



PLANT PATHOLOGY SERIES

TIMELY INFORMATION

Agriculture & Natural Resources

EXTENSION PLANT PATHOLOGY, EXTENSION HALL, AUBURN UNIVERSITY, AL 36849-5624

August 15, 2001

PP-508

JULY PLANT DISEASES FROM THE AUBURN PLANT DIAGNOSTIC LAB

JULY PLANT DISEASES FROM THE BIRMINGHAM PLANT DIAGNOSTIC LAB

DISEASE POSSIBILITIES FOR AUGUST

LAB NOTES

Jackie Mullen (jmullen@acesag.auburn.edu)
Extension Plant Pathology Specialist-Auburn

Jim Jacobi (jjacobi@acesag.auburn.edu)
Extension Plant Pathology Specialist-Birmingham

Auburn Plant Disease Report-July (J. Mullen)

Our July plant sample submissions were more numerous than in June (182 samples compared to 167 in June). This is unusual since June is normally our busiest month for plant samples. July was a relatively dry month in several sections of the state. We saw many of our common summer foliage and crown/root rot diseases, but many of our samples still seemed to involve trees and shrubs with suspect root damage, probably related to drought stress of last year. Overall, disease submissions seemed to be slightly reduced from our typical July plant sample disease numbers.

This summer as with last summer, we have seen ring nematode damage on some golf course bentgrass areas. The fungal wood/root rot diseases we saw are typically considered to be associated with stressed trees. Our drought conditions of last year would cause most of our trees to fall into the 'stressed' category. Cantaloupe and tomato samples were found to have virus problems typical for Alabama. Charcoal rot was found on corn. This find was not too surprising with the dry conditions present in some areas of the state in July.

ALABAMA A&M AND AUBURN UNIVERSITIES, AND TUSKEGEE UNIVERSITY, COUNTY GOVERNING BODIES AND USDA COOPERATING

The Alabama Cooperative Extension System offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, religion, sex, age, veteran status, or disability.

Viruses detected in cantaloupe were cucumber mosaic virus (CMV), papaya ringspot virus (PRSV), and watermelon mosaic virus (WMV2). Symptoms typical of these viruses were present as an obvious mosaic on leaves with over-all stunted plant growth.

On squash, unusual diffuse yellow leaf spots were present. Fungal and bacterial pathogens were not evident. ELISA tests indicated the presence of CMV and possibly some other viruses. This was a strange sample as symptoms were not indicative of virus.

A tomato sample showed symptoms characteristic of the CMV, tomato spotted wilt (TSWV) and tobacco etch virus (TEV) detected previously in tomato. Plants showed stunting, leaf curl, and a slight mottle. ELISA testing confirmed the presence of CMV, TSWV, and TEV.

We saw one peanut sample with symptoms indicative of TSWV; however, ELISA testing did not confirm the presence of TSWV. It is possible that negative TSWV results relate to a sample that had been initially infected with the virus several weeks earlier and virus protein was no longer in normal condition. Or, possibly the symptoms of stunting, yellow ringspots, and mottle seen may have been caused by one of the other mosaic-like viruses of peanut. Over-all, thus far this summer, virus problems in the state have been low in occurrence, as judged by plant sample submissions to the lab.

The corn charcoal rot appeared as a gray decay at the lower stalk and root with an associated top dieback. When stalks were cut open, the gray coloration inside the lower stalk and roots was seen to be typical of charcoal rot caused by *Macrophomina phaseolina*. The gray coloration is due to abundant production of tiny black sclerotia (hard, black overwintering bodies) throughout the decayed areas. Disease control involves sanitation and regular irrigation.

Table 1. Plant Diseases Seen In The Auburn Plant Diagnostic Lab in July.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Apple	Cedar Apple Rust (<i>Gymnosporium juniperae-virginianae</i>)	Franklin
Azalea	Sclerotinia Blossom Blight	Mobile
Bean, Garden	Alternaria Leaf Spot	Lee
Bentgrass	(High) Ring Nematode Damage (<i>Criconemoides</i>)	Jefferson
Bermuda	Dollar Spot (<i>Sclerotinia</i>)	Baldwin
Cantaloupe	Anthracoze (<i>Colletotrichum</i>)	Lee

<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Cucumber Mosaic Virus	Macon
	Papaya Ringspot Virus	Macon
	Watermelon Mosaic Virus 2	Macon
Centipede	Suspect Stress, Take-all Patch (<i>Gaeumannomyces</i>)	Covington
Chestnut	Phytophthora Root Rot	Lee
Chrysanthemum	Pythium Root Rot	*
Coreopsis	Bacterial Leaf Spot	Mobile
Corn	Cercospora-Gray Leaf Spot	Randolph
	Charcoal Rot (<i>Macrophomina phaseolina</i>)	Autauga
	Southern Rust (<i>Puccinia polysora</i>)	Limestone
Cotton	Fusarium Root Rot	Madison
	Root Knot Nematode (<i>Meloidogyne</i>)	Colbert
Cucumber	Anthracnose (<i>Colletotrichum</i>)	Macon
Daylily	Pythium & Phytophthora Crown Rot	Baldwin
	Rhizoctonia Crown Rot	Baldwin
Dogwood	Powdery Mildew	Pike
	Spot Anthracnose (<i>Elsinoe</i>)	Lawrence, Montgomery, Pike
Eastern Red Cedar	<i>Heteronbasidium annosum</i> Wood/ Root Rot	Lee
Eggplant	Phomopsis Leaf Spot	Lee

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Fescue	Anthrachnose (<i>Colletotrichum</i>)	Pickens
	Dollar Spot (<i>Sclerotinia</i>)	Pickens
Gardenia	Phytophthora Root Rot	Mobile
Hydrangea	Cercospora Leaf Spot	Lee
Iris	Anthrachnose (<i>Colletotrichum</i>)	Lee
Impatiens	Rhizoctonia Stem/Crown Rot	Tuscaloosa
Magnolia, Saucer	Hypoxylon Canker	Montgomery
Mahonia	Anthrachnose (<i>Colletotrichum</i>)	Jackson
Maple, Red	Phyllosticta Leaf Spot	Tallapoosa
Maple, Sugar	Armillaria Root Rot	Lee
Mint	Colletotrichum Leaf Spot	Baldwin
Oak	Monochaetia Leaf Spot	Cullman, Lauderdale
	Oak Leaf Blister (<i>Taphrina</i>)	Cullman
Peach	Brown Rot (<i>Monilinia fructicola</i>)	Franklin
Peanut	Cylindrocladium Black Rot	Covington
	Rhizoctonia Stem Rot	Butler
	Tomato Spotted Wilt Virus, Suspect	Henry
Pear, Bradford	Colletotrichum Leaf Spot	Jackson, Randolph
Peas	Fusarium Lower Stem Rot	Montgomery, Marshall
Pecan	Scab (<i>Cladosporium</i>)	Marengo
Pepper	Bacterial Leaf Spot (<i>Xanthomonas</i>)	Lee

