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PP-513

SEPTEMBER PLANT PROBLEM REPORT FROM THE AUBURN PLANT DIAGNOSTIC LAB

SEPTEMBER PLANT PROBLEM REPORT FROM THE BIRMINGHAM PLANT DIAGNOSTIC LAB

DISEASE POSSIBILITIES FOR OCTOBER

LAB NOTES

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Auburn Plant Disease Report-September (J. Mullen)

As is usual in September, most of our samples submitted (97 samples submitted in September this year) were ornamentals and turf grasses. We did see summer squash which tested positive for four viruses, and we confirmed the presence of downy mildew and *Microdochium* lesions on pumpkin. *Microdochium* had not been observed previously on pumpkin in Alabama. See more on this disease on page 3. Also, another case of daylily rust (*Puccinia hemerocallidis*) in the state was confirmed.

Several diseases on bermuda grasses were observed. *Helminthosporium*-type leaf spots were observed on coastal bermuda and Tifway bermuda. Brown patch and dollar spot were also diagnosed on bermuda grasses. On Tifdwarf bermuda, patchy dieback and thinning-out damage was caused by very high levels of ring and spiral nematode populations. See ANR fact sheets-621, -492, and -523, respectively, for further comments on these diseases.

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A centipede sample was diagnosed as nematode damage from very high levels of ring and spiral nematodes. The damage was observed as poor growth, dieback and a very poor root system.

Bacterial leaf spot and *Phytophthora* root rot were diagnosed on chrysanthemum. Bacterial leaf spot appeared as black, angular, vein-bound spots. Edges of spots were often darker and wet-looking if observed from the lower leaf surface. When leaf spot edges were cut and examined in a drop of water using 100x magnification of a compound microscope, bacterial streaming was evident. Bacterial leaf spots are difficult to control. Strict sanitation is extremely important. Copper sprays may provide some protection. *Phytophthora* root rot develops when soil conditions are kept wet for a prolonged period of time. Roots become rotted with a brown, wet appearance. Foliage wilts and dieback occurs. Disease control requires sanitation, improved soil-water relations. In greenhouse or nurseries situations, protective fungicide drenches may be appropriate. See ANR-500B.

The sample of daylily rust appeared as numerous small, dark brown leaf spots on leaves that were becoming uniformly necrotic. The orange coloration of the rust spores was observed when the tissue was examined with the stereo- and compound microscope. Once the disease becomes 'old', the spots become dark and necrotic and do not appear as the powdery, orange spots seen when the disease is actively developing. Control involves sanitation of all foliage and protective fungicide sprays. See the timely information PP-506 by Austin Hagan for more details.

Cercospora and *Septoria* leaf spots are common on dogwood in September-October. Spots are typically small, brown, and angular. These leaf spot diseases usually are not a problem earlier in the season. The abundant-adequate moisture in many parts of the state has allowed for these diseases to be a common occurrence this year. Sanitation of fallen leaves is usually the only recommendation given.

Cercospora leaf spots on mustard and turnip were seen in September. And, *Cercospora* leaf spots on crucifers are a typical occurrence in the fall. Spots are usually cream to light brown in color and irregular in shape. Sanitation of diseased foliage will help. See the Alabama Pest Management Handbook for fungicide recommendations.

Myrothecium crown rot, and *Phytophthora* & *Pythium* stem rot were present on petunia. The *Myrothecium*, which has been previously described as a crown rot disease of pansy, caused a brown, soft rot of the petunia crown. Microscopic black and white spore bodies of the fungus were observed and allowed for a quick diagnosis. Removal of infected plants is recommended. Also, protective fungicide sprays of a Daconil product should provide control. Also seen on petunia was a *Phytophthora* and *Pythium* stem rot. Brown stem lesions and dieback were evident. These fungi cause problems when wet conditions are prevalent for a prolonged period of time. Damaged plants or plant sections should be removed. Daconil or Aliette sprays will provide protective disease control.

Pumpkin samples were diagnosed with downy mildew (*Pseudoperonospora* sp.), *Microdochium* lesions, and root knot nematode. The downy mildew was evident as yellow, diffuse (leaf spot edges were not definite.) spotting of upper and lower leaf surfaces. After wet conditions, the lower leaf surfaces of spots developed gray webby textures. The gray coloration is due to the presence of downy mildew spores. Disease control of downy mildew on pumpkin is listed in the Alabama Pest Management Handbook. *Microdochium*, observed by E. Sikora in Cullman and Jackson Counties, has not been previously reported as a disease of pumpkin in Alabama. It has been reported to occur on pumpkin and squash in Tennessee. The fungus causes light brown or cream-

colored (bleached) spots/lesions to occur on various parts of the plant. Individual lesions are small (usually about 0.5 cm) but spot coalescence will cause large areas to be affected. Lesions usually appear to have a dry, scabby surface and are spindle-shaped. We observed the dry, scabby lesions on the fruit, stems, leaves, and peduncles. Ed Sikora is currently evaluating fungicides for control of this disease and it appears that a regular spray program for pumpkins is effective. Root-knot nematode is easily recognized by the irregular root galls caused. Root-knot, however, is not easily controlled - crop rotation to a crop with root-knot resistance or tolerance is generally recommended.

