spot	Brown, small, angular spots.	Sanitation. See the AL Pest Management Handbook.
	Spot Anthracnose ( <i>Elsinoe</i> )	Tiny red spots on bracts & leaves.	See AL Pest Management Handbook.
	Powdery Mildew	White powdery coating on leaves, both upper and lower leaf surfaces. Yellowing and blight follows. New growth may be distorted.	Sanitation of leaves in the fall. Cleary's 3336 sprays may be applied as protective sprays if trees are small.
Fatsia	<i>Sclerotium rolfsii</i> Crown Rot	Plant wilt and collapse. Decay of the lower stems with the appearance of a white mold at the soil level when conditions are wet and hot. Small, round, mustard seed sized white-brown-black sclerotia may develop.	Sanitation. Deep turn soil or soil removal if practical. Solarization will help.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Fern	Pythium Root Rot	Brown, water-soaked roots.	See Pest Management Handbook.
Fescue	Anthrachnose ( <i>Colletotrichum</i> )	Brown spotting of leaves.	Sanitation. Do not water in the evening. See the AL Pest Management Handbook.
	Brown Patch ( <i>Rhizoctonia</i> )	Brown blight of foliage.	See AL Pest Management Handbook.
	Dollar Spot	See Centipede.	See Centipede.
Fig	Limb Blight ( <i>Corticium salmonicolor</i> )	A pink-white mold develops on branches; dieback.	Sanitation.
	Rhizoctonia Blight	Large necrotic blotches on leaves.	Sanitation.
Florida Jessamine	Botryodiplodia Dieback	Elongated, sunken cankers cause dieback. Canker edges are often cracked.	Prune out cankers. Make cuts 4-5 inches from edges of damage.
Gardenia	Phytophthora Root Rot	Roots become wet, brown, and rotted. Dieback begins with lower foliage usually.	Sanitation. Reduce irrigation. See AL Pest Management Handbook.
Geranium	Botrytis Blight	Blossoms become gray-brown and limp.	Sanitation; See the AL Pest Management Handbook.
	Phytophthora Root Rot	Roots become brown, water-soaked.	See AL Pest Management Handbook.
	<i>Xanthomonas campestris</i> pv. <i>pelargonii</i>	Leaves develop black spots. Stems develop black rot areas. The bacterial infection will become systemic and eventually plants will wilt.	Sanitation.
Grape	Black Rot ( <i>Guignardia</i> )	Medium-dark brown circular spots with darker brown borders on leaves and fruit.	Protective fungicide sprays; Sanitation.
Hawthorn	Cedar-Hawthorn Rust ( <i>Gymnosporangium</i> )	Bright yellow spots on leaves and fruit of apple, crabapple, hawthorne.	See ANR-468.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		Aecial orange cups develop in spots (Cedars develop cankers.)	
Hawthorn, Indian	Entomosporium Leaf Spot	Red, black circular leaf spots.	See the AL Pest Management Handbook.
Hibiscus	Fusarium Stem/Root Rot	Dark brown, dry stem decay lesion.	Sanitation. Protective treatment spray of Cleary's 3336.
Holly	Phytophthora Root Rot	Dieback. Roots become brown and wet rotted.	See the AL Pest Management Handbook.
Holly, Foster	Botryosphaeria Canker	Sunken, cracked lesions; dieback often results.	Sanitation. Avoid stress.
Holly, Helli	Pythium Root Rot	Feeder roots develop a wet, light brown rot.	See AL Pest Management Handbook. Keep area well drained.
	Thielaviopsis Root Rot	Roots show black lesions and often black root tips. Plants grow poorly.	---
Hosta	Pythium Root Rot	Roots become light brown and wet-rotted; pull apart easily.	Sanitation. Reduce water levels in the area; crop rotation; deep turning soil will help.
	Southern Blight ( <i>Sclerotium rolfsii</i> )	Crown rot; white mold at soil level.	Sanitation. See the AL Pest Management Handbook.
Hydrangea	Anthracnose ( <i>Colletotrichum</i> )	Light brown leaf spots/blotches.	Sanitation. See the AL Pest Management Handbook.
	Bacterial Leaf Spot	Dark, angular leaf spots.	Sanitation.
	Cercospora Leaf Spot	Irregular brown lesions of variable sizes develop on leaves.	Sanitation; Cleary's 3336 or Domain protective sprays.
	Fusarium Wilt	Lower foliage wilts and yellows. Yellowing and dieback progresses up the plant. Vascular browning is present.	Sanitation. Long crop rotation. Resistant varieties.