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Persimmon	Pestalotia Leaf Spot	Lee
Petunia	Phytophthora Blight	Cleburne, Cullman
Rose	Black Spot (<i>Diplocarpon rosa</i>)	Lee
Satsuma	Fusarium Crown Rot	Baldwin
Squash	Cercospora Leaf Spot	Lee
	Cucumber Mosaic Virus	Macon
	<i>Fusarium solani</i> Root Decay	Autauga
	Fusarium Crown Rot	Colbert
St. Augustine	Take-all Patch (<i>Gaeumannomyces graminis</i> var. <i>graminis</i>)	Autauga, Lee, Montgomery, Washington
Strawberry	Common Leaf Spot (<i>Mycosphaerella</i>)	Lee
Sweetpotato	Fusarium Wilt	Mobile
Thyme, Lemon	Colletotrichum Leaf Spot	Baldwin
Tomato	Cucumber Mosaic Virus	Macon
	Fusarium Wilt	Marshall
	Tobacco Etch Virus	Macon
	Tomato Spotted Wilt Virus	Macon
Turnip	Bacterial Leaf Spot	Winston
Walnut	Cercospora Leaf Spot	Barbour
Watermelon	Gummy Stem Blight (<i>Mycosphaerella</i>)	Blount
Zoysia	Brown Patch (<i>Rhizoctonia</i>)	Covington

<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Take-all Patch (<i>Gaeumannomyces</i>)	Covington, Elmore

*Counties are not reported for greenhouse and nursery diseases.

Birmingham Plant Disease Report-July (J. Jacobi)

We received 104 samples for the month of July. As we enter August, the hot, dry weather in late July has promoted the occurrence of southern chinch bugs in St. Augustinegrass. Now is a good time to check lawns with this grass because the chinch bugs are probably there. Look for off-colored areas. Where chinch bugs are suspected, part the grass at the edge of the affected areas and examine the soil and base of the turf. Good cultural management can reduce the need for chemicals. Keep thatch to a minimum. Thatch provides protection for chinch bugs and chemically interferes with many insecticides. Be sure to observe proper mowing, fertilization, watering, and specific lawn care practices for St. Augustinegrass to minimize thatch. Compounds containing the following chemicals are good for homeowners: cyfluthrin (Lawn & Garden Multi-Insect Killer), diazinon, dursban, and acephate (Orthene). To make turf less attractive to chinch bugs in regularly infested areas, use organic, slow-release, nitrogen sources and reduce the rate of applied nitrogen.

Daylily rust was seen in the lab for the first time. The disease was found in a large collection of daylilies. Unlike most of the previous reports this sample came from a homeowner, whereas previous reports were from nurseries and garden centers. I suspect that there are more homeowners that unknowingly brought infected daylilies into their landscape over the last year. The last issue of the Kentucky Pest News also reported daylily rust. More information on the identification and control of daylily rust can be obtained in the Timely Information Sheet (#PP506) written by Austin Hagan.

Two new books are now available from APS Press: *Shade Tree Wilt Diseases* and *Diseases of Woody Ornamentals and Trees in Nurseries*. More information on these books and ordering information is available at <http://www.shopapspress.org>.

Table 2. July Plant Diseases Received at the Birmingham Plant Diagnostic Lab.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Apple	Cedar Apple Rust	Jefferson
	Japanese Beetles	Jefferson

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Aucuba	Botryosphaeria Dieback and Phytophthora Root Rot	Jefferson
Azalea	Azalea Lacebugs	Jefferson(3)
	Phomopsis Dieback	Jefferson
Bentgrass	Black Layer	Shelby(2)
	Curvularia Blight	Jefferson
	Dollar Spot	Jefferson
	Fairy Ring	Jefferson
	Pythium Root Rot	Jefferson
	Slime Mold	Jefferson
Bermudagrass	Dollar Spot	Jefferson
	Helminthosporium Leaf Spot	Shelby
Boxwood, American	Macrophoma Leaf Spot	Jefferson
	Volutella Blight	Jefferson
Boxwood, Dwarf English	Phytophthora Root Rot	Jefferson
	Pythium Root Rot	*
Butterfly Bush	Spider Mites	Walker
Centipede	Brown Patch	Shelby, Walker
Cherry Laurel	Powdery Mildew, Shothole	Jefferson
Cherry, Yoshino	Oriental Fruit Moth	Walker
Clematis, Evergreen	Clematis Wilt	Jefferson

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Crape Myrtle	Cercospora Leaf Spot	Jefferson(2)
Daylily	Daylily Rust	*
Dogwood, Flowering	Cercospora Leaf Spot	Jefferson
	Powdery Mildew	Jefferson(3)
	Spot Anthracnose	Walker
Elm, American	Powdery Mildew	Jefferson
Fescue	Brown Patch	Jefferson
Ficus Pandurata	Pythium Root Rot	Jefferson
Florida Jessamine	Botryodiplodia Dieback	Jefferson
Holly	Oedema	Jefferson
Holly, Chinese	Scale	Jefferson
Holly, Japanese	Botryosphaeria Canker	Jefferson
Hydrangea	Cercospora Leaf Spot	Jefferson
Iris	Cladosporium Leaf Spot	Walker
Ivy, English	Anthracnose	Jefferson
Juniper	Juniper Scale	Jefferson
	Phomopsis Twig Blight	Jefferson(2)
	Phytophthora Root Rot	Jefferson, Shelby, St. Clair
Maple, Japanese	Anthracnose	*
	Phomopsis Dieback	*(2)