Summer squash was diagnosed with cucumber mosaic virus, papaya ringspot virus, watermelon mosaic virus II, and zucchini yellow mosaic virus using ELISA methods. Symptoms were distinctive as a mosaic virus disease with leaves showing a definitive pattern of green and pale yellow coloration and reduced and/or abnormal leaf development. The only control is to rotate to plants not susceptible or tolerant to these viruses.

Severe rust on zoysia was noted on a sample from Calhoun County. Foliage was severely blighted and showed the bright orange, powdery spore pustules typical of this disease. See ANR-621 or the Alabama Pest Management Handbook for control of this disease.

Table 1. 2001 September Plant Diseases Seen In The Plant Diagnostic Lab At Auburn.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Aesculus	Anthracnose (<i>Colletotrichum</i>)	*
	Pestalotia Leaf Spot	*
Althea	Rust	Baldwin
Bermuda	Dollar Spot (<i>Sclerotinia</i>)	Chilton
	<i>Rhizoctonia</i> Brown Patch	Colbert
Bermuda, Coastal	Helminthosporium-Type Leaf Spot	Washington

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Bermuda, Tifdwarf	Ring & Spiral Nematode Damage	Montgomery
Bermuda, Tifway	Brown Patch (<i>Rhizoctonia</i>)	Autauga
	Dollar Spot (<i>Sclerotinia</i>)	Autauga
	Exserohilum Leaf Spot	Autauga
Bahiagrass	Dollar Spot (<i>Sclerotinia</i>)	Calhoun, Marengo
Centipede	Ring & Spiral Nematode Damage	Covington
Cherry, Kwanzan	Anthraxnose	Russell
Cherry, Laurel	Fungal Leaf Spot	Calhoun
Chrysanthemum	Bacterial (Suspect <i>Pseudomonas</i>) Leaf Spot	*
	Phytophthora Root Rot	Cherokee
Cotton	Cercospora Root Rot	Washington
Daylily	Daylily Rust (<i>Puccinia hemerocallidis</i>)	*
Dianthus	Phytophthora Stem Blight	Cullman
	Pythium Root Rot	Cullman
Dogwood	Cercospora Leaf Spot	Russell
Holly, Helli	Pythium Root Rot	Marshall
	Rhizoctonia Aerial Blight	Marshall
Hydrangea, Oak Leaf	Phytophthora Root Rot	Limestone
	Pythium Root Rot	Limestone
Ivy	Alternaria Leaf Spot	*

<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Anthracnose (<i>Colletotrichum</i>)	*
	Pythium Root Rot	*
Laurel	Pythium Root Rot	*
Maple, Japanese	Pythium Root Rot	Limestone
Maple, Red	Botryosphaeria Canker	Lee
Marigold	Phytophthora Stem Rot	Lee
	Pythium Stem Rot	Lee
	Rhizoctonia Crown Rot	Lee
Mustard	Cercospora Leaf Spot	Limestone
Oak	Bacterial Scorch (<i>Xylella</i>)	Madison
Pear, Bradford	Alternaria Leaf Spot	Russell
Petunia	Myrothecium Crown Rot	Lee
	Phytophthora Stem Rot	Lee
	Pythium Stem Rot	Lee
Pumpkin	Downy Mildew (<i>Pseudoperonospora</i>)	Baldwin, Jackson
	Microdochium Leaf, Stem, Peduncle, Fruit Spots	Jackson
	Root-Knot Nematode (<i>Meloidogyne</i>)	Cullman
Salvia	Rhizoctonia Crown Rot	Lee
Scuppernong	Black Rot (<i>Guignardia</i>)	Tallapoosa
St. Augustine	Gray Leaf Spot (<i>Piricularia</i>)	Covington, Escambia

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Monroe	Take-All Patch (<i>Gaeumannomyces</i>)	Covington, Escambia,
Squash, Summer	Cucumber Mosaic Virus	Cullman
	Papaya Ring Spot Virus	Cullman
	Watermelon Mosaic Virus II	Cullman
	Zucchini Yellow Mosaic Virus	Cullman
Rose	Botrytis Blight	Cleburne
Tomato	Bacterial Wilt (<i>Ralstonia</i>)	Montgomery
	Root-Knot Nematode (<i>Meloidogyne</i>)	Montgomery
Turnip	Cercospora Leaf Spot	Limestone
Zoysia	Dollar Spot (<i>Sclerotinia</i>)	Montgomery
	Rust (<i>Puccinia</i>)	Calhoun
	Take-All Patch (<i>Gaeumannomyces</i>)	Lee

*Locations are not reported for nursery and greenhouse samples.