	Phytophthora Crown	Dieback, wilt. Roots	Sanitation. Deep turn or

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Rot	become brown and wet rotted.	soil removal, if practical. See AL Pest Management Handbook.
	Pythium Crown & Root Rot	Feeder roots become light brown and soft-rotted.	See AL Pest Management Handbook. Improve soil drainage.
Impatiens	Impatiens Necrotic Spot Virus	New growth is dwarfed and stunted; foliage may show yellowing spots/pattern or black spots/patterns.	Sanitation; Thrips control with insecticides.
	Phytophthora Crown & Root Rot	Medium brown, wet, soft rot of lower stem and roots.	Sanitation; See AL Pest Management Handbook.
	Pythium Root Rot	Medium brown, wet, soft rot of lower stem and roots.	Sanitation; See AL Pest Management Handbook.
	Rhizoctonia Crown Rot	Dark brown, dried crown/rot.	Sanitation. See the AL Pest Management Handbook.
Ivy, Algerian	Phytophthora Root Rot	Roots become brown and wet-rotted; tissues pull apart easily.	Sanitation. Reduce water levels in the area; crop rotation; deep turn soil may help.
Ivy, English	Alternaria Leaf Spot	Large, brown-black, sometimes zonate, circular-oval spots (3-5 mm diameter).	See AL Pesticide Handbook.
	Anthrachnose ( <i>Colletotrichum</i> )	Circular or roughly circular, brown leaf spots.	Sanitation. See the AL Pest Management Handbook.
	Bacterial Leaf Spot	Angular, black, water-soaked spots (2-3 mm diameter).	Sanitation; See AL Pest Management Handbook.
	Phyllosticta Leaf Spot	Brown, Circular to oval leaf spots.	See recommendations for Alternaria.
	Phytophthora Root Rot	Brown, water-soaked root decay.	Sanitation. See AL Pest Management Handbook.
Juniper	Pestalotia Blight	Needles become brown.	Sanitation. Locate and correct stress condition.
	Phytophthora Root Rot	Roots become brown,	Sanitation; See the AL

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		soft, and water-soaked.	Pest Management Handbook.
	Twig Blight ( <i>Phomopsis</i> )	Brown twig tips; small cankers at base of small twigs.	Sanitation; Cleary's 3336, Domain, or a benomyl fungicide labeled for ornamentals.
Juniper, Shore	Pestalotia Tip Blight	Branch tips dieback.	See the AL Pest Management Handbook. Remove stress.
	Phytophthora Root Rot	Roots develop a brown, wet decay.	See AL Pest Management Handbook. Improve soil drainage.
	Pythium Root Rot	Small roots become water-soaked and decayed. Infected roots may be only slightly brown.	See AL Pest Management Handbook. Improve soil drainage.
Kudzu	Cercospora Leaf Spot	Brown, irregular leaf spots.	---
Leyland Cypress	Cercospora Blight	Needles (usually lower limbs affected first) become brown.	Sanitation. See the AL Pest Management Handbook.
	Pestalotia Tip Blight	Tips of branches turn brown. Discoloration progresses from the tip.	Maintain healthy trees.
	Seiridium Canker	Sunken branch lesions with resinosis.	Pruning.
	Sphaeropsis Dieback	Sunken cankers develop. Dieback of branch occurs from tip to the canker.	Pruning.
Ligustrum	Colletotrichum Leaf Spot	Medium brown circular-irregular leaf spots.	Sanitation. See AL Pest Management Handbook.
Lilac	Phytophthora Root Rot	Roots become brown and water-soaked.	Subdue 2E may be used as a protective treatment. First test a few plants to be sure phytotoxicity is not a problem.
Liriope	Colletotrichum Leaf Spot	Brown, circular-irregular leaf spots (2-10 mm diameter). When	Sanitation; Cleary's 3336, Domain, or a benomyl fungicide

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		spots coalesce, a large portion of leaf may turn brown and die. Often leaf tips are affected.	labeled for ornamentals.
	Fusarium Crown & Root Rot	Dieback; roots & crown become brown & dry rotted.	Sanitation.
	Pythium Root Rot	Foliage dieback; roots become light brown and water-soaked.	Sanitation; reduce irrigation.
	Rhizoctonia Crown Rot	Lower stems become dry rotted and brown.	Sanitation. Cleary's 3336 may be applied as a protective spray treatment.
	Root-Knot Nematode ( <i>Meloidogyne</i> )	Plants grow poorly. Roots exhibit irregularly-shaped galls.	Leaves soil fallow for a few years; plant nematode-resistant plants or solarize area (ANR-713).
Magnolia, Japanese	Bacterial Leaf Spot	Brown, irregular leaf spots with water-soaked margins.	Strict sanitation.