<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Pythium Root Rot	*
Nectarine	Botryosphaeria Dieback	Jefferson
Oak, Black	Powdery Mildew	Jefferson
Oak, Southern Red	Algal Leaf Spot	Shelby
Okra	Cucumber Mosaic Virus	Jefferson
Peach	Botryosphaeria Dieback	Jefferson
Pecan	Pecan Scab	Jefferson
Pepper, Bell	Cucumber Mosaic Virus	Jefferson
Petunia	Phytophthora Blight	Walker
St. Augustinegrass	Brown Patch	Jefferson
	Gray Leaf Spot	Jefferson
	Take-all Root Rot	Jefferson
Tomato	Buckeye Rot	Jefferson
	Cucumber Mosaic Virus	Jefferson
	Early Blight	Jefferson(2)
	Fusarium Wilt	Jefferson(2)
Vinca	Phytophthora Blight	Jefferson, Walker
Zoysia	Brown Patch	Jefferson
	Dollar Spot	Jefferson, Shelby
	Fairy Ring	Jefferson
	Take-all Root Rot	Jefferson

Table 3. Brief Disease Descriptions and Control Recommendations for Diseases Often seen in August.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Ajuga	<i>Sclerotium rolfsii</i> Crown Rot	Stems collapse at soil line; a white mold with brown mustard-seed sized sclerotia present.	Sanitation; Solarization.
Apple	Bitter Rot on Fruit (<i>Colletotrichum</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. See the Ala. Pest Management Handbook.
	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 (1/4 inch diam.) with purple margins and irregular shape. <u>Canker</u> : Lesions on branches or trunk are slightly sunken, reddish-brown and show concentric rings of cracked bark.	Sanitation; recommend fungicide treatments.
	Fireblight (<i>Erwinia</i>)	During mid to late summer, fireblight bacteria are spread during wet conditions by insects and water droplets from blighted twigs and cankers to the edges of young leaves which develop black V-shaped and circular edge spots which slowly spread downward.	Prune affected areas 14 inches beyond damage. (Streptomycin is only recommended for protection of blossom infections.)

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Fly Speck (<i>Microthyriella</i>)	Tiny black dots occurring in groups on the surface of the apple skin.	Sanitation; see Ala. Pest Management Handbook or Fruit Spray Guide.
	Sooty Blotch (<i>Gloeodes</i>)	Blotches of gray (sooty appearance) on the apple skin; often associated with fly speck.	Sanitation; see Ala. Pest Management Handbook or Fruit Spray Guide.
	Southern Blight (<i>Sclerotium rolfsii</i>)	Sunken, water-soaked canker at base of the trunk; dieback.	Sanitation; solarization; fumigation; deep plowing to displace sclerotia away from root zone.
Arbor-vitae	Phytophthora Root Rot	Roots show a wet, brown decay	Sanitation. See AL Pest Management Handbook.
Aucuba	Botryosphaeria Canker (Blotch)	Black, large, irregular lesions on leaves and stems; dieback beyond cankers.	Sanitation; Cleary's 3336, Domain, or benomyl labelled for ornamentals.
	Helminthosporium Leaf Spot	Brown, elongate leaf lesion.	Sanitation. Cleary's 3336.
Azalea	Phomopsis Dieback	Elongated sunken lesions on branches and twigs.	Pruning; Cleary's 3336 protective sprays.
	Phytophthora Crown/Root Rot	Crowns/roots become brown and wet or water-soaked.	See the Ala. Pest Management Handbook.
Bahia Grass	Dollar Spot (<i>Sclerotinia</i>)	White spots/ lesions on leaf blades; whole sections of turf - beginning with dollar spot size areas - may become blighted. A problem during dry periods.	Frequent cutting.
Basil	Rhizoctonia Aerial Blight	Blight of foliage, esp., lower foliage.	----

