

TIMELY INFORMATION

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DECEMBER PLANT DISEASES FROM THE AUBURN PLANT DIAGNOSTIC LAB

DECEMBER PLANT DISEASES FROM THE BIRMINGHAM PLANT DIAGNOSTIC LAB

DECEMBER INSECT REPORT FROM THE AUBURN PLANT DIAGNOSTIC LAB

DISEASE POSSIBILITIES FOR JANUARY

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Auburn Plant Disease Report-December (J. Mullen)

December was a short month at work. We received 6 plant samples. The only disease samples received were two boxwood samples with Phytophthora root decay and Macrophoma foliage blight. Also, an out-of-state (Florida) Bermuda sample was received with large patch (*Rhizoctonia solani*).

See ANR-222 ('Growing Boxwoods in Alabama') for a description of the two common boxwood diseases. These diseases are both dependent on the existence of previously damaging events. Phytophthora foliage or root infection and development require the existence of a prolonged wet situation. Phytophthora root rot depends on a previous prolonged time of wet soil. Landscape occurrence of Phytophthora root rot often develops in areas of heavy clay soils and poor drainage. There are several Phytophthora species that cause root rot on a variety of plants. We have not as yet identified the Phytophthora species on this boxwood sample, but

Phytophthora nicotiana has been identified on other boxwood root decay samples in Alabama received this year and in the past. Macrophoma foliage blight usually develops on boxwoods previously stressed by a root situation. Root environment problems or root disease may have been involved.

Citrus greening (caused by the bacterium *Candidatus Liberobacter* spp.) is a disease of citrus that is of concern in the citrus-growing areas of the southern sections of Alabama. This is a difficult disease to diagnose. PCR (a DNA detection diagnostic method) is currently the only reliable method available for diagnosis of the disease. The disease (caused by *C. Liberobacter asiaticus*) is present in areas of Florida, but it has not been identified in Alabama as yet. The disease is transmitted by a psyllid (*Diaphorina citri*), which occurs in Florida and also it was recently found in AL, LA, TX, and CA. Prior to November, citrus greening was considered by USDA-APHIS to be a very high risk disease and called a ‘Select Agent List’ pathogen. This fall, citrus greening was also identified in Louisiana. In mid-November, USDA-APHIS removed citrus greening from the ‘Select List’. The disease is still considered a very high risk, very damaging disease of citrus. It is quarantined by USDA-APHIS in Florida. The Alabama State Department of Agriculture & Industries has a quarantine against the transport of citrus plants from nurseries in Florida into Alabama. Debra and I attended a USDA-APHIS sponsored citrus greening PCR diagnostic training in December. Due to the quarantined status of the disease, diagnostic tests for citrus greening may be conducted only by APHIS approved labs. Any diagnostic positive results obtained by an ‘approved’ university diagnostic lab must be confirmed by a USDA lab.

Table 1. December 2008 Plant Diseases Seen In The Auburn Plant Diagnostic Lab.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Bermuda	Large Patch (<i>Rhizoctonia solani</i>)	Manatee County, FL
Boxwood	Macrophoma Foliage Blight	Montgomery
	Phytophthora Root Rot	Lee

Birmingham Plant Disease Report-December (J. Jacobi)

The lab received a total of 8 samples during the month of December. Over half the samples showed abiotic damage related to dry conditions in summer and fall. We didn’t list abiotic problems in the table.

Rhizoctonia, the fungus that causes large patch of warm season grasses, was still active in early to mid-December during the relatively mild, wet weather (temperatures and rainfall were both way above normal for the month). At this time of year, the question is often whether it’s best to apply a fungicide treatment now or wait until spring. In most cases, I don’t recommend treatment at this time of year. Instead wait until early spring (late March) to apply one of the

recommended fungicides as a curative treatment as the turfgrass is emerging from dormancy. Curative treatments of large patch should halt the expansion of the patches and may speed the recovery of the damaged turfgrass. But, don't expect a miracle recovery after treatment. For zoysiagrass, it will usually take 6-8 weeks after treatment for the damaged turfgrass to fully recover. Bermudagrass will often recover in 3-4 weeks even without fungicide treatment. The best time to treat for large patch is preventatively in fall (September-early October), with additional treatments in spring, if needed. The fungicides that have produced the best results are Bayleton, Eagle, Heritage, and Prostar.