	Hypoxylon Canker	Circular or elongated areas on trunk/branches where bark falls off and gray or black fungal growth (stroma) develops in a hard thick layer; dieback eventually develops.	Prune out the infected area. Make cut 5 inches beyond the damage.
	Powdery Mildew	White powdery dusting on twigs and upper surfaces of leaves; infected areas die.	Cleary's 3336 would provide protective control.
Maple	Anthrachnose ( <i>Kabatella</i> )	Large, light-brown irregular spots and blotches may kill whole leaves; spots often follow leaf veins.	Sanitation; fungicide sprays.
	Botryosphaeria Canker	Sunken lesions on branches/trunk; cracking at lesion edges may occur.	Sanitation.
	Ganoderma Wood/Root	Dieback; brown wood	Sanitation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Rot	rot.	
	Phyllosticta Leaf Spot	Spots are circular-irregular, and have brown centers with purple margins (1/8"-1/2" diameter).	Sanitation; fungicide sprays.
Maple, Japanese	Anthracnose	Brown, circular or roughly circular leaf spots; some irregular blotches that may expand along leaf veins.	Sanitation of leaves in the fall.
	Phomopsis Dieback	Usually small, sunken, oval cankers on branches, twigs.	Prune out cankers. Make cuts about 4 inches beyond the edge of cankers.
Marigold	Botrytis Blight	Flowers & leaves develop brown or gray spots/blotches.	Sanitation. Increased air circulation. Cleary's 3336 protective sprays.
	Phytophthora & Pythium Root Rot	Roots become brown with a wet rot.	See AL Pest Management Handbook.
Mint	Colletotrichum Leaf Spot	Brown circular leaf spots.	Sanitation.
Mondo Grass	Anthracnose ( <i>Colletotrichum</i> )	Brown irregular lesions on leaves.	Sanitation. See AL Pest Management Handbook.
	Pythium Root Rot	Foliage dieback; roots become light brown and rotted.	Sanitation. Reduce irrigation.
	Web Blight ( <i>Rhizoctonia</i> )	Brown blotches and spots develop; when conditions are humid, a light brown webbing will occur.	Sanitation. Cleary's 3336 or Halt will provide protective disease control.
Morningglory	Rust ( <i>Puccinia</i> )	Orange powdery patches on leaf surfaces; infected areas die.	Sanitation.
	White Rot ( <i>Albugo</i> )	White raised patches form on leaves; infected areas die.	Sanitation; reduce irrigation.
Mulberry, Weeping	Cylindrosporium Leaf Spot	Small reddish brown angular spots.	Sanitation.
Muscadine	Black Rot ( <i>Guignardia</i> )	Reddish-brown irregular	Protective fungicide

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		leaf spots with tiny black specks often scattered over surface of spots.	sprays. See the AL Pest Management Handbook.
Nandina	Virus	Leaves develop red discoloration and/or dark red spots and/or a red and/or yellow mosaic develops.	Sanitation.
Nectarine	Botryosphaeria Dieback	Sunken, elongated cankers with cracked edges.	Prune out cankers making cut 4-5 inches from damage.
Oak	Anthrachnose ( <i>Apiognomonina</i> )	Brown blotches often along leaf veins or leaf edges.	Sanitation; See AL Pest Management Handbook for small oak trees.
	Hypoxyylon Canker	Areas on trunk will develop a gray or black hard layer just under the bark; bark will become cracked and fall off.	Sanitation.
	Monochaetia Leaf Spot	White, rough-surfaced irregular leaf spots.	Sanitation of leaves in the fall.
	Oak Leaf Blister ( <i>Taphrina</i> )	Round, slightly, convex-concave light brown leaf spots (4-5 mm diameter).	Sanitation; See AL Pest Management Handbook.
	Phyllosticta Leaf Spot	Circular, brown spots (2-4 mm diameter).	Sanitation.
	Powdery Mildew	Leaves and young twigs develop white coating on surfaces. Leaves and twigs may be deformed. Some yellowing and dieback may result. Not usually a serious problem.	Sanitation of leaves in the fall. Protective sprays of Cleary's 3336 may be used.
	Slime Flux	A foul smelling ooze runs down trunk surface. Initially, infection of fungi, bacteria, and yeast develops in wound area.	Sanitation of infection area when it is still localized.
Okra	Alternaria Leaf Spot	Gray leaf spots, large	See the AL Pest

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		and small; a zonate pattern may be present.	Management Handbook.
	Botrytis Fruit Rot	Brown-gray blotches on fruit surface.	Sanitation.