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Beans, Garden	Anthracnose (<i>Colletotrichum</i>)	Circular and irregular reddish spots develop on leaves and pods.	See the Ala. Pest Management Handbook or Vegetable Spray Guide.
	Fusarium Wilt	Plants wilt easily when water is restricted; yellowing of lower leaves spreads up the plant.	Rotate the area away from beans for 10 years or solarization.
	Root-Knot Nematode (<i>Meloidogyne</i>)	Plants are yellowed and stunted. Roots are galled.	Homeowners should use pre-plant treatment of solarization or crop rotation.
Beans, Butter	Mosaic Virus	Regular yellow blotches or patterns on foliage.	Remove diseased plants. Do not save seed. Control insects.
	Rhizoctonia Lower Stem Rot	Dark brown decay of lower stem.	Sanitation. See Ala. Pest Management Handbook.
Begonia	Pythium Root Rot-Rhizoctonia/Fusarium Lower Stem/Root Rot	Lower stem brown and decayed.	See the Ala. Pest Management Handbook.
	Ring Nematode (<i>Criconemoides</i>)	Areas of turf yellow and die.	Avoid stressful situations. Commercial turf areas may apply treatment.
Bentgrass	Anthracnose (<i>Colletotrichum</i>)	Leaf spot and blight.	Collect grass clippings; apply protective sprays of Cleary's 3336.
	Pythium Blight	Grass blades become browned, wet, water-soaked, sometimes greasy-looking.	See the Ala. Pest Management Handbook.
	Rhizoctonia Brown Patch	Brown, irregular blotches on leaves; dead patches (1 or more feet diam.) in lawn.	See ANR-492 or the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Ring Nematode (<i>Criconemoides</i>)	Areas of turf yellow and die.	Avoid stressful situations. Commercial turf areas may be treated with protective nematicides.
	Sting Nematode Damage (<i>Belonolaimus</i>)	Areas of turf yellow and die.	Avoid stressful situations. Commercial turf areas may be treated with protective nematicides.
Bermuda	Brown Patch (<i>Rhizoctonia</i>)	Brown, irregular blotches on leaves; dead patches (1 or more feet diam.) in lawn.	See ANR-492 or the Ala. Pest Management Handbook.
	Decline (<i>Gaeumannomyces</i>)	Thinning out of grass in patches.	Sanitation; Keep pH at 6.0; do not use nitrate fertilizers.
	Dollar Spot (<i>Sclerotinia</i>)	Silver dollar-sized, bleached-out spots appear in lawn. Spots enlarge. Individual grass blades develop white lesions with brown borders.	See the Ala. Pest Management Handbook.
	Helminthosporium Blight/Leaf Spot	Leaf lesions are irregular shaped and brownish-green; old lesions become tan or white.	Sanitation; recommend fungicide treatments (at least 3).
	Take-all Patch (<i>Gaeumannomyces</i>)	Yellowing of individual plants followed by dieback; thinning out of grass in patches.	See the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Blackberry	Septoria Leaf Spot	New infection spots are greenish black and circular-angular. Older spots are gray-white with well-defined margin, 1-2 mm diameter; some shot-hole, defoliation.	Sanitation of fallen leaves; See AL Pest Management Handbook.
Blueberry	Botryosphaeria Canker	Dark, brown-black lesions on current year's growth. Foliage beyond the canker turns yellow and eventually the branch will die.	Pruning; Benlate sprays.
	Phomopsis Cane Canker	Elongated, cracked, sunken cankers	Prune out cankers, making cuts 3-4 inches beyond the lesion edge.
	Septoria Leaf Spot	Small, circular, white-tan spots with purple borders; stem lesions are sunken with tan or gray centers with red-brown margin.	Follow recommendations for anthracnose on blueberry.
	Summer Chlorosis	Stress Plants become yellowed and sometimes leaves develop small red spots.	Increase irrigation and nitrogen application.
Boxwood	Phytophthora Root Rot	Roots are cream-colored; outer cortex slips readily away from the central core.	Sanitation. Improve water relations. See AL Pest Management Handbook.
	Pythium Feeder Root Rot	Roots are cream-colored; outer cortex slips readily away from the central core.	Sanitation. Improve water relations. See AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Volutella Blight	Sunken elongated lesions on branches or twigs which may be covered by orange fruiting bodies of the fungus.	Improve growing conditions; eliminate any environmental stresses; See Ala. Pest Management Handbook.
Cantaloupe	Fusarium Wilt	Plants yellow and wilt from base of plant up.	--
Centipede	Brown Patch (<i>Rhizoctonia</i>)	Dark brown irregular lesions on leaves, generally. Dead patches (1 or more feet diam.) in lawn.	See ANR-492 or Pest Management Handbook.
	Exserohilum Blight	See Bermuda with Helminthosporium Blight.	See Ala. Pest Management Handbook.
	Take-All Patch (<i>Gaeumannomyces graminis pv. graminis</i>)	Patches of grass yellow and die; may be stress-related.	See ANR-823; Bayleton is labelled.
Cherry	Bacterial Canker (<i>Pseudomonas</i>)	Sunken cankers (often with ooze); often a foul smell is associated.	Sanitation.
	Septoria Leaf Spot	Medium brown angular spots (about 1 cm diam.).	Sanitation in the fall.
Cherry, Weeping Higan	Shot Hole (<i>Xanthomonas</i>)	Reddish, water-soaked spots develop; centers of older spots fall out.	Sanitation.
Chrysanthemum	Bacterial Leaf Spot (<i>Pseudomonas</i>)	Dark brown/black, small (2-4 mm diam.), angular spots; sometimes with water-soaked edges.	Sanitation.
	Botrytis Blight	Brown spots, blotches.	See Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Fusarium Wilt	Yellowing/wilt of leaves, beginning at the bottom of the plant and moving upward.	Sanitation; rotation for 7-10 years or solarization.
	Pythium Root Rot	Roots become brown and water-soaked.	Sanitation; protective fungicide drenches of Captan, Subdue, or Banol; solarization or crop rotation.
Coleus	Phytophthora Crown Rot	Roots become brown & water-soaked.	Sanitation.
Collards	Alternaria Leaf Spot	Dark gray-brown irregular shaped spots.	See Ala. Pest Management Handbook.
	Black Rot (<i>Xanthomonas</i>)	Dark V-shaped lesion at leaf edge; blackening of leaf veins; black vascular ring if stem cut cross-wise.	Rotation for 2-3 years; solarization.
	Cercospora Leaf Spot	Tan or whitish circular-irregular spots.	See Ala. Pest Management Handbook.
Corn	Corn Smut (<i>Ustilago maydis</i>)	White fleshy galls on ears and stalks. Older galls crack open and expose black powdery spores within.	Sanitation. See ANR-601.
	Southern Corn Leaf Blight (<i>Bipolaris maydis</i>)	Brown, elliptical spots, usually less than 3 inches long.	---
	Southern Rust (<i>Puccinia polysora</i>)	Orange pustules develop on upper leaf surfaces. Leaves become blighted.	See the Ala. Pest Management Handbook.
Cotton	Alternaria Leaf Spot	Round brown spots up to ½ inch in diameter. This is usually not a serious problem.	---

