

TIMELY INFORMATION

Agriculture & Natural Resources

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APRIL & MAY PLANT DISEASES FROM THE AUBURN PLANT DIAGNOSTIC LAB

APRIL & MAY PLANT DISEASES FROM THE BIRMINGHAM PLANT DIAGNOSTIC LAB

APRIL & MAY INSECT REPORT FROM THE AUBURN PLANT DIAGNOSTIC LAB

DISEASE POSSIBILITIES FOR MAY & JUNE

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We had 40 samples submitted to the Auburn University Plant Diagnostic Lab in the month of April. An increase in turfgrass samples were observed this month. In spring when turf is beginning to green up, patch type diseases are often most visible. Brown patch, caused by *Rhizoctonia solani*, was the most prevalent disease of turfgrass this month. This disease is usually observed in spring when moisture is abundant and temperatures are moderate. As we move into drier conditions, brown patch will not usually continue to develop. *Rhizoctonia solani* was also observed on Asiatic jasmine, cotton and creeping thyme. *Phytophthora* spp., which can cause foliar blights and root rots, appeared to be a major problem in April. This pathogen was observed on azalea, blueberry, camellia, gardenia, and strawberry.

We received 86 samples in the Auburn University Plant Diagnostic Lab in May. The majority of samples observed were turfgrass sample. Brown patch was the major disease observed on turf, although take-all patch, caused by the fungus *Gaeumannomyces graminis*, is increasing in occurrence. Take-all patch is difficult to control. Light monthly applications of nitrogen fertilizers or the use of a slow-release fertilizer to maintain moderate turf growth throughout the growing season is recommended. Heavy nitrogen fertilization may contribute to the disease development. Fruit and vegetable samples are beginning to be submitted this month, and many of them are showing abiotic diseases or stresses including nutrient imbalances, herbicide injury and cultural damage. Several ornamental plants taken from routine surveys conducted by the Alabama State Department of Agriculture were screened for dieback and foliage blights caused by *Phytophthora* spp. and many were determined to be positive for the pathogen.

Table 1 April 2010 Plant Diseases Seen In The Auburn Plant Diagnostic Lab.

Plant	Disease	County
Amaryllis	<i>Stagonospora curtisii</i>	Henry
Apple	<i>Erwinia amylovora</i>	Elmore
Asiatic Jasmine	<i>Rhizoctonia solani</i>	Mobile
Azalea	<i>Phytophthora sp</i>	Mobile
Blueberry	<i>Phytophthora sp</i>	Washington
Camellia	<i>Phytophthora sp.</i>	*
Centipede	<i>Colletotrichum sp.</i>	Houston, Jefferson,
	<i>Rhizoctonia solani</i>	Lee; Houston
	Low Potassium	Muscogee CO., GA
	Nematode Damage	Escambia CO.; FL
	<i>Gaeumannomyces graminis</i>	Escambia CO.; FL
Collards	<i>Pieris rapae</i>	Lee
Cotton	<i>Rhizoctonia solani</i>	Henry
Creeping Thyme	<i>Rhizoctonia solani</i>	Montgomery
Gardenia	<i>Dialeurodes citri</i>	Montgomery
	<i>Phytophthora sp.</i>	Montgomery
Holly, Chinese	Cold Injury	Elmore
	Cultural	Elmore
Holly, Compacta	Low Soil pH	Mobile
	Cultivation	Mobile
Holly, Hybrid Cultivars	Winter Damage	Elmore

Leyland Cypress	<i>Carulaspis minima</i>	Montgomery
	<i>Cercospora</i> Blight	Montgomery
Maple, Red	Ambrosia beetles	Autauga
Oak	<i>Parthenolecanium corni</i>	Montgomery
Oakleaf Hydrangea	Herbicide Injury	Autauga
Oats	<i>Drechslera avenae</i>	Autauga
Rose	<i>Coniothyrium fuckelli</i>	Mobile
	Rose Rosette	Fayette
	Herbicide Injury	Fayette
Sacred Lotus	Leaf Spots	Geneva
Snapdragon	Downey Mildew	Geneva
		Russell, Elmore,
St. Augustine	<i>Gaeumannomyces graminis</i>	Mobile
	<i>Rhizoctonia solani</i>	Elmore
Strawberry	<i>Phytophthora cactorum</i>	Butler
Tea Olive	Leaf Spots	Monroe
Tomato	Herbicide Injury	Calhoun
Zoysia	<i>Rhizoctonia solani</i>	Jefferson

Table 2 May 2010 Plant Diseases Seen In The Auburn Plant Diagnostic Lab

Plant	Disease	County
Anise	<i>Phytophthora</i>	Jefferson, Shelby
Apple	Cedar Apple Rust	Lee
	Fire Blight	Hale
Azalea	Nutrient Deficiency	Madison
	Phytophthora	Mobile
	Poor Drainage	Montgomery
	Nematode Damage	Madison

Bermudagrass	Brown Patch	*
	<i>Exserohilum</i> Leaf Spot	Baldwin
	Helminthosporium Blight	Colbert
	Low soil pH	*
	Nematode Damage	*
	Rhizoctonia Brown Patch	*
Blueberry	Abiotic	*
	Anthracnose Fruit Rot	*
	Nutrient Deficiency; pH	*
	Cultural	*
Camelia	Phytophthora	*
Centipede	Anthracnose	Crenshaw Baldwin, Elmore, Jefferson, Montgomery
	Brown Patch	Shelby
	Cold Damage	Crenshaw
	Cultural	Elmore
	Curvularia blight	Mobile
	Gray Leaf Spot	Jefferson, Mobile
	Low soil pH	Montgomery
	Patch disease	Montgomery
	Southern Blight	Montgomery
	Herbicide Injury	Crenshaw Elmore, Jefferson, Mobile
	Take-All Patch	Jefferson
	Abiotic	
	<i>Rhizoctonia solani</i> Seedling	
	Corn	stem rot
Cotton	Cultural	Autauga

	Rhizoctonia Stem Rot	Geneva
Crabapple	Chemical Injury	Macon
	Fire Blight	Macon
Crape Myrtle	Rhizoctonia	Dallas
Eastern Redcedar	Seridium Canker	Montgomery
	Insect Injury	Montgomery
Gardenia	Cultural	Montgomery
	Leaf Spots	Montgomery
Gerber Daisy	Botrytis Blight	Autauga
	Grape Tube Gall Maker	
Grape	<i>(Cecidomyia vitifoliae)</i>	Calhoun
	Rose Chafer	*
Hawthorne	Fire Blight	Elmore
Holly, Burford	Cultural	Russell
Hydrangea, Oakleaf	Bacterial Leaf Spot	Jefferson
Japanese Maple	Anthracnose Leaf Spot	Calhoun
	Phomopsis Canker	Calhoun
Juniper	Phomopsis tip blight	Calhoun
Lemon	Sooty Mold (<i>Capnodium citri</i>)	
Leyland Cypress	Fungal Canker	Elmore
	Insect Injury	Crenshaw
	Soil Fertility	Crenshaw
Loblolly Pine	Brown Spot; Needle Blight	Baldwin
Magnolia	Phytophthora	*
Mountain Laurel	Phytophthora	*
Osmanthus	Phytophthora	*
Peach	Bacterial Spot	Mobile
Pear	Herbicide Injury	Crenshaw
Pepper	Chemical Injury	
Persimmon	Insect Injury	Clay
Pieris	Phytophthora