Birmingham Plant Disease Report-September (J. Jacobi)

Sixty-nine samples were received during the month of September. The month started out extremely wet, with from 6 to 10 inches of rain in many location in Central Alabama. The wet weather this summer and early fall have provided favorable conditions for a variety of leaf spot fungi on many landscape plants. Many of these leaf spot diseases, including Cercospora leaf spot on crape myrtle and flowering dogwood, may be alarming to homeowners, but cause little long-term damage to established plants. Some of the diseases seen last month included web blight of Rosemary, brown patch on zoysiagrass and St. Augustinegrass, Tubakia (*Actinopelte*) leaf spot on oak, and Phytophthora root rot on Eleagnus. Web blight or Rhizoctonia blight of Rosemary is caused by the fungus *Rhizoctonia solani*. Brown hyphae of Rhizoctonia growing in the canopy of infected plants are a common sign of web blight after periods of warm wet weather (like we had in early September). One research report indicated that this disease might kill prostrate forms of rosemary,

whereas upright forms generally have less damage. The fungicides thiophanate-methyl and mancozeb can provide good control of web blight.

In the last few weeks, there have been several reports of black root rot from diagnostic labs in other Southern states. Although we have not seen any samples at the Birmingham lab, this disease can be a significant problem in pansy. The soilborne fungus *Thielaviopsis basicola* causes black root rot. Pansies infected with black root rot produce aboveground symptoms that are typical of other root rotting diseases and include stunting, decline and/or yellowing (chlorosis) of the foliage. As pansies are installed this fall, remember to always examine plants carefully for uneven growth, poor foliage color, discolored roots, or other symptoms of the disease before planting in the landscape. See Plant Disease Note ANR-1052, “Black Root Rot or Pansy” for a more thorough description of the disease and control measures.

Table 2. 2001 September Diseases Seen In the Birmingham Plant Diagnostic Lab.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Ajuga	Cercospora Leaf Spot	Jefferson
Azalea Lacebugs	Jefferson (3)	
Azalea, Native	Cercospora Leaf Spot	Jefferson
Begonia	Pythium Root Rot	Jefferson
Bentgrass	Pythium Root Rot	Jefferson(2)
Bermuda	Dollar Spot	Jefferson(2)
Bermuda, Tifeagle	Curvularia Blight	Jefferson
Boxwood, American	Macrophoma Leaf Spot	Jefferson
	Phytophthora Root Rot	Jefferson
Centipedegrass	Dollar Spot	Jefferson
	Spittlebugs	Jefferson
Coral Bells (<i>Huechera spp.</i>)	Cylindrocladium Root Rot	Jefferson
	Pythium Root Rot	Jefferson
Crape Myrtle	Cercospora Leaf Spot	Jefferson

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Cypress, Leyland	Seridium Canker	Jefferson
Dogwood	Cercospora Leaf Spot	Jefferson
	Powdery Mildew	Jefferson(2)
	Septoria Leaf Spot	Jefferson
Eleagnus	Phytophthora Root Rot	Jefferson
Hackberry	Aphids	Jefferson
	Sooty Mold	Jefferson(2)
Holly, Chinese	Sooty Mold	Jefferson
Ivy, English	Phytophthora Root Rot	Jefferson
Jasmine, Sambuc	Thrips	Jefferson
Juniper, Blue Pacific	Phytophthora Root Rot	Jefferson
Magnolia, Southern	Sooty Mold	Jefferson
Maple, Japanese	Anthracnose	Jefferson
Oak, Red	Tubakia Leaf Spot	Jefferson
Oak, Willow	Iron Chlorosis	Jefferson
	Spider Mites	Jefferson
Pecan	Scab	Jefferson
Peony	Botrytis Leaf Spot	Jefferson
Rosemary	Phytophthora Root Rot	Jefferson
	Rhizoctonia Web Blight	Jefferson(2)
St. Augustinegrass	Brown Patch	Jefferson

<u>Plant</u>	<u>Disease</u>	<u>County</u>
	Chinch Bugs	Jefferson(2)
Vinca	Phytophthora Blight	Jefferson
Willow	Cercospora Leaf Spot	Jefferson
Zoysiagrass	Brown Patch	Jefferson(2)
	Dollar Spot	Jefferson

Disease Possibilities For October

Disease problems usually decline in October as temperatures drop, the summer field and garden crop season is largely over, and the fall-winter plantings of small grains have not yet begun or are just beginning. But, we still commonly see forage problems, landscape ornamental problems, greenhouse/nursery crop problems, vegetables from fall gardens, and field plantings of vegetables in the southern-most sections of the state. With ornamentals, watch for black root rot on pansies. Also, Myrothecium crown rot was recently noted on greenhouse pansies. See page 17 for more on pansy diseases.