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Cercospora Leaf Spot	Brown, somewhat circular spots.	---
	Fusarium Wilt	Plants begin to yellow on lower sections. Gradually, yellowing spreads upwards and plants wilt.	---
	Phomopsis Canker	Elongated, brown, sunken canker.	Prune out cankers, making cuts 3-4 inches away from edge of lesion.
	Reniform Nematode (<i>Rotylenchulus</i>)	Plants stunted, poor growth.	Rotation.
	Root-knot Nematode (<i>Meloidogyne</i>)	Irregular galls present on roots; reduced plant growth.	Sanitation; crop rotation.
	Stemphyllium Leaf Spot	Small, circular, brown spots with concentric rings give a target-like pattern.	---
Crabapple	Scab (<i>Venturia</i>)	Olive-brown circular, slightly raised spots (4-5 mm diam.) develop on leaves and fruit.	See Ala. Pest Management Handbook.
Cucumber	Anthracnose (<i>Colletotrichum</i>)	Angular, brown, water-soaked spots on leaves, stems.	See the Ala. Pest Management Handbook.
	Watermelon Mosaic Virus I	Yellow-green mosaic pattern; slight reduced growth.	Sanitation.
Cypress, Leyland	Cercospora Blight	Inside and lower limbs become blighted.	Sanitation; See Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Seiridium Canker	Elongated, sunken lesions on branches and trunk; sap (resin) oozes onto bark.	Sanitation; See Ala. Pest Management Handbook.
Daisy, Gerbera	Phytophthora Leaf Blight/Crown Rot	Leaves develop brown blotches; lower stem develop brown lesions; plants collapse.	See the Ala. Pest Management Handbook.
Daylily	Southern Blight (<i>Sclerotium rolfsii</i>)	A wet rot at soil line; sometimes a white fluffy mat of fungus at soil line.	Sanitation; solarization.
Dogwood	Cercospora Leaf Spot	Leaf spot on lower leaves of tree; angular to irregular leaf spots (2-6 mm) which are light brown or gray in the center and dark brown or purple on borders.	Sanitation.
	Powdery Mildew (<i>Phyllactinia</i>)	Powdery white dusting on leaves; foliage distortion and death.	Sanitation in the fall; See Al. Pest Management Handbook.
	Septoria Leaf Spot	Leaf spots on lower leaves of tree; angular to irregular tan or brown spots (2-6 mm) sometimes with faint yellow halos.	Sanitation.
	Spot Anthracnose (<i>Elsinoe</i>)	Tiny red spots on flowers, leaves.	Sanitation in fall; See Al. Pest Management Handbook.
Euonymus	Anthracnose (<i>Colletotrichum</i>)	Small, whitish spots (1/16 in. diam.) on foliage.	Recommend fungicide sprays. See Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Fatsia	Phytophthora Root Rot	Roots become brown, water-soaked, decayed; outer cortex slips easily away from the central core of the root.	Sanitation; improve moisture levels in the soil.
Fern	Rhizoctonia Root Rot	Dark brown, dried, decayed roots.	Sanitation; See Ala. Pest Management Handbook.
Fescue	Anthracnose (<i>Colletotrichum</i>)	Brown spots and blotches develop on grass blades.	See Ala. Pest Management Handbook for brown patch recommendations.
	Bipolaris (<i>Helminthosporium</i>) Crown Rot	Stolons/crowns become browned and dry rotted. Leaf blades become yellowed and then brown.	See the Ala. Pest Management Handbook.
	Brown Patch (<i>Rhizoctonia</i>)	Brown, irregular blotches on leaves; dead patches appear in lawn; patch size after 1-2 ft. diam.	See ANR-492 and the Alabama Pest Management Handbook.
Fig	Rhizoctonia Aerial Blight	Leaves develop irregular brown lesions that become torn and tattered.	Sanitation.
	Phytophthora Root Rot	Recently infected roots are brown & water-soaked; older infection areas are dried and brown. Foliage shows wilt, dieback.	---
	<i>Sclerotium rolfsii</i> Crown Rot	Necrosis at crown with white mycelial mat and mustard sized sclerotia.	Sanitation; See Ala. Pest Management Handbook.
Forsythia	Anthracnose	Brown, leaf spots/blotches.	Sanitation. See Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
<i>Gomphrena glabosa</i>	Fusarium Crown Rot	Brown, dried, decayed lower stem.	Sanitation; Crop rotation.
Grape	Anthracnose (<i>Colletotrichum</i>)	Circular (1-5 mm diam.) - angular lesions have brown-black edges and gray-white centers; lesions may be numerous and coalesce; lesions on shoots may cause cracking. Disease most severe on new growth. Lesions on fruit have a dark brown-black margin and gray center, fruit rot follows.	Sanitation; recommend fungicide sprays.
	Black Rot (<i>Guignardia</i>)	<u>Leaves:</u> Reddish-brown spots with black margins (2-5 mm diam.); spots circular or slightly lobed. <u>Shoots, Cane:</u> Purple or black, elongated, elliptical lesions; bark splits along lesion length. <u>Fruit:</u> White spots (2-3 mm diam.) with brown edges; spots enlarge and fruit becomes wrinkled, black, rotted.	Sanitation; recommend fungicide sprays.
Holly, Japanese	Phytophthora Root Rot	Roots become brown and water-soaked; plants become yellowed with dieback.	See the Ala. Pest Management Handbook.
Hosta	Impatiens Necrotic Spot Virus	Yellow ring spots on leaves; plants become stunted.	Sanitation. Control thrips.
	White Mold (<i>Sclerotium rolfsii</i>)	Lower trunk or stem is rotted and generally soft and limp.	Sanitation; possibly solarization.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Hydrangea	Armillaria Root Rot	Hydrangea dies suddenly. Thin white fungal mat may be seen under the bark; black thread-like rhizomorphs may be seen on or under bark; honey-colored mushrooms may develop.	Sanitation; See ANR-907.
	Cercospora Leaf Spot	Brown, circular or angular leaf spots.	Sanitation. See Ala. Pest Management Handbook.
	Colletotrichum Blossom Blight	Blossoms become covered with brown spots.	Sanitation. Cleary's 3336 may be applied for protective disease control.
	Powdery Mildew	White powdery dusting on leaf & stem surfaces.	Sanitation. See AL Pest Management Handbook.
	Pythium Crown/Root Rot	Wet, water-soaked brown lesions on crowns and roots.	See the Ala. Pest Management Handbook.
Impatiens	Phytophthora Root Rot	Wet, water-soaked brown lesions on roots.	See the Ala. Pest Management Handbook.
	Rhizoctonia Crown and Root Rot	Crowns and roots become brown and dry rotted.	Sanitation; solarization may help.
Ivy, English	Anthracnose	Irregular or circular dark brown or black leaf spots.	Sanitation; See AL Pest Management Handbook.
	Bacterial Leaf Spot	Dark brown-black angular leaf spots.	Sanitation. Do not water over-head. See AL Pest Management Handbook.
	Colletotrichum Leaf Spot	Brown leaf spots that are circular or irregular.	See the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phomopsis Canker	Brown, gray lesions on stems; dieback.	Sanitation; Cleary's or benomyl protective sprays.