	Choanephora Fruit Rot	A wet rot with tiny black hair like structures.	Sanitation.
	Cucumber Mosaic Virus	Plants become stunted. Leaves may be abnormal in shape (shoestring), puckered, with mosaic.	Remove plants. Control of aphid may help some.
	Fusarium Wilt	Wilting, yellowing, stunting of whole plant; vascular system darkened.	Rotation away from okra for 6-10 years.
	Rhizoctonia Seedling Disease	Lower stems and roots develop brown, dry lesions.	Sanitation.
	Southern Blight ( <i>Sclerotium rolfsii</i> )	Lower stem at soil line become brown-black; a white fungal mat present when conditions hot & humid.	Crop rotation; Solarization; Sanitation.
Palm, Sago	<i>Alternaria alternata</i> Leaf Spot	Gray leaf spots.	Sanitation; Cleary's 3336.
Pampas Grass	Piricularia Leaf Spot	Gray-brown circular leaf spots.	Cleary's 3336.
Pea, Field	Anthracnose ( <i>Colletotrichum</i> sp.) Fusarium Crown Rot	Brown-orange spots on leaves, pods. Lower stem at soil line develops a brown, dry rot.	See the AL Pest Management Handbook. Long crop rotation or soil solarization.
	Fusarium Wilt	Lower leaves turn yellow; plants wilt; vascular system discolored in lower stem.	Rotate area out of peas for 6-10 years; or solarization.
	Mosaic Virus; Possibly Black Eye Cowpea Mosaic Virus	Green and yellow spots or blotches in a regular pattern on leaves.	Do not save seed; control weeds and insects. Plant resistant varieties--'Mississippi Cream' or 'Pink Eye

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
			Purple Hull BVR’.
	Rhizoctonia Stem Rot	Dark brown or brown-red dry lesions develop on lower stems.	See AL Pest Management Handbook.
	Southern Blight ( <i>Sclerotium rolfsii</i> )	Dark brown lesion on stem at the soil surface; coarse white fungal threads at soil line plus white, tan or black, tiny “balls” (½” mm diameter).	Rotation; solarization.
Peach	Brown Rot ( <i>Monilinia</i> )	While blossom blight, twig blight and branch cankers occur earlier in the season, brown spots/ areas on the fruit are noticed in July. Grey-brown tufts of spores develop over the rotted areas.	Sanitation; fungicide sprays.
	Bacterial Leaf Spot ( <i>Xanthomonas</i> )	Brown-black circular spots which fall out leaving shot holes; may be yellowing around spots.	Sanitation; sprays for commercial growers.
	Botryosphaeria Dieback; Gummosis	Elongated, sunken canker with cracked edges.	Sanitation. Make pruning cuts 4-5 inches from the edges of cankers.
	Phomopsis Canker	Dieback. Brown elliptical cankers.	Sanitation.
	Phytophthora Crown/ Root Rot	Trunk at the soil level and roots become decayed with a wet-looking characteristic.	Sanitation.
Peanuts	Aspergillus Crown Rot	A dark brown decay develops at soil line. Sometimes black spore structures are seen as tiny black aerial specks.	---
	Cylindrocladium Black Root Rot	Black lesions on lower stems (near soil line) and roots. Orange spore masses may cover	---

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		lesions.	
	Early Leaf Spot ( <i>Cercospora</i> )	Dark brown, circular leaf spots (3-4 mm) on upper leaf surfaces.	Regular fungicide spray program.
	Late Leaf Spot ( <i>Cercosporidium</i> )	Black circular leaf spots (3-4 mm) on lower leaf surfaces.	Regular fungicide spray program.
	Phoma Leaf Blotch	Oval brown spots.	---
	Phytophthora Crown Rot	Lower stems become dark and water-soaked, decayed.	Sanitation. Reduce irrigation. Check with A. Hagan.
	Rhizoctonia Stem Rot	Dark brown, sunken, dried lesions on stems.	See the AL Pest Management Handbook.
	Tomato Spotted Wilt Virus	Stunted plants; leaves show ring spot patterns; new leaves small and abnormally shortened internodes.	Control thrips.
	White Mold ( <i>Sclerotium</i> )	White fungal strands with tiny white, tan or black associated ball structures (sclerotia) on stems, pegs or pods.	Fungicide treatment; Rotation.
Pear	Entomosporium Leaf Spot ( <i>Fabraea</i> )	Purple or dark-brown spots (1/4" diameter) on leaves and fruit. Cankers on current season growth are purple or black.	Sanitation; Pruning; Regular fungicide treatments.