Cercospora leaf spot is a common problem on turnips and other crucifers in the fall. Leaf spots are circular or angular, cream or light brown-colored. Spotting may be severe. Control involves sanitation. Some crucifers can be treated with copper preparations. See the 2001 Vegetable Spray Guide.

The list below includes some common disease problems received in the lab during October of the past few years. Comments on control practices are brief. Refer to the Ala. Pest Management Handbook or individual spray guides or fact sheets for details.

Table 3. Disease Description and Brief Control Comments on Some Common Diseases Seen in October.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Arbor-vitae	Cercospora Blight	Infection usually begins with lower, inner foliage where needles become brown and fall off. Microscopic study usually allows for spore observations.	Sanitation and Cleary's 3336 helps control the disease.
	Pestalotia Blight	Brown dying sections of foliage, stress related.	Sanitation; Cleary's 3336; Remove stress condition.
	Phoma Blight	Tip dieback.	Sanitation; Cleary's 3336 may give protective control; eliminate stress situations.
Aucuba	Botryosphaeria Blight	Black elongated lesions on stems cause a dieback. Also, black irregular lesions may develop on leaves.	Sanitation; Cleary's, Domain or a benomyl labelled on ornamentals may help.
Azalea	Cercospora Leaf Spot	Brown circular or angular leaf spots of variable size.	See the Ala. Pest Management Handbook under Rhizoctonia web blight.
	Colletotrichum Leaf Spot	Brown circular-irregular spots (2-3 mm) diameter.	Sanitation; usually this is a stress related problem which develops in the fall.
	Phomopsis Canker	Brown, sunken, elongated stem lesions.	Pruning 3 inches beyond the canker margins. Cleary's protective sprays after pruning may help.
	Phytophthora Root Rot	Brown, water-soaked root decay.	Sanitation; protective fungicide treatments. See ANR-571.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Azalea Liners and Containers	Rhizoctonia Root Rot	Brown, dried dying roots.	Sanitation. See Ala. Pest Management Handbook.
	Phytophthora Root Rot	Brown, water-soaked dying roots.	Sanitation. See Ala. Pest Management Handbook.
Bentgrass	<i>Bipolaris cyanodontis</i> Leaf Spot	Small, narrow (1 mm x 2-3 mm) brown spots on grass blades which will cause browning of whole leaf blade when spots are numerous.	See the Ala. Pest Management Handbook.
	Pythium Blight	Patches of turf become water-soaked and brown.	See the Ala. Pest Management Handbook.
	Rhizoctonia Blight	Foliage blight.	See the Ala. Pest Management Handbook.
Bermuda	<i>Bipolaris</i> and <i>Helminthosporium</i> Leaf Spot	Small, narrow (1 mm x 2-3 mm) brown spots on grass blades which will cause browning of whole leaf blade when spots are numerous.	See the Ala. Pest Handbook.
	Dollar Spot (<i>Sclerotinia</i>)	Spot-areas become blighted. Bleached leaf spots with dark borders are usually evident. Sometimes tiny black, flat sclerotia are present at the base of leaves.	See the Ala. Pest Management Handbook.
	Ring Nematode (<i>Criconemoides</i>)	Patches or areas of turf become yellowed.	See the Ala. Pest Management Handbook.
	Rust (<i>Puccinia</i>)	Orange, powdery dusting on leaves; affected areas develop into brown blotches.	See ANR-621 and the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Bermuda, Coastal	Helminthosporium Leaf Spot	Small, narrow (1 mm x 2-3 mm) brown spots on grass blades which will cause browning of whole leaf blade when spots are numerous.	Frequent cutting; maintain good fertility, especially with potassium levels.
Blackberry	Coniothyrium Cane Blight Septoria Leaf Spot	Reddish brown sunken lesions. Circular or almost circular cream colored spots with red borders.	Sanitation. Sanitation. See the Ala. Pest Management Handbook.
Boxwood	Volutella Blight	Brown stem cankers and leaf blight; orange wet spore masses.	Sanitation; Cleary's 3336; remove stress.
Cactus, Christmas	Fusarium Crown Rot	Lower trunk becomes decayed with brown dried tissues.	Sanitation. Do not save soil.
Calendula	Rust (<i>Coleosporium</i>)	Yellow-orange brown spots (0.3-0.8 cm diam.) with a yellow halo of 1-2 mm wide.	Removal of calendula from close proximity to black pine and Scots pine (alternate hosts) may help.
Cedar	Armillaria Root Rot	Rapid or slow dieback; thin white mycelial mat under bark at soil line; thin black threads may be present under bark.	Sanitation.