	Phytophthora Root Rot	Roots become brown and water-soaked.	See the Ala. Pest Management Handbook.
Juniper	Pestalotiopsis Needle Blight	Needles turn brown in patchy areas on branches.	Sanitation; see Ala. Pest Management Handbook; avoid stress.
	Phomopsis Tip Blight	Tips of lower branches dieback.	See the Ala. Pest Management Handbook.
	Phytophthora Root Rot	See Holly, Japanese.	See Holly, Japanese.
Kiwi	Phytophthora Root Rot	Roots become brown and water-soaked; foliage shows yellowing and dieback.	Sanitation.
Liatris (Blazing Star)	Southern Blight (<i>Sclerotium rolfsii</i>)	Crown rot develops & causes plant to dieback.	Sanitation; Solarization; root-associated soil removal.
Maple	Anthracnose (<i>Kabatella</i>)	Small-large brown blotches develop on leaves, often following along veins +/- or leaf edges.	See the Ala. Pest Management Handbook.
	Phyllosticta Leaf Spot	Small (4-8 mm diam.) leaf spots develop with brown-purple borders and brown-cream centers.	See the Ala. Pest Management Handbook, under 'Leaf Spot'.
Maple, Sugar	<i>Monastichella hysteroidea</i> Leaf Spot	Brown irregular spots.	Sanitation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Marigold	Alternaria Leaf Spot	Black irregular spots 0.5-2 mm diameter. When spots numerous, plant death may result.	See Ala. Pest Management Handbook, under 'Leaf Spot'.
Mondograss	Anthracnose (<i>Colletotrichum</i>)	Gray, brown spots on leaves.	Sanitation; See Ala. Pest Management Handbook.
Muscadine	Black Rot	Reddish-brown leaf spots, irregular circular with tiny black specks on spots, bordering the outer edge of the spots.	Sanitation; See the AL Pest Management Handbook.
Oak	Anthracnose (<i>Apiognomonina</i>)	Small to large brown blotches develop on leaves, often following along veins +/- leaf edges.	See the Ala. Pest Management Handbook.
	Bacterial Scorch Disease (<i>Xylella</i>)	Leaf edge turn brown in scattered locations in tree; gradual dieback over 2-3 years.	Remove tree.
	Hypoxylon Canker	Dark gray to black, hard fungal layer develops under and at level of the bark on tree; dieback.	Pruning; improve tree vigor.
	Oak Leaf Blister (<i>Taphrina</i>)	Light brown leaf spots that are circular and concave-convex.	Sanitation; See Ala. Pest Management Handbook.
Okra	Root Knot Nematode (<i>Meloidogyne sp.</i>)	Irregular galls on roots.	Sanitation; grow nematode resistant vegetable variety; crop rotation to some grasses, marigolds, etc. See ANR-856.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Pansy	Pythium Root Rot	Roots become brown and water-soaked; plants become yellowed and finally die.	See the Ala. Pest Management Handbook.
	Bacterial Spot	Shot hole spots on leaves, often with a reddish border; sunken dark brown spots on fruit.	Sanitation. See AL Pest Management Handbook.
Pea, Field	Mosaic Virus	Yellow spots & blotches (mosaic pattern) on puckered and sometimes distorted leaves.	Sanitation; Control insects.
	Charcoal Root Rot (<i>Macrophomina</i>)	The major tap root at and just below the soil-line becomes dry, shredded and sprinkled with tiny black pepper-sized spots. These bodies of the fungus are a diagnostic sign. The "pepper spots" are present on the root surface and scattered throughout the inner tissues. Spots are usually very numerous and give the root a gray-black appearance. This is a problem during dry periods.	Sanitation. Rotation.
	Fusarium Root Rot	Red-brown lesions on lower stems, upper root areas; dieback wilt.	Rotation for 10-15 years.
Peanut	Cylindrocladium Root Rot	Stems near the soil-line are black; orange minute dots may be evident on decay area.	Crop rotation; See A. Hagan.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Early Leaf Spot (<i>Cercospora</i>)	Brown spots, often with a yellow halo; spores are produced on the upper leaf surfaces of spots.	See Ala. Pest Management Handbook; also Folicur.
	Late Leaf Spot (<i>Cercosporidium</i>)	Brown to dark-brown spots; spores are produced on the lower leaf surface.	See Alabama Pest Management Handbook; also Folicur.
	Rhizoctonia Stem Rot and Pod Rot	Dark brown, sunken, dried lesions on stems and pods.	Folicur.
	Root Knot Nematode	Irregular swellings of pods & roots.	See ANR-393.
	Southern Blight (<i>Sclerotium</i>)	Stems at the soil line become brown-decayed and soft. A white, fan-shaped mycelial growth may develop at the soil line.	See the Ala. Pest Management Handbook; also Folicur.
	Tomato Spotted Wilt Virus	Stunted plants; leaves show ring spot patterns; new leaves small; internodes abnormally shortened.	Control thrips.
Pear	Entomosporium Leaf Spot (<i>Fabraea</i> Leaf Spot)	Black circular spots (4-6 mm diam.) develop on leaves, fruit and shoots. A small black pustule often develops in the spot centers.	Sanitation of leaves/fruit in the fall. Follow spray guide recommendations in ANR-50.
	Fireblight (<i>Erwinia</i>)	Prune out dieback; make cuts 14 inches beyond damage.	Blossom blight; dieback, cankers.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Pecan	Fungal Leaf Scorch	Brown or gray-brown lesions begin at the base of the leaflet and spread toward the leaflet midrib. Early leaf drop follows.	See fungicides recommended for scab control.
	Scab (<i>Cladosporium</i>)	<u>Leaves:</u> Slightly elevated, olive-brown, circular spots. <u>Nuts:</u> Slightly elevated, olive-brown, circular to irregular spots.	Sanitation; recommend fungicide sprays.
Pepper	Bacterial Leaf Spot (<i>Xanthomonas</i>)	Dark, angular spots with water soaked edges; spot centers may dry out; leaf drop.	Sanitation.
	Cucumber Mosaic Virus	Foliage mottled; new growth stunted.	Sanitation. Control aphids.
	Pythium Root Rot	Roots become brown and water-soaked.	Rotation; improve water drainage.
	Tomato Spotted Wilt Virus	Foliage mottled; new growth stunted.	Sanitation; control thrips.
Periwinkle	Anthracnose (<i>Colletotrichum</i>)	Brown, sunken cankers on stem sections.	Sanitation; Cleary's 3336, Domain, or a benomyl WP labelled for ornamentals.
	Phytophthora Aerial Blight	Dark brown lesions appear on stems; dieback.	Sanitation; Aliette.
	Phytophthora Root Rot	Roots become dark brown decayed and water-soaked; foliage shows yellowing/dieback.	Sanitation; solarization.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Rhizoctonia Aerial Blight	Lower stems and leaves become browned and dry-rotted. Some mycelial webbing may occur. Whole plants will eventually die.	Sanitation. Protective sprays of Cleary's 3336, Domain, or a benomyl WP labelled for ornamentals.