	Fireblight ( <i>Erwinia</i> )	In July, black spots/ areas begin at leaf edges. Gradually black leaf areas enlarge until black discoloration moves into the twig and branch.	Sanitation.
	Juniper-Pear rust ( <i>Gymnosporangium</i> )	Orange aecial 'cups' develop on lower leaf surface of pear. Junipers develop a witches-broom in sections of plant with cankers and orange	Sanitation. Removal of alternate host if possible.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		spore pustules.	
	Nectria Canker	Sunken lesions are usually surrounded by swollen callus tissues.	Sanitation. Cut out the canker, making cuts 3-4 inches beyond the edge of the cankers.
Pecan	Scab ( <i>Cladosporium</i> )	Leaf lesions are dark green-brown-black and sometimes slightly raised. Some leaf deformity may occur. Similar irregular spots develop on nut shucks. Spot coalescence is common.	See the AL Pest Management Handbook.
Peony	Botrytis Blight	Brown blotches and spots develop on leaves and possibly blossoms.	Sanitation. See the AL Pest Management Handbook.
	<i>Sclerotium rolfsii</i> Crown Rot	Lower stem becomes rotted; if warm and wet, a white mold may appear.	Crop rotation. Deep turn soil. See A. Hagan.
Pepper	Anthrachnose ( <i>Colletotrichum</i> )	Translucent sunken spots develop on fruit. Eventually spots may develop tiny black or orange specks.	See AL Pest Management Handbook.
	Bacterial Spot ( <i>Xanthomonas</i> )	Irregular, black, greasy spots (2-5 mm diameter) on leaves and stems; some yellow halos around spots; defoliation.	Bactericide sprays; Sanitation.
	Bacterial Wilt ( <i>Ralstonia</i> )	Rapid wilt and death.	Sanitation. Crop rotation from solanaceous plants.
	Cucumber Mosaic Virus	Plants become stunted. Leaves may show abnormal shape, mosaic, puckering. Disease may be mild or severe.	Sanitation. Control of aphids may help some.
	Fusarium Crown/Root Rot	The lower stem and roots become dried with a brown decay.	Sanitation. Crop rotation or deep plow.
	Pythium Crown/Root	The lower stem and	Sanitation. Improve soil

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Rot	roots become rotted with a wet, brown decay.	drainage; decrease irrigation.
	Southern Blight ( <i>Sclerotium rolfsii</i> )	Crown rot; white mold.	Deep plow; rotate to cotton, sorghum, or grass; solarization.
	Tomato Spotted Wilt Virus	Plants showed stunted new growth; a mosaic pattern.	Control thrips.
Periwinkle ( <i>Catharanthus</i> )	Anthracnose ( <i>Colletotrichum</i> )	Brown, sunken cankers on stem sections.	Cleary's 3336, Domain, or WP benomyl; Sanitation.
	Phomopsis Blight	Brown, sunken cankers on stem sections.	Cleary's, Domain or WP benomyl; Sanitation.
	Phytophthora Aerial Blight	Dark brown, black cankers encircle stems and cause wilt and dieback.	Sanitation. See AL Pest Management Handbook.
	Rhizoctonia Aerial Blight/Crown Rot	Lower leaves and lower stem near the soil line become browned and decayed.	See the AL Pest Management Handbook; Sanitation.
Persimmon, Asian	Botryosphaeria Canker	Sunken, cracked lesions on branches and trunks; dieback.	Sanitation.
Petunia	Phytophthora Foliage Blight/Root Rot	Foliage develops spots, blight, & collapse.	Sanitation.
	Entomosporium Leaf Spot	Red-black circular leaf spots.	See AL Pest Management Handbook.
Pine, Loblolly	Pythium Root Rot	Brown, water-soaked roots.	See AL Pest Management.
Pine, Virginia	Pitch Canker ( <i>Fusarium</i> )	Sunken lesions on branches/trunk with resin flow.	Sanitation.
Plum	Bacterial Scorch Disease ( <i>Xylella fastidiosa</i> )	Leaf edges turn brown; often the browned leaf edge area is zonate. Trees dieback and eventually die.	Sanitation; tree removal.
Poinsettia	Black Knot ( <i>Plowrightia morbosum</i> ) Pythium Root Rot	Black swollen, elongate galls on branches. Roots become soft,	See AL Pest Management Handbook. See the AL Pest

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		brown, & water-soaked.	Management Handbook.
Privet	Anthrachnose	Circular or irregular brown (sometimes large) spots.	See AL Pest Management Handbook.
Privet, Japanese	Cercospora Leaf Spot	Circular or irregular brown (sometimes large) spots.	See AL Pest Management Handbook.