Centipede	Brown Patch (<i>Rhizoctonia</i>) Take-All Patch (<i>Gaeumannomyces</i>)	Browning patches in lawn; brown, irregular leaf spots. Areas or patches of turf become thinned as individual plants yellow and die.	Sanitation; See Ala. Pest Management Handbook. See the Ala. Pest Management Handbook.
Chrysanthemum	Alternaria Blight	Dark brown, irregular spots on foliage.	Sanitation; See Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Fusarium Crown Rot	Lower stem becomes reddish brown, dried and dead; lesion may be one-sided on stem or may extend around entire stem.	Sanitation; See Ala. Pest Management Handbook under Fusarium wilt.
	Stem Blight, <i>Pseudomonas syringae</i> and <i>Erwinia carotavora</i> .	Black, wet rotting of stem.	–
Coleus	Anthrachnose (<i>Colletotrichum</i>)	Circular-irregular brown lesions on foliage.	Sanitation; Cleary's 3336.
Collards	Alternaria Leaf Spot	Irregular, medium-brown spots (3 x 6 mm) on foliage.	Sanitation; rotation.
	Black Rot (<i>Xanthomonas</i>)	Black V-shaped lesions on leaf edges; internal, black rot of lower stem.	See AL Pest Management Handbook.
	Cercospora Leaf Spot	Irregular, light brown spots (3-10 mm diam.) on foliage.	Sanitation; rotation.
Crape Myrtle	Cercospora Leaf Spot	Brown angular leaf spots of variable size.	Sanitation and protective sprays of Cleary's 3336.
Cucumber	Downy Mildew (<i>Pseudoperonospora</i>)	Irregular yellow spots with indefinite margins on upper leaf surfaces. When conditions are humid, a gray fungal webbing may be seen on lower leaf surfaces (under yellow spots) with a hand lens.	--
Cypress, Leyland	Cercospora (<i>Asperisporium</i> or <i>Cercosporidium sequoiae</i>) Lower Limb/ Needle Blight.	Lower limbs browned in spots with abundant (microscopic) sporulation of <i>C. sequoiae</i> .	Sanitation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Seiridium Canker	Sunken lesion on stem/branches.	Sanitation.
Dianthus	Pythium Crown Rot	Lower stem becomes dark, and water-soaked.	See the Ala. Pest Management Handbook.
	Rhizoctonia Crown Rot	Lower stems become brown and dry rotted.	Sanitation. See the Ala. Pest Management Handbook.
Dogwood	Cercospora Leaf Spot	Small (3-5 mm), brown, irregular spots scattered over leaf surfaces.	Sanitation.
Elm	Powdery Mildew (<i>Phyllactinia</i> or <i>Uncinula</i>)	White, powdery dusting on leaves.	Sanitation of leaves in the fall.
Euonymus	Crown Gall (<i>Agrobacterium tumefaciens</i>)	Woody irregular gall that encircles lower stem area.	Sanitation; crop rotation.
Fatsia	Phytophthora and Pythium Root Rot	Roots become brown and water-soaked; the outer cortex will slip easily off the root central cylinder.	Sanitation; remove wet conditions.
Fescue	Helminthosporium Leaf Spot	Small, brown elongated spots (1 or 2 x 3 or 4 mm).	See the Ala. Pest Management Handbook.
Fern, Boston	Pythium Root Rot	Outer root cortex easily slips from inner core; plants yellow and dieback.	Sanitation. See Ala. Pest Management Handbook.
Fig	Anthracnose (<i>Colletotrichum</i>)	Circular-angular brown leaf spots.	Sanitation.
	Cercospora Leaf Spot	Brown angular leaf spots of variable size.	Sanitation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Grape	Phomopsis Leaf Spot	Light green or yellow circular-irregular spots with dark centers; shot holes.	Sanitation; captan or maneb product may be used for protective control. See AL Pest Management Handbook.
Holly	Botryosphaeria Canker/Dieback	Sunken, cracked lesions with brown decay under bark.	Sanitation.
	Oedema	Small (1-2 mm), raised, corky, light-medium brown spots on lower leaf surfaces.	Reduce watering during cloudy weather; improve soil drainage.
	Phyllosticta Leaf Spot	Small (2-4 mm diam.) irregular or circular brown leaf spot.	Sanitation; See Ala. Pest Management Handbook.
Hollyhock	Pythium Root Rot	See comments for Dianthus.	Sanitation. Improve soil drainage.
	Rhizoctonia Root Rot	See comments for Dianthus.	Sanitation; Cleary's 3336 protective drenches.
Hosta	Root-Knot Nematode (<i>Meloidogyne</i>)	Plants grow poorly. Root galls evident.	Solarization of the area before replanting.
Hydrangea	Cercospora Leaf Spot	Brown angular leaf spots of variable size.	Sanitation. See the Ala. Pest Management Handbook.
	Alternaria Leaf Spot	Brown oval leaf spots.	Sanitation.
Impatiens	Pythium Crown Rot	Lower trunk becomes brown and soft-decayed.	Sanitation; correct wet soil problem; see Ala. Pest Management Handbook.
Ivy, English	Anthracnose (<i>Colletotrichum</i>)	Irregular brown leaf spots (3-10 mm diam.) and dark brown elliptical lesions on stems.	Sanitation; See Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phytophthora Stem, Root, and Leaf Rot	Brown, water-soaked dying stems, roots, leaf area.	Sanitation. See the Ala. Pest Management Handbook.