Table 2. 2008 December Problems Seen in the Birmingham Plant Diagnostic Lab.

<u>Plant</u>	<u>Problems</u>	<u>County</u>
Boxwood, Common	Volutella Blight	Jefferson
Pansy	Botrytis Blight	Jefferson
	Chemical Injury	Jefferson
St. Augustine- grass	Large Patch (<i>Rhizoctonia</i>)	Jefferson

December Insect Report (C. Ray)

County	Host	Category	Identification	Scientific Name
Morgan		Miscellaneous	Box Elder Bug	<i>Boisea trivittatus</i>
Mobile	Home	Household- Miscellaneous	Yellow Jacket	<i>Vespula</i> sp.
Jefferson	Toilet	Household- Miscellaneous	Drain Fly Larva	Psychodidae
Calhoun	Home	Household- Miscellaneous	Pomace Flies	Drosophilidae

Disease Possibilities For January

In January, we may see rust diseases and barley yellow dwarf virus on oats, wheat and related small grains. In the southern most sections of the state, fungal and bacterial diseases of vegetables (especially crucifers) and brown patch on turf grasses may be problems. Pythium blight/root rot may occur on cool-season grasses; this is mostly a problem on golf course areas. Black root rot (*Thielaviopsis basicola*) may occur on pansies and container hollies. Botrytis is a

common problem on greenhouse crops at this time of year. Downy mildew may occur on a variety of plants. It is often seen on crucifers such as broccoli and roses when conditions are damp and temperatures are in the 60-70°F range. Last year in January, we saw two cases of greenhouse tomato deformity where ethylene leak gas damage from gas heaters was suspected.

The list below includes some common disease problems received in the lab in January of the past few years. Comments on control practices are brief. Refer to appropriate fact sheets, timely informations, and 2008 Alabama Pest Management Handbook.