Potato, Irish	Fusarium Dry Rot (Tuber)	Dry, brown rot areas develop in tubers. Often rot areas develop cavities in the tuber containing white mycelium.	Avoid wounding tubers at harvest.
	Erwinia Soft Rot ( <i>Pectobacterium</i> )	Soft, dark irregular areas of rotted, watery, foul-smelling tissue.	Avoid wounds and wet conditions.
Pumpkin	Watermelon Mosaic Virus	Green-yellow mosaic; reduced growth.	Sanitation. Control aphids.
Pyracantha	Southern Blight ( <i>Sclerotium</i> )	See Aster.	Solarization. See A. Hagan.
Rhododendron	Botryosphaeria Canker	Sunken, brown, dried, cracked, elliptical lesions develop on branches.	Sanitation. Protective spray of Cleary's 3336 or Domain.
Raspberry	Botrytis Blossom Blight	Blossoms become brown and limp.	Sanitation. See AL Pest Management Handbook.
Rose	Black Spot ( <i>Diplocarpon rosae</i> )	Black circular leaf spots with irregular, feathery edges.	See AL Pest Management Handbook.
	<i>Cercospora rasicola</i> Leaf Spot	Circular brown spots.	See AL Pest Management Handbook for black spot.
	Common Canker ( <i>Coniothyrium</i> )	Brown, irregular lesions on canes.	See control comments for black spot in the AL Pest Management Handbook.
Satsuma	Fusarium Crown Rot	A dry brown decay develops at soil line.	Sanitation.
Snapdragon	Phytophthora Root Rot	Roots become brown and water-soaked.	See AL Pest Management Handbook.
Sorghum-Sudan	Exserohilum Leaf Spot	Brown, elongated leaf	---

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Soybean		spot (0.2 cm-1 cm).	
	Asian Soybean Rust ( <i>Phakopsora pachyrhizi</i> )	Tiny yellow-brown spots. The lower leaf surface of spots becomes covered with powdery light orange spores.	See Ed Sikora.
	Bacterial Leaf Spot ( <i>Pseudomonas</i> )	Small, angular brown-black spots, sometimes with a halo.	---
	Charcoal Rot ( <i>Macrophomina</i> )	Lower stem near soil line becomes weakened and shredded. Split stem has tiny black dots sprinkled throughout.	---
	Cyst Nematode ( <i>Heterodera</i> )	Poor plant growth; small, undeveloped root system; white or yellow or brown spherical bodies (½ mm) on roots.	Rotation; Fumigation; Resistant varieties.
	Downy Mildew ( <i>Peronospora manshurica</i> )	Yellow, angular spots on upper leaf surfaces. Older spots become brown-black. A gray mold may develop on lower leaf surfaces when humidity high.	See the AL Pest Management Handbook.
	Frogeye Leaf Spot ( <i>Cercospora</i> )	Circular-irregular spots (1-5 mm) with dark red borders and gray centers; spot coalescence; leaf drop.	Healthy seed; Rotate 2 years.
	Fusarium Root Rot (Sudden Death Syndrome)	Usually a problem only on small plants. The tap root and lateral root system becomes rotted. Plants wilt and die.	Delay cultivation until soil moisture is adequate. Ridge soil around the base of plants to promote adventitious root development. Rotation.
	Rhizoctonia Stem and Root Rot	Lesions on lower stems and roots may be brown or reddish depending on the fungus isolate and soil conditions. Plants may wither and die.	Use fungicide seed protectants. Provide good soil drainage.
Root-Knot Nematode	Plants grow poorly, are	See Soybean Spray	

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	( <i>Meloidogyne</i> )	yellowed and/or stunted. Roots have irregularly-shaped galls.	Guide.
	Septoria Leaf Spot	Irregular, dark brown spots (1-4 mm diameter) typically on older leaves; leaves turn yellow & fall.	Plow under crop residue; disease free seed; rotation.
	Sudden Death Syndrome ( <i>Fusarium</i> )	Plants rapidly wilt and collapse; tap root becomes dry rotted.	See Ed Sikora.
Squash, Summer	Bacterial Wilt ( <i>Erwinia tracheiphila</i> )	Wilt, dieback.	Control cucumber beetles.
	Fusarium Root Decay and/or Crown Rot	Roots and crowns develop a brown, dry rotting. Plant wilt and dieback.	Sanitation. Crop rotation.
	Mosaic Viruses	See comments on cucumber.	See comments on cucumber.
St. Augustine	Brown Patch ( <i>Rhizoctonia</i> )	Irregular areas or patches become blighted. Individual brown lesions on leaves may be evident.	See ANR-492 & the AL Pest Management Handbook.