Juniper	Pestalotia Blight	Sections of foliage turn brown and dead; stress related.	Sanitation; <u>remove stress condition</u> .
	Phomopsis Tip Blight	Tip ends of branches turn brown. Blight moves from twig tips into inner foliage. Lower foliage may be affected first; seen more in nurseries than landscapes.	Sanitation; Cleary's 3336 protective sprays. See the Ala. Pest Management Handbook.
	Phytophthora Root Rot	Feeder roots become brown and wet rotted. They eventually dry out.	Sanitation. Solarization before replant may help. Improve water drainage.
	Seiridium Canker	Sunken, brown lesion on branches.	Pruning 3-4 inches beyond the edge of canker; after pruning, protective Cleary's sprays may help.
Kiwi	Alternaria Leaf Spot	Brown, irregular, small-large (2-5 mm spots).	Sanitation.
Loquat	Anthracoze (<i>Colletotrichum</i>)	Brown irregular-circular spots on leaves and stems; some large blotch areas along veins.	Removal of fallen leaves; pruning of disease stem areas; Cleary's protective sprays.
Maple	Anthracoze (<i>Colletotrichum</i>)	Irregular, spreading, brown lesions on leaves and small twigs. Leaf lesions may occur and develop along veins.	Collect and remove all fallen leaves. Protective fungicides used only when trees are small.
	Cristulariella Zonate Leaf Spot	Brown-gray zonate circular-oval leaf spots.	Sanitation in the fall.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phyllosticta Leaf Spot	Circular brown spots with dark brown or purple margins.	Sanitation in the fall.
Marigold	Alternaria Leaf Spot	Angular or round black spots.	Sanitation.
Monkeygrass	Anthracnose (<i>Colletotrichum</i>)	Brown blotches on leaves; sometimes blotches begin at leaf tips; black fruiting bodies may be visible as tiny black dots in lesions.	Sanitation; Cleary's 3336 or Domain protective sprays.
Muscadine	Anthracnose (<i>Colletotrichum</i>)	Circular gray-white spots with black margins; shot holes.	See AL Pest Management Handbook.
Mustard	Cercospora Leaf Spot	Light brown, irregular spots (3-10 mm) on foliage.	Sanitation; rotation.
Oak, Pin	Xylella Scorch Disease	Dieback with leaf edge scorch.	Sanitation.
Okra	Alternaria Leaf Spot	Brown, circular-oval leaf spots.	Sanitation.
Orchid, <i>Oncidium sp.</i>	Colletotrichum Leaf Spot	Brown irregular spots.	Sanitation; Cleary's 3336.
Pansy	Anthracnose (<i>Colletotrichum</i>)	Brown stem lesions (cankers) on lower stems. Also brown circular-irregular leaf spots of variable size.	Sanitation; See the Ala. Pest Management Handbook.
	Cercospora Leaf Spot	Leaf spots are black, circular areas of feathery patterned discoloration.	Sanitation.
	Myrothecium Crown Rot	Crowns brown and decaying with tiny black capped white spore masses.	Sanitation. See A. Hagan.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Pythium Crown Rot and Root Rot	Light-medium brown, water-soaked crowns and roots.	Sanitation; See Ala. Pest Management Handbook.
	Phytophthora Root Rot/Crown Rot	See description for Pythium	See Pythium.
	Thielavopsis Root Rot	Black spots (lesions) on roots.	Sanitation; Cleary's 3336 protective treatment.
Pear	Anthracnose Fruit Rot (<i>Colletotrichum</i>)	Sunken spots.	See AL Pest Management Handbook.
Pecan	Scab (<i>Cladosporium</i>)	Spots begin as olive roughened spots. Older spots are brown-black colored, again with a roughened surface.	See ANR-50 (Homeowners) or AL Pest Management Handbook.
Pepper	Early Blight (<i>Alternaria</i>)	Circular-oval brown lesions; sometimes zonate.	See AL Pest Management Handbook.
Periwinkle (<i>Vinca</i>)	Stem Canker (<i>Colletotrichum</i>); May be secondary	Sections of lower stems become brown and dead.	Sanitation; Cleary's 3336.
	Pythium Root Rot	Roots become brown, soft & rotted.	Sanitation.
	Phytophthora Aerial Blight	Sections of foliage become blighted. Stems develop brown lesions.	Sanitation.
	Phytophthora Root Rot	Roots become brown, soft and rotted.	Sanitation.
Pine, Virginia	<i>Lophodermium</i> (<i>Ploioiderma</i>) Needle Cast	Older needles turn brown and drop; very small (1-2 mm or 1/32 inch) football shaped, black fruiting bodies develop on browning needles.	Protective fungicide sprays in the fall & spring. See Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Poinsettia	Bacterial Stem Rot (<i>Erwinia</i>)	Black, water-soaked spots or lesions on stems. Lesions may girdle stems.	Sanitation; pot-level irrigation; See Ala. Pest Management Handbook.