	Rhizoctonia/Fusarium Crown Root Rot	Dried, brown lesions on lower stem and roots.	Cleary's drenches will help provide some protection.
Petunia	Phytophthora & Pythium Root Rot	Roots brown and water-soaked, rotted.	Sanitation. See AL Pest Management Handbook.
Pine, Virginia	Fusarium Pitch Canker	Sunken lesions that ooze sap.	Sanitation.
	Lophodermium (<i>Ploioderma</i>) Needle Cast	Last year's needles become spotted and browned; eventually they drop. Needles have tiny football-shaped, hard black bodies scattered over their surfaces.	See the Ala. Pest Management Handbook.
	Rhizosphaeria Needle, Twig Blight (Suspect Stress Related)	Needles and twigs become brown and dead.	Apply Bravo 720 at rate of 5½ pints per 100 gallons or Bravo 500 at 8 pts. per 100 gallons after shearing when growth is ½ inch and again when new growth is 2 inches long.
Poinsettia	Bacterial Stem Rot (<i>Erwinia</i>)	Lower stem becomes blackened and rotted; usually occurs on small plants.	Sanitation.
	Fusarium Root Rot	Roots become dry and decayed. Symptoms may be confused with Rhizoctonia.	Sanitation; Cleary's 3336 protective sprays/drench.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Pythium Root Rot	Roots water-soaked, decayed.	Sanitation; protective drenches fungicide; See Ala. Pest Management Handbook.
Poplar	Alternaria Leaf Spot	Brown, irregular spots (8-15 mm diam.) develop on leaves.	Sanitation. Chemical treatment not usually recommended.
Potato, Irish	Root-knot Nematode (<i>Meloidogyne</i>)	Irregular galls on roots and on tuber surfaces.	Sanitation; crop rotation to nematode suppressive crops; resistant varieties; See ANR-856.
	Scab (<i>Streptomyces scabies</i>)	Rough, circular, irregular lesions on tubers.	See the Ala. Pest Management Handbook.
Pumpkin	Cucumber Mosaic Virus	Leaves may develop a mosaic, mottle, puckering, distorted shapes, curling.	Sanitation. Weed control; Insect Control; See ANR-809.
	Downy Mildew (<i>Pseudoperonospora</i>)	Yellow diffuse spots on upper leaf surface; gray mold on corresponding lower leaf surface.	See Ala. Pest Management Handbook.
	Watermelon Mosaic Virus I	Leaves and fruit show a yellow-green mosaic pattern; new growth is stunted.	Sanitation; control insects and weeds.
Red Cedar	Phomopsis Blight	Tips of branches become brown with damage spreading into the lower sections of the branches.	See the Ala. Pest Management Handbook.
Rose	Aerial Blight (<i>Rhizoctonia</i>)	Brown, irregular blotches on leaves.	Sanitation; Cleary's 3336 would give protective control.
	Black Spot (<i>Diplocarpon rosa</i>)	Black feathery-edged leaf spots	See Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Rosemary	Fusarium & Pythium Root Rot	Dried, decayed roots.	Sanitation; avoid environmental stresses.
Sesame	Fusarium, Pythium Wilt/Root Rot	Brown water-soaked rots.	---
	Fusarium Associated With Stem Cankers	Brown dried, elongated cankers.	---
	Leaf/Pod Blotch (<i>Colletotrichum</i> , <i>Fusarium</i>)	Brown circular, oval spots.	Sanitation.
Smoketree	Powdery Mildew	White powdery dusting on leaves; leaf blight.	Sanitation; Cleary's 3336 protective sprays if desired.
Sorghum	Anthracnose (<i>Colletotrichum</i>)	Small to large circular lesions with yellowish centers and red, black or brown edges. Spots may coalesce. Stalk rot shows bleached surface lesions with reddish edges; head rot may also occur.	Rotation. Plow under crop residues.
	Charcoal Rot (<i>Macrophomina</i>)	See comments for field pea. This is usually a dry weather problem.	Rotation. Plow under crop residue.
Soybean	Aerial Blight (<i>Rhizoctonia</i>)	Lesions may appear on leaves, stems and pods usually beginning on the lower or middle sections of the plant. At first the spots or blotches appear water-soaked and black. Soon the spots appear greenish-brown or reddish-brown. Older spots and blighted areas become tan, brown or black.	See Ala. Pest Management Handbook or Soybean Pest Management Circular ANR-413.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		Older lesions often become dried and fall apart.	
	Anthracnose (<i>Colletotrichum</i>)	Irregularly shaped brown lesions on stems, pods, petioles. In later stages of disease black fruiting bodies with minute black spines may be seen covering the lesions. (Usually a hand lens is needed to view the fruiting bodies.)	Rotation. Plow under crop residues.
	Charcoal Root Rot (<i>Macrophomina</i>)	See comments for field pea. This may be a problem when conditions are dry.	See Bill Gazaway. Rotation.
	Cyst Nematode (<i>Heterodera</i>)	Plants are stunted and yellow. Root systems are reduced and show a low incidence of Rhizobium nodules. White-yellow and brown cysts about the size of a small pin head may be seen on roots with the aid of a hand lens.	Rotation; resistant cultivars; See Soybean Pest Management, Circular ANR-413.
	Downy Mildew (<i>Peronospora</i>)	Yellow spots develop on upper leaf surfaces. On corresponding areas of lower leaf surfaces, gray-purple tufts of mycelium/spores develop.	See the Ala. Pest Management Handbook or Soybean Pest Management Circular ANR-413.
	Frogeye Leaf Spot (<i>Cercospora</i>)	<u>Leaves:</u> Circular-angular spots with a dark red-brown border. <u>Stems:</u> Elongated gray lesions with red-brown margins. <u>Pod:</u>	See Ala. Pest Management Handbook and Bill Gazaway or ANR-413.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		Circular to irregular, slightly sunken gray spots with dark red-brown borders.	
	<i>Fusarium solani</i> Root Rot	Tap root becomes brown and dried.	Crop rotation for 10-15 years.
	Nematode, Sting (<i>Belonolaimus</i>)	Plants become yellowed and stunted. Roots first develop dark sunken lesions at root tips or on young roots. Lesions often cause root breakage which gives root ball a stubby appearance.	See Ala. Pest Management Handbook or ANR-413.
	Nematode, Stunt (<i>Tylenchorhynchus</i>)	Plants are yellowed, stunted, unthrifty; roots are abnormally shortened.	See Ala. Pest Management Handbook.
	Root-Knot Nematode (<i>Meloidogyne</i>)	Plants are stunted and yellowed. Roots develop knots or galls of variable shape and size.	Crop rotation; Use resistant cultivars. See Ala. Pest Management Handbook.
	Stem Canker (<i>Diaporthe</i>)	Small, red-brown lesions at nodes develop into large longitudinal gray-brown cankers with red-brown margins. Leaves develop inter-veinal browning.	Rotation. Crop rotation.