	Gray Leaf Spot ( <i>Piricularia</i> )	Gray-brown oval or irregular spots on grass blades; spots may merge.	Protective fungicide sprays; Sanitation.
	Take-All Patch ( <i>Gaeumannomyces</i> )	Patches or areas become yellowed and thinned as individual plants develop root/stolon lesions and plant foliage dies back.	See ANR-823 and the AL Pest Management Handbook.
Strawberry	Common Leaf Spot ( <i>Mycosphaerella</i> )	Red-brown round or oval spots on leaves, stems. Spots may have light brown centers.	See AL Pest Management Handbook.
Sweet Potato	Fusarium Wilt	Plant wilts with wilt and yellowing beginning at lower foliage and progressing upward. Vascular tissues under the cortex are brown	Sanitation; long crop rotations (10-16 yrs.).

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		streaked.	
	Scurf ( <i>Monilochaetes infuscans</i> )	Raised or sunken scabby, rough lesions on roots.	See AL Pest Management Handbook.
Sycamore	Alternaria Leaf Spot	Irregular brown leaf spots.	Sanitation. Collect and remove all fallen leaves this fall.
	Powdery Mildew	White powdery substance on leaves.	See AL Pest Management Handbook.
	Scorch ( <i>Xylella</i> )	Leaves become brown and dried at the margins.	Tree pruning; tree removal.
Syngonium	Phytophthora Root Rot	Roots become brown with a wet decay.	Improve soil drainage. See AL Pest Management Handbook.
Tomato	<i>Alternaria alternate</i>	Black mold on fruit.	Sanitation.
	Anthrachnose Fruit Rot (Bitter Rot)	Medium brown spots and rot in fruit.	Sanitation. See the AL Pest Management.
	Bacterial Canker ( <i>Clavibacter</i> )	Elongate, brown, wet-looking lesions or cankers on stems; center of cankers dry and look white.	Protective sprays; Sanitation.
	Bacterial Canker ( <i>Pseudomonas</i> )	Elongate, dark brown, wet looking lesions or cankers on stems; when stems are cut open with a lengthwise cut, inner tissues are seen to be hollow with tissues arranged in a ladder-like structure.	Protective sprays; Sanitation.
	Bacterial Speck ( <i>Pseudomonas</i> )	Gray spots with black centers, sometimes surrounded by wide borders of yellow or white tissue. Spots on upper leaf surfaces may be raised. Fruit spots are small, dark, slightly raised & scabby spots which may be surrounded by an extensive yellow-white	See Vegetable Spray Guide or AL Pest Management Handbook and ANR-71.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		halo.	
	Bacterial Spot ( <i>Xanthomonas</i> )	Small, black, almost circular or angular spots on leaves, often with no halo development. Fruit spots are small, black, and slightly raised.	See Vegetable Spray Guide or AL Pest Management Handbook and ANR-71.
	Bacterial Wilt ( <i>Ralstonia</i> )	Plants wilt rapidly; foliage green when wilt occurs.	Rotation; solarization of soil.
	Buckeye Fruit Rot ( <i>Phytophthora parasitica</i> )	Brown, water-soaked spots with dark zonate rings and an indefinite margin.	Ridomil 2E. See Vegetable Spray Guide.
	Cucumber Mosaic Virus	Leaves show deformity, mosaic, stunted growth.	Sanitation. Control aphids.
	Early Blight ( <i>Alternaria</i> )	Black or brown spots (1/4-1/2 inch diameter) on leaves, stems, fruit. Spots often have a concentric pattern.	Fungicide sprays; Sanitation; See Vegetable Spray Guide.
	Fusarium Wilt	Plant foliage turns yellow and die. Often yellowing begins at lower sections of the plant or on one side of the plant. Gradually the whole plant dies. Vascular system is brown.	Resistant varieties; Rotation.
	Gray Wall	Blotchy ripening.	Avoid excess soil moisture, soil compaction, high nitrogen and low potassium.
	Late Blight ( <i>Phytophthora infestans</i> )	Large spreading brown lesions, cankers.	See AL Pest Management Handbook.
	Pith Necrosis ( <i>Pseudomonas corrugata</i> )	Stems may develop adventitious roots and become hollow inside the stem with scattered horizontal tissue strands present.	Sanitation. Copper combination protective sprays may help. See AL Pest Management Handbook under tomato bacterial spot, speck & canker.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Root-Knot Nematode ( <i>Meloidogyne</i> )	Knotty galls on roots; plants show poor growth.	Rotation; Fumigation; Solarization.