	Fusarium Root and Lower Stem Rot	Roots and lower stems become reddish-brown, dried and dead.	Sanitation; Banrot drenches.
	<i>Pythium</i> Stem and Root Rot	Lower stems and roots become medium brown, soft, water-soaked and rotted.	See Ala. Pest Management Handbook.
	<i>Rhizoctonia</i> Stem Rot & Root Rot	Lower stems develop dry, medium-dark brown surface lesions; roots may become brown and dried.	See Ala. Pest Management Handbook. Use Cleary's 3336 or Topsin M.
	<i>Rhizopus</i> Stem Rot	Stem sections become glassy and water-soaked; a delicate black mass of fungal threads and small black spherical structures may develop over the lesions.	Sanitation.
Poplar	Anthracnose	Brown, circular-irregular leaf spots which may follow along leaf veins.	Sanitation of fallen leaves in the fall.
Pumpkin	Fusarium Fruit Rot	Brown, sunken, soft rot with white-orange fluffy fungal growth.	Sanitation. Crop rotation away from pumpkin.
	Gummy Stem (<i>Mycosphaerella</i>)	Brown, cracked, oozing lesions on stems.	At this time of year, sanitation, rotation.
	Papaya Ringspot Virus	Mosaic on leaves and fruits; abnormal leaf development.	Sanitation. Crop rotation away from cucurbits.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Powdery Mildew (<i>Erysiphe</i>)	White, dusty coating on leaves, stems, fruit.	At this time of year, sanitation, rotation.
	Pythium Fruit Rot	Watery soft rot.	Sanitation. Avoid wet planting areas.
	Watermelon Mosaic Virus II	Mosaic pattern.	Sanitation; control aphids.
Rhododendron	Cercospora Leaf Spot	Relatively large (5-15 mm diam.) irregular, brown spots.	Sanitation; Use Cleary's 3336 or Topsin M or a WP benomyl (not Benlate).
	Phytophthora Crown Rot	Dark brown, wet decay at lower stem area.	Sanitation. See Ala. Pest Management.
	Pythium Crown Rot	Dark brown, wet decay at lower stem area.	Sanitation. See Ala. Pest Management Handbook.
Rose	Cercospora Leaf Spot	Brown angular leaf spots of variable size.	Sanitation; See the Ala. Pest Management Handbook under black spot.
	Phomopsis Canker	Brown spindle-shaped sunken lesions.	Sanitation.
Sorghum, Grain	Fusarium Head Blight	Infection of the panicle branches causes their collapse and wilt and eventual death.	--
	Gray Leaf Spot (<i>Piricularia</i>)	Small red spots on leaves become large red blotches and leaf death may result.	Sanitation; crop rotation.
Soybean	Anthracnose (<i>Colletotrichum truncatum</i>)	Irregularly shaped brown blotches on stems, pods, leaves sometimes with tiny black specks.	Use disease free seed. Deep plow crop residues.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Pod & Stem Blight (<i>Diaporthe phaseolarum</i> ; <i>Phomopsis sojae</i>)	Large areas of lower stem and petioles & pods become brown and eventually tiny black bodies develop in linear rows.	Plant disease-free seed. Crop rotation or deep plowing of residue. Consult resistance differences among cultivars.
Squash, Summer	Potato Virus Y-fruit sample (ELISA test)	Fruit was small and mosaic present. Only fruit was seen.	Sanitation. Control of aphids may help some.
	Watermelon Mosaic Virus II-fruit sample (ELISA test)	Yellow-green mosaic patterns on fruit.	Control aphids; Do not save seed (There is some evidence that seed transmission may occur in some situations.)
St. Augustine	Brown Patch (<i>Rhizoctonia</i>)	Browning patches in lawn; brown irregular leaf spots/blotches on grass blades.	See the Ala. Pest Management Handbook.
	Gray Leaf Spot (<i>Piricularia</i>)	Gray irregular spots of variable size. Whole leaf blades may be blighted.	See the Ala. Pest Management Handbook.
	Take-All Patch (<i>Gaeumannomyces</i>)	Individual grass plants become yellowed and die. Areas of turf yellow and thin out.	See ANR-823, Take-All Root Rot, A New Disease of St. Augustine.
Strawberry	Anthrachnose (<i>Colletotrichum</i>)	Fruit rot begins as tan or brown, water-soaked lesions on unripe or ripe fruit. Pink or cream-colored spore masses may cover the lesions. Fruits may dry and become shrivelled and hard. One species of <i>Colletotrichum</i> will cause both fruit rot and stolon, crown rotting, and leaf spot. Stolons develop brown-black, sunken	Sanitation. See the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		<p>lesions which cause subtended plant parts to die. Petioles develop similar lesions. Crown rotting appears as a red-brown firm rot or red-brown streaking. Plants with crown rot typically wilt and die. Leaf spots are black, (some-times gray), 1-2mm diam., and may be numerous.</p>	