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

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Alfalfa	Sclerotinia Blight	Plants unthrifty, yellow and die. Shiny, black, irregular resting structures (1-2 mm diam) sometimes present on roots and lower stems at the soil line.	Crop rotation.
African Violet	Pythium Root Rot	Roots become brown and wet-rotted.	Sanitation and reduce watering practices.
Azalea	Anthracnose (<i>Colletotrichum</i>)	Circular, oval, or slightly irregularly shaped brown spots.	Sanitation; See the AL Pest Management Handbook.
	Cercospora Leaf Spot	Medium brown circular-irregular leaf spots (about ¼ inch diam.)	See the AL Pest Management Handbook; Sanitation.
	Phomopsis Dieback	Sunken decay (usually elliptical) lesions (cankers) on branches; dieback.	Pruning. See the AL Pest Management Handbook.
Basil	Botrytis Cutting Rot	Cutting ends become brown and decayed.	Sanitation; increase air circulation and temperature.
Bentgrass	Brown Patch (<i>Rhizoctonia</i>)	Foliage blight in circles or areas of a few inches to a few feet diameter.	See the AL Pest Management Handbook or ANR-342.
	Pythium Blight (Root Rot)	Irregular areas become yellowed and eventually grass dies. The disease may develop rapidly if wet conditions with mild temperatures occur.	See the AL Pest Management Handbook or ANR-594.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Rhizoctonia Stem Rot	Stems become brown decayed, and shriveled.	Sanitation.
Bermuda	Brown Patch (<i>Rhizoctonia</i>)	Foliage blight in circles or areas of a few inches to a few feet diameter.	See the AL Pest Management Handbook or ANR-342.
Boxwood	Macrophoma Blight	Leave become a yellow, straw color with black pin-head size raised bodies on leaf surfaces. Associated with previously weakened plants.	Correct other problems. See the AL Pest Management Handbook.
	Phytophthora Root Decay	Plants were stunted; roots were wet and dry rotted and brown discolored.	See the AL Pest Management Handbook.
	Volutella Blight	Cankers and dieback present. Orange masses of spores often present. Often stress associated.	See the AL Pest Management Handbook.
Broccoli	Downy Mildew	Yellow irregular spots on leaves.	Sanitation. See the AL Pest Management Handbook.
Cabbage	<i>Alternaria brassicicola</i> Leaf Spot	Gray circular, oval or irregular leaf spots.	See the AL Pest Management Handbook.
	Botrytis Damping-Off	Seedlings collapse as a result of a soil-line decay.	See Ed Sikora.
Camellia	Anthrachnose (<i>Colletotrichum</i>)	Circular-irregular brown-gray spots on leaves.	Sanitation. Cleary's 3336.
Camellia, Sasanqua	Edema	Pale yellow leaf spots on upper leaf surfaces; corky, light brown scabby spots on lower leaf surfaces.	Reduce soil water content; especially a problem during cloudy weather.
Centipede	Brown Patch (<i>Rhizoctonia</i>)	Foliage blight in circles or areas of a few inches to a few feet diameter.	See the AL Pest Management Handbook or ANR-342.
	Slime Mold (<i>Physarum</i>)	Thin, often ruffled, sheets of jello-like	No control needed; physical removal.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		consistently on grass blades and soil; spores cover the grass/soil with a powdery, dusty coating.	
Cherry Laurel, Carolina	Botryosphaeria Canker	Large or small, elongated, sunken lesions on branches or trunk.	Pruning or tree removal when the trunk is involved.
	Cercospora Leaf Spot	Irregular-circular brown leaf spots.	Sanitation; Cleary's 3336 or Halt protective sprays.
Coleus	Botrytis Blight	Leaf spots and blotches that are gray-brown.	Sanitation; increase air circulation; increase temperature.
	Pythium Root Rot	Foliage wilt, yellowing, collapse; roots become light brown, water-soaked.	Sanitation; reduce water levels in soil.
Collards	Black Rot (<i>Xanthomonas</i>)	Black V-shaped lesions may develop at leaf edges. Veins leading away from lesions may become dark. Eventually the central core of the stem becomes black and decayed.	Sanitation; rotate away from crucifers for 2 years.
	Oedema	Small, buff, brown colored, corky, slightly raised dots form on the lower leaf surfaces. Corresponding spots on upper leaf surfaces become yellowed.	Reduce irrigation practices on cloudy days.
	Pythium Root Rot	Roots become soft, brown and rotted. The outer root tissues will easily pull away from the central stele or core.	Plant the crop where good drainage exists. Crop rotation.
Cryptomeria, Japanese	Phyllosticta Needle Blight	Brown needle spots develop.	Sanitation of fallen needles; protective spray of Cleary's 3336 or Halt may help.
Cypress, Leyland	Botryosphaeria Canker	Large or small,	Pruning or tree removal