	Sudden Death Syndrome (<i>Fusarium solani</i>)	The tap root becomes brown and dry-rotted. Small feeder roots may also become decayed. Foliage develops inter-veinal browning.	Rotation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Squash	Mosaic Virus	Leaves develop a mottled green-yellow or dark green-light green mosaic or regular patterned coloration; new growth is stunted.	Remove affected plants; Control insects and weeds.
	Powdery Mildew	White dusting evident on foliage.	See Ala. Pest Management Handbook.
	Pythium Crown Rot	Lower stems become soft and water-soaked, rotted.	Sanitation. Reduce irrigation if appropriate, avoid low, wet areas.
St. Augustine	Brown Patch (<i>Rhizoctonia</i>)	See Centipede.	--
	Dagger Nematode (<i>Xiphenema sp.</i>)	Plants stunted; roots poorly developed, stunted.	Solarization or crop rotation.
	Gray Leaf Spot (<i>Piricularia</i>)	Gray spots and blotches on grass blades.	See the Ala. Pest Management Handbook.
	Root Knot Nematode (<i>Meloidogyne</i>)	Areas grow poorly and become stressed easily.	Avoid stressful situations. Commercial turf situations may apply protective treatment.
	Take-All Patch <i>Gaeumannomyces</i>	Patch areas thin and individual plants turn yellow and die; affected plants show dark brown/black lesions on roots/stolons.	Adjust soil pH to 5.5-6.0; Use only ammonium-based nitrogen in fertilizers.
Strawberry	Common Leaf Spot (<i>Mycosphaerella</i>)	Reddish-bordered spots with gray centers.	Sanitation. See the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phomopsis Leaf Spot	Brown blotches that often develop along leaf edges. Spots usually have purple-red edges.	Sanitation. See the Ala. Pest Management Handbook.
Sycamore	Anthrachnose (<i>Discula</i>)	Brown irregular blotches develop along leaf veins and/or along leaf edges. Defoliation may follow.	See the Ala. Pest Management Handbook.
	Scorch (<i>Xylella</i>)	Leaf edges become browned. Foliage dies but usually remains on the tree. The following year leaves may be smaller than normal, some die-back may occur. Edge browning occurs mid-late summer.	Remove diseased trees.
Tomato	Anthrachnose (<i>Colletotrichum</i>)	Fruit spots begin as small sunken colorless spots but they develop into larger sunken areas with blackish centers where fungal spores (orange) develop.	See the Ala. Pest Management Handbook or Vegetable Spray Guide.
	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 Leaf Spot (<i>Xanthomonas axonopodis</i> pv. <i>campestris</i>)	Very small, brown or black angular leaf spots; outer edges of spots may appear wet or water-soaked.	Sanitation; See the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Bacterial Wilt (<i>Pseudomonas solanacearum</i> <i>Ralstonia solanacearum</i>)	Green healthy plants wilt and collapse rapidly.	Sanitation.
	Cucumber Mosaic Virus Complex	Plants become stunted; new growth becomes stunted; foliage shows mosaic, twisting, curling, shoe-string deformity on leaves.	See Ed Sikora. Control aphids and weeds.
	Early Blight (<i>Alternaria</i>)	Black or brown spots (1/4-1/2 inch diam.) on leaves, stems, fruit. Spots often have a concentric pattern.	Fungicide sprays; Sanitation.
	Fusarium Wilt	Plant foliage turns yellow and dies. 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.
	Pith Necrosis (<i>Pseudomonas</i>)	Sometimes brown cankers are evident and sometimes they are not present. Dieback. When stem cut longitudinally, pith is hollow with step like strands present.	Sanitation.
	Potato Virus Y	Foliage mottled, distorted; new growth stunted.	Sanitation; control aphids.
	Septoria Leaf Spot	Small (2-3 mm) gray, circular leaf spots with dark borders. Wet weather and moderate temperatures favor disease.	Apply protective fungicide sprays. Rotation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Southern Blight (<i>Sclerotium</i>)	White fungal mat occurs at soil line; plants die due to death of lower stem.	Solarization or fumigation.
	Tomato Spotted Wilt Virus	New growth becomes abnormally small; yellow spots appear. Young leaves become bronzed in spots, patches or whole leaf area involved. Fruit spotted or with ring spots. Plant wilt and die.	Sanitation; Control thrips.
Vinca minor	Alternaria Leaf Spot	Dark brown angular leaf spots; leaf blight.	Sanitation; Chipco 26019.
	Rhizoctonia Aerial Blight	Leaves or stems become blighted, spotted.	Sanitation; Cleary's or benomyl protective treatments.
Watermelon	Anthracnose	Black circular spots on leaves, stems; dieback.	Sanitation; See Ala. Pest Management Handbook.
	Cercospora Leaf Spot	Circular-irregular pale brown leaf spots with black margins (2-10 mm diam.).	Sanitation; fungicide sprays.
	Cucumber 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 7-12 years and then plant a resistant variety such as Crimson Sweet or Jubilee.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Gummy Stem (<i>Mycosphaerella</i>)	Elongate, brown, wet and some- times cracked lesions; black leaf spots may develop on leaf edges; plant sections beyond cankers dieback.	Protective fungicide sprays; Sanitation in the fall.
	Watermelon Mosaic Virus I (Papaya Ringspot Virus)	See comments for Cucumber Mosaic Virus (CMV).	Sanitation.
	Watermelon Mosaic Virus II	See comments for CMV.	Sanitation.
Weeping Willow	Crown Gall (<i>Agrobacterium tumefaciens</i>)	Rounded, woody gall on lower trunk and possibly large roots.	Sanitation; solari- zation. Root zone soil replacement; control soil insects.
Wisteria	Phomopsis Stem Blight	Dieback and brown, dried sunken lesions.	Sanitation; Cleary's 3336.
Zoysia	Dollar Spot (<i>Sclerotinia</i>)	Silver dollar-sized, bleached-out spots appear in lawn. Spots enlarge. Individual grass blades develop white lesions with brown borders.	See the Ala. Pest Management Hand- book.
	Helminthosporium Leaf Spot and Crown Rot	Brown, small elongated leaf spots; yellowing and dieback.	See ANR-621 and the Ala. Pest Management Handbook.
	Rhizoctonia Brown Patch	Brown blotches on leaves; roughly circular patches (1 or more feet diam.) turn brown in lawn.	See ANR-492.
	Ring Nematode Damage (<i>Criconemoides</i>)	Poor root system; poor top growth; dieback.	See ANR-523.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Rust (<i>Puccinia</i>)	Grass blades show chlorotic areas on one side of leaf and orange, rusty powder (spores) on the other side.	Sanitation; recommend fungicide sprays in some situations.
	Take-All Patch (<i>Gaeumannomyces graminis pv graminis</i>)	See St. Augustine grass.	Cultural practices; fungicides including Bayleton.

Lab Notes

Remember that August-early October is the best time to sample for soil nematode analysis. The charge for nematode analysis is \$10 per sample.