	Phomopsis Leaf Blight	<p>Spots begin as red-purple circular lesions, sometimes with gray centers. Later, three zones may develop in the spots with (1) the outer zone red, purple, or yellow; (2) the middle zone light brown in color; (3) and the central zone dark brown sometimes with black dots of fruiting bodies. Older spots along veins develop into V-shaped lesions. Usually this disease is of minor importance with older leaves becoming damaged during late summer. Occasion-ally fruit rot may occur. Ripening or ripened fruit develop round, pink, water-soaked lesions that become brown and crusty with black dots (fruiting bodies).</p>	Sanitation. See the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phytophthora & Pythium Rot/Root Rot	Crown A reddish-brown decayed area in crowns develops. The roots typically develop a dark surface discoloration while the inner tissues are red-discolored. Plants may be stunted, depending upon the severity of the crown, root damage. Wilting and dieback is a common symptom.	--
Sweet Potato	Black Rot (<i>Ceratocystis</i>)	Surface lesions are firm, black, dry. When wet, lesions appear greenish- black.	Avoid wounds. Follow proper curing procedures before storage.
	Fusarium Surface Rot	Surface lesions are initially circular, brown (light-dark), firm and dry. Lesions usually stop at the vascular ring. In storage, affected roots become shrunken & hard. (This is distinguished from Fusarium root rot as root rot involves extensive areas of the internal tissues.)	Avoid wounding roots at harvest time.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Scurf (<i>Monilochaetes</i>)	At harvest, brown or black spots are noticed on the potato skin. Surface spots may merge so that the whole root surface is involved. Lesions do not extend below the outermost periderm layer. Scurfy sweet potatoes placed into storage may be okay or cracks may develop around the lesions. These cracks cause the root to dry-out and shrink. Secondary decay organisms may become established in cracked areas.	Rotate area away from sweet potatoes for 3-4 years.
Tomato	Anthracnose Ripe Rot (<i>Colletotrichum</i>)	Symptoms appear on ripe fruit as small, slightly depressed, circular spots. Lesions of normal coloration may enlarge to 12 mm diam., become more sunken with a concentric ring pattern. Tissue below the surface lesion is light colored and granular. Lesion surfaces eventually develop brown centers, sometimes with tiny black dots (sclerotia), and masses of orange spores pustules. (Occasionally leaf/stem spot [small circular spots with yellow halos] and a brown lesion root rot may occur.)	Sanitation. See the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Bacterial Spot (<i>Xanthomonas</i>)	Small (1-4 mm diam.), angular, black water-soaked spots or dried spots with water-soaked edges on leaves. On fruit, small (2-4mm) scabby, brown spots develop.	Sanitation. See the Ala. Pest Management Handbook.
Turnip	Anthrachnose (<i>Colletotrichum</i>)	Irregular, medium-brown spots (3-10 mm or larger) on leaves. Sometimes spots develop along veins.	Sanitation. Rotation; See comments in the Ala. Pest Management Handbook.
	Bacterial Leaf Spot	Very small (1 mm) dark, water-soaked angular-circular spots.	Sanitation.
	Cercospora Leaf Spot	White, tan, or light brown irregular spots, 2-10 mm diam.	See Ala. Pest Management Handbook; sanitation; rotation; copper sprays.
	Black Rot (<i>Xanthomonas</i>)	Leaf edges develop V-shaped black spots; lower stem shows blackening of vascular system when stem is cut transversely.	Sanitation; rotate out of crucifers 4-5 years.
Willow	Cercospora Leaf Spot	Small circular, brown spots.	Sanitation of leaves in the fall. See the Ala. Pest Management Handbook.
	Rust (<i>Melampsora</i>)	Rust-colored powdery spots that later become brown-colored.	Sanitation of leaves in the fall.
Zoysia	Brown Patch (<i>Rhizoctonia</i>)	See Centipede Brown Patch.	--
	Dollar Spot (<i>Sclerotinia homeocarpa</i>)	Small whitish spots in lawn. Individual leaves show bleached-out lesions with dark borders.	See ANR-493 or the Ala. Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Rust (<i>Puccinia zoysiae</i>)	Red-brown spore pustules scattered over leaf surfaces.	See AL Pest Management Handbook.
	Take-All Patch (<i>Gaeumannomyces</i>)	Black lesions on roots. Plants yellow and die.	See ANR-823, Take-All on St. Augustine Grass.

Lab Notes

Soil samples for nematode analysis should be submitted soon before freezing temperatures occur. Clients in the northern sections of the state, especially, should not delay in collecting these samples.