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		elongated, sunken lesions on branches or trunk.	when the trunk is involved.
Euonymus, Winged	Phytophthora Root Rot and Poor Soil Drainage	Dieback; yellowing of lower foliage; root decay.	Improve soil drainage; reduce watering schedule if appropriate; see AL Pest Management Handbook.
Fern	Botrytis Blight	Brown discoloration of fronds and a gray fungal growth when conditions are cool and damp.	Daconil is labeled for use on fern and it will control Botrytis.
	Rhizoctonia Aerial Blight	Brown irregular lesions on fronds.	Sanitation. See the AL Pest Management Handbook.
Fescue	Bipolaris Leaf Spot	Small, brown, or reddish-brown elongated spots (1-6 mm long) on leaf blades.	--
	Pythium Crown & Root Rot	See Bentgrass.	See the AL Pest Management Handbook or ANR-594.
	Rust (<i>Puccinia</i>)	Small, red-orange, powdery spots and blotches form on leaf blades. Leaves turn yellow and brown.	--
Fescue, Tall	Net Blotch (<i>Drechslera</i>)	Small, often elongated, medium-brown or reddish-brown spots (1-2 mm long). Usually spots are abundantly scattered over leaf blades.	See AL Pest Management Handbook.
	Pythium Blight	See Bentgrass.	See the AL Pest Management Handbook or ANR-594.
Foliage Plants	Bacterial Leaf Spot	Small, angular, black, water-soaked spots (1-3 or more mm diameter) on foliage. As spots age, centers become dry, papery and may fall apart. Some centers may become light in	Sanitation. See AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		color. Spots may be surrounded by yellow "halo".	
Foxglove	Anthrachnose (<i>Colletotrichum</i>)	Circular or irregularly shaped brown leaf spots. When humid and seasonably warm, orange spore masses may be in concentric rings.	Sanitation. Protective sprays of a thiophanate-methyl fungicide labeled for ornamentals will help in the spring.
Fuchsia	Botrytis Blight	Brown-gray spots/blight.	Sanitation. Cleary's 3336.
Gardenia	Pestalotia Leaf Spot	Brown or silvery, irregularly shaped spots (associated with stress).	Improve growing conditions.
Geranium	Bacterial Leaf Spot (<i>Pseudomonas</i>)	See Foliage Plant Description.	Sanitation. See AL Pest Management Handbook.
	Botrytis Blossom Blight	Flowers or young leaves/stems may become spotted and blighted.	Sanitation. Raise the temperature if possible. Reduce the humidity. Apply labeled protective fungicide treatment such as Heritage, Daconil, or Cleary's. See the AL Pest Management Handbook.
	Fusarium Stem & Root Rot	Lower stem and roots become black colored with a dry decay.	Sanitation. Cleary's protective drenches/sprays will help.
	Oedema	Small (1/8 inch diameter or less), light brown, corky slightly raised spots scattered over lower leaf surfaces. Corresponding areas on upper leaf surfaces are yellowed spots.	Reduce watering on cool, cloudy days.
Gerbera Daisy	Pythium Stem and Root Rot	Black cankers (rotting) of lower stem, crown and roots.	Sanitation. See the AL Pest Management Handbook.
	Bacterial Leaf Spot (<i>Pseudomonas</i>)	See Foliage Plants.	See Foliage Plants.
Greenhouse Crops	Botrytis Blight	Gray-brown spots and blotches on the foliage.	See AL Pest Management Handbook;

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		During moist, cool conditions, this fungus will produce a delicate gray web of fungal growth.	Sanitation.
	Downy Mildew (<i>Peronospora</i>)	Faded, yellow blotches on upper leaf surfaces. Lower leaf surfaces showed gray-purple, powdery masses of fungal growth.	Reduce humidity; raise temperatures; refer to the AL Pest Management Handbook.
Hawthorn, Indian	Entomosporium Leaf Spot	Reddish, oval or irregularly shaped spots.	Sanitation. See the AL Pest Management Handbook.
Hellebore	Pythium Root Rot	Roots become light brown, water-soaked and rotted; foliage wilt, dieback.	Sanitation; reduce watering schedules; Subdue, see label directions.
Holly, Chinese	Alternaria Leaf Spot	Dark brown, oval or irregular leaf spots.	Sanitation of spotted leaves; Daconil or related products may be used.
Holly, Helli	Thielaviopsis Root Rot	Black spots and areas on roots and root tips; foliage yellows, wilts, and/or shows dieback.	Sanitation; Cleary's 3336. Domain drenches may help as a preventative measure. See the AL Pest Management Handbook.
Holly, 'Nellie R. Stevens'	Botryosphaeria Canker	Sunken, dry rotted lesions on branch or trunk; lesion margins are often cracked.	Sanitation--pruning.
	Phytophthora Root Rot	Roots become brown and wet-rotted. Roots pull apart easily; foliage wilt; dieback.	Remove damaged plants; reduce water levels; see the AL Pest Management Handbook.
Hydrangea	Powdery Mildew	White powdery dusting on leaves and shoots; dieback; blight.	See the AL Pest Management Handbook.
Indian Hawthorn	Colletotrichum Leaf Spot	Brown circular leaf spots.	Sanitation of fallen leaves. Protective sprays of Cleary's 3336 or Halt.
Irish Potato	Fusarium Rot	Dark brown, soft rot of	Sanitation. Maintain