	Septoria Leaf Spot	Gray-brown, circular-irregular leaf spots.	See AL Pest Management Handbook.
	Southern Blight ( <i>Sclerotium</i> )	White fungal mat occurs at soil line; plants die due to death of lower stem.	Solarization; rotation; fumigation, Terraclor. See AL Pest Management Handbook.
	Tobacco Etch Virus	Plants become stunted; leaves develop mosaic and puckering.	Sanitation. Control of aphids may help some.
	Tomato Spotted Wilt Virus	New growth becomes abnormally small, small yellow spots appear. Young leaves become bronzed in spots, patches or whole leaf areas involved. Fruit spotted or with ring spots. Plants wilt and die.	Sanitation; Control thrips.
Verbena	Fusarium Crown Rot	Brown lower stem rot.	Cleary's drenches may help.
Viburnum	<i>Phytophthora nicotiana</i> Leaf Spot	Irregular brown spots & blotches.	Sanitation. Reduce irrigation in the area.
Vinca Minor	Anthracoze ( <i>Colletotrichum</i> )	Brown, irregular spots develop leaves.	Sanitation. Cleary's 3336, Domain or a benomyl product labeled for ornamentals.
	Phyllosticta Leaf Spot	Brown leaf spots with darker brown border.	Cleary's 3336 protective sprays.
	Pythium Root Rot	Roots become brown and water-soaked.	Aliette protective treatments or Subdue 2E. (Test a few plants for phytotoxicity.)
	Rhizoctonia Stem Blight	Brown lesions near soil line.	Sanitation; Cleary's 3336 or benomyl protective sprays.
Watermelon	Cercospora Leaf Spot	Circular-irregular pale brown leaf spots with black margins (2-10 mm diameter).	Sanitation; fungicide sprays.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Cucumber Mosaic Virus or Watermelon Mosaic Virus	Leaves become mottled green-yellow, distorted, wrinkled with curled edges; abnormally shortened internodes.	Control weeds; Control aphids and cucumber beetles; Do not save seed.
	Fusarium Wilt	Lower leaves turn yellow; whole plant wilts; lower stem vascular system is brown.	Rotate 6-7 years and then plant a resistant variety such as Crimson Sweet or Jubilee.
	Gummy Stem ( <i>Mycosphaerella</i> )	Elongate, brown, wet and sometimes cracked lesions; black leaf spots may develop on leaf edges; plant sections beyond cankers die back.	Protective fungicide sprays; Sanitation in the fall.
	Root-Knot Nematode ( <i>Meloidogyne</i> )	Roots develop irregular swellings (galls) plants are stunted.	Solarization. Fumigation sometimes for commercial plantings.
Wisteria	Bacterial Leaf Spot	Dark brown, angular spots.	Sanitation. Do not water overhead.
Zinnia	Bacterial Leaf Spot ( <i>Xanthomonas</i> )	Dark brown, angular spots.	Sanitation. Do not water overhead.
	Bacterial Wilt ( <i>Ralstonia</i> )	Plants wilt suddenly and quickly die.	Sanitation. Crop rotation.
	Tomato Spotted Wilt Virus	Leaves show a yellow green mosaic.	Sanitation. Crop rotation.
Zoysia	Bipolaris Leaf Spot	Small, brown, elongated spots which may coalesce to cause large area of blight on leaves.	Sanitation. See the AL Pest Management Handbook.
	Brown Patch ( <i>Rhizoctonia</i> )	Irregular areas or patches become blighted. Individual brown lesions on leaves may be evident.	See ANR-492 & the AL Pest Management Handbook.
	Dollar Spot ( <i>Sclerotinia</i> )	Bleached-out, silver-dollar-sized spots in lawn; spots may merge. Individual grass blade	See AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		show whitish spots, blotches with dark brown borders.	
	Fairy Ring	Yellow and later brown areas develop in a ring like pattern. Mushrooms may develop in the fall at the outer edges of the rings.	See ANR-372 and the AL Pest Management Handbook.
	Helminthosporium Leaf Spot	Small, elongated brown spots on leaf blades. Numerous spots cause leaf blight.	See AL Pest Management Handbook.
	Ring Nematode ( <i>Criconeoides</i> )	Yellow-dead patches scattered in lawn.	See AL Pest Management Handbook.
	Rust ( <i>Puccinia zoysia</i> )	Rusty spots on leaves; leaves later dry out and turn brown.	See AL Pest Management Handbook.
	Take-All Patch ( <i>Gaeumannomyces</i> )	Black lesions on roots cause plants to become yellow and dieback.	See ANR-823 and the AL Pest Management Handbook.