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		inner tuber tissue. The rot is not watery.	cool dry storage conditions.
	Rhizopus Rot	A soft, watery, colorless rot develops.	Sanitation. Keep storage conditions cool and dry.
	Scab (<i>Streptomyces</i>)	Rough, slight sunken lesions on tubers, usually about 5 mm but size may vary greatly.	See the AL Vegetable Control Guide.
	Scurf, Black (<i>Rhizoctonia</i>)	Black, hard, slightly raised spots/irregular lesions of variable size but usually about 5 mm diameter.	See the AL Vegetable Control Guide under Rhizoctonia.
	Soft Rot (<i>Erwinia</i>)	Soft, brown or cream-colored watery areas with a foul smell.	Sanitation. Avoid wounding. Keep cool.
Ivy, Swedish	Bacterial Leaf Spot	See Foliage Plants.	See Foliage Plants.
Juniper, Shore	Phytophthora Root Rot	Roots become brown and wet-rotted. Roots pull apart easily; foliage wilt; dieback.	Remove damaged plants; reduce water levels; see the AL Pest Management Handbook.
Lantana	Bacterial Leaf Spot	Generally spots are dark, wet-looking during early stages, and angular.	Strict sanitation. Water at pot or soil level.
Lavender	Botrytis Blight	Gray-brown leaf spots & blotches.	Sanitation of fallen leaves; increase air circulation and temperature.
Leucothoe	Colletotrichum Leaf Spot	Reddish-brown irregular spots about ¼ inch diameter.	Sanitation. Cleary's 3336 may help.
	Pestalotia Leaf Spot, usually secondary to cold damage.	Large, light gray, irregular spots and blotches.	Sanitation.
Leyland Cypress	Cercospora Blight	Dead foliage first seen on inner, lower foliage.	See the AL Pest Management Handbook. Also, recent GA research indicates Daconil is effective.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Seiridium Canker	Sunken, dry rot decay lesions on branches or trunk; dieback.	Pruning; See the AL Pest Management Handbook or ANR-1160 for further comments.
Magnolia, Southern	Algal Leaf Spot (<i>Cephaleuros</i>)	Circular reddish-green-gray, slightly raised leaf spots with wavy edges.	Sanitation. See the AL Pest Management Handbook.
Mondograss, Dwarf	Anthrachnose (<i>Colletotrichum</i>)	Light brown, circular-irregular-tip scorch spots. When humid and warm, orange-cream zonate spore masses seen.	Sanitation of foliage. Protective sprays of thiophanate-methyl labeled on ornamentals will help.
Nandina, Dwarf	Colletotrichum Leaf Spot	Medium brown circular to irregular spots (about ¼ inch diameter).	Sanitation; Cleary's 3336 or Domain may help. (Test on a few plant first.)
Oats	Blotch (<i>Drechslera avenae</i>)	Small brown flecks that become large longitudinal strips and blotches of dead tissue. Outer edges of spots fade into irregular areas of brown, red-brown or yellow.	See AL Pest Management Handbook.
	Crown Rust (<i>Puccinia coronata</i>)	Bright orange-yellow, round or oblong pustules develop mostly on leaves but sheaths, stems and panicles may also have pustules. Plant yellowing and lodging may result from infection.	Plant resistant cultivars.
Oxalis	Rust (<i>Puccinia</i> sp.)	Rusty orange powdery spots develop on leaves; eventually leaves wither and die.	Sanitation.
Pansy	Alternaria Blight	Small, brown, irregular lesions.	Sanitation. Daconil may help.
	Botrytis Blight	Gray or gray-brown circular-irregular spots/blotches on foliage.	See AL Pest Management Handbook; sanitation or ANR-596a.
	Colletotrichum Leaf Spot	Circular brown leaf spots.	Sanitation of fallen leaves; See the AL Pest

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
			Management Handbook.
	Phytophthora Crown Rot	Lower stem becomes brown and soft, wet rotted.	Sanitation. See the AL Pest Management Handbook.
	Pythium Root Rot	Plants unthrifty, wilt, yellow and die. Roots become brown and watersoaked.	See AL Pest Management Handbook; sanitation or ANR-596a.
	Rhizoctonia Foliage Blight	Spots/blight of brown color.	See AL Pest Management Handbook.
	Thielaviopsis Root Rot	Black spots and areas on roots and root tips. Plants wilt, yellow and die.	Sanitation; Cleary's 3336 or Domain drenches, as a preventative measure, may give some control. See AL Pest Management Handbook or ANR-596a.
Pear	Root Knot Nematode (<i>Meloidogyne</i>)	Pear decline. Roots develop irregular galls.	Sanitation. Crop rotation or fallow.
Photinia	Colletotrichum Leaf Spot	Brown, circular leaf spots develop.	Sanitation. See AL Pest Management Handbook recommendations for Entomosporium.
	Entomosporium Leaf Spot	Red-black circular-irregular spots on foliage; spots may coalesce; leaf fall will result.	Sanitation; protective fungicide sprays. See AL Pest Management Handbook or ANR-392.
Pittosporum	Alternaria Leaf Spot	Grey, circular-irregular leaf spots.	Sanitation. Cleary's 3336 or Halt may be applied if desired as protective treatment.
Plum	Black Knot (<i>Plowrightia morbosum</i>)	Green, elongated, irregular swellings on branches. As galls develop, they become hard and black.	Pruning; See ANR-1055 (Plant Disease Note Series).
<i>Poa trivialis</i>	Pythium Blight	Foliage becomes brown and is initially wet looking.	See the AL Pest Management Handbook. Also, you can check with Austin Hagan.
Poplar, Yellow	<i>Cylindrocladium</i>	Sunken, dry decay of	Sanitation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	<i>clavatum</i> Crown Rot	lower trunk at soil level.	
Pothos	Anthrachnose (<i>Colletotrichum</i>)	Small-large brown lesions.	Sanitation. See the AL Pest Management Handbook.
Rape	Alternaria Leaf Spot	Dark brown, oval or irregular leaf spots.	See A. Hagan.
Rose ('Knock-Out')	Phytophthora Root Rot	Foliage dieback; roots become brown and rotted initially and later dry out.	Remove damaged plants; See the AL Pest Management Handbook.
Rye	Spot Blotch (<i>Bipolaris sorokiniana</i>)	Usually on lower leaves, dark brown spots of varying shapes and sizes appear. Spots may coalesce so that large leaf areas are involved. Older lesions are olive colored when spores are present. Severely infected leaves completely die.	See AL Pest Management Handbook.
Ryegrass (Over-seeded Lawn Grass)	Pythium Blight	Roots become light brown and water-soaked. Grass blades may also become brown and water-soaked or they may yellow and decline from root rot problem.	See the AL Pest Management Handbook or ANR-594.
Ryegrass, Perennial	Pythium Blight	Roots become light brown and water-soaked. Grass blades may also become brown and water-soaked or they may yellow and decline from root rot problem.	See the AL Pest Management under turf.
Snapdragon	Pythium Root Rot	Dieback; roots appear light brown, rotted, and water-soaked.	Sanitation; reduce soil water content; See the AL Pest Management Handbook.
Southern Magnolia	Algal Leaf Spot (<i>Cephaleuros</i>)	Green or reddish circular spots, usually 3-4 mm diameter, slightly raised.	See the AL Pest Management Handbook.
Spinach	Pythium Root Rot	Dieback; roots appear	Sanitation; reduce soil

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		light brown, rotted, and water-soaked.	water content; See the AL Pest Management Handbook.
St. Augustine	Brown Patch (<i>Rhizoctonia</i>)	Brown blotches develop on grass blades; circular to irregular patches turn brown.	See the AL Pest Management Handbook and Circular ANR-324.
	Gray Leaf Spot (<i>Piricularia</i>)	Large, brown-gray irregular leaf spots.	See the AL Pest Management Handbook.
	Take-All Patch (<i>Gaeumannomyces graminis</i> pv. <i>graminis</i>)	Patchy areas show scattered plants turning yellow and dying; roots/stolons show black cankers.	See ANR-823.
Strawberry	Phomopsis Blight/Leaf Spot	Brown, V-shaped areas develop at edges of leaves. The blotches may involve 1/3 or more of the leaf area.	See the AL Pest Management Handbook or AL Fruit Control Recommendations.
	<i>Phytophthora cactorum</i> Crown and Root Rot	Crowns and roots develop brown, decay areas.	Sanitation; reduce water levels in soil; See the AL Pest Management Handbook.
Sweet Potato	Fusarium Root Rot	Dry, dark brown rotted patches on the surface of the root. Rot area usually does not extend beyond vascular tissues.	Sanitation and careful handling during harvest.
	Scurf (<i>Monilochaetes</i>)	Dark brown to black spots/areas develop on the surface of the roots. Surface cracking may develop.	Sanitation, rotation for 3-4 years, fungicide protective dips (see Vegetable Control Recommendations).
Thyme	Rhizoctonia Stem Rot	Stems become brown, decayed, and shriveled.	Sanitation.
Tomato	Anthrachnose Fruit Rot (<i>Colletotrichum gloeosporiodes</i>)	Round or oval, colorless, sunken water-soaked spots.	Sanitation. See the AL Pest Management Handbook.
	Bacterial Stem Rot (<i>Pectobacterium carotovora</i> pv. <i>carotovora</i> ; formerly <i>Erwinia carotovora</i>)	A soft, black, wet rot of stem.	Sanitation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Early Blight (<i>Alternaria solani</i>)	Oval, often zonate, cream-colored spots on leaves and stems.	Sanitation. See the Alabama Pest Management Handbook.
	Fusarium Wilt	Plants show yellowing and wilt in the lower foliage. Gradually the yellowing/wilt moves upward. The vascular tissue in lower stem is brown streaked.	Sanitation by plant removal; crop rotation for 10-16 years.
	Target Spot (<i>Corynespora cassicola</i>)	Oval, target-patterned light brown spots on leaves and stems. May be confused with early blight. See page 3.	Sanitation. Check with Ed Sikora.
Turnip	Cercospora Leaf Spot	Light brown or cream-colored irregular spots on foliage.	See the AL Vegetable Control Recommendations.
Vinca	Botrytis Leaf Spot	Gray-brown blotches on foliage.	Increase the temperatures to 70°F or above. Decrease humidity. Apply protective fungicide treatments.
	Pythium Root Rot	Roots become brown, water-soaked.	Sanitation. See the Alabama Pest Management Handbook.
	Thielaviopsis Root Rot	Black spots and areas on roots and root tips. Plants wilt, yellow, and die.	Sanitation; Cleary's 3336 or Domain drenches may help.
Wax Myrtle	Botryosphaeria Canker	Sunken, cracked lesions on trunks and branches develop.	Sanitation. Maintain a vigorous plant.
Wheat	Bipolaris Leaf Spot	Tan flecks first appear on both sides of lower leaves. (Later, younger leaves may be infected and spotted). Flecks gradually may become much larger and elongated (up to 12 mm). These spots are generally tan with brown centers and yellow borders. Lesions	Generally no control needed.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		may coalesce.	
	Powdery Mildew (<i>Erysiphe</i>)	Gray-white or buff-colored powdery blotches on leaf blades. Distortion and yellowing of new growth.	See the Small Grains Control Recommendations.
	Rust - Leaf (<i>Puccinia recondita</i>)	Small, dark red dots of spore masses on leaves and leaf sheaths. This disease is commonly seen in Alabama.	See the Small Grains Control Recommendations.
	Rust - Stem (<i>P. graminis</i>)	Reddish-brown dots or ovals or elongated masses of spores on stems, leaf sheaths and occasionally on leaf blades and spikes. This disease is occasionally seen in the state.	See the Small Grains Control Recommendations.
	Rust - Stripe (<i>P. striiformis</i>)	Yellow-orange, narrow stripes of spore masses on leaves and spikelets. Heads may be infected. Disease usually restricted to cool temperatures. This disease is rarely seen, but it was observed in 1990 in one location.	----
	Septoria Blotch	Yellow flecks on lower leaves become elongated lesions (1-5 x 4-15 mm) that change from yellow to red-brown with some spots developing gray centers.	Generally no control needed.
	Take-All (<i>Gaeumannomyces</i>)	Lower stem and roots at the soil line become blackened and decayed. Usually this disease does not occur until late in the wheat season, but it occasionally will develop on seedlings.	Crop rotation to oats, corn, or legumes for 1 year.
Yarrow	Pythium Root Rot	Poor growth of plant; yellowing of lower	Sanitation; reduce soil water levels; apply a

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		foliage; pale brown root decay as a soft rot.	recommended protective fungicide drench in a greenhouse/nursery situation.
Zoysia	Rhizoctonia Brown Patch	Irregular areas or patches become brown.	If temperatures are warm and grass is not dormant, protective fungicide treatments are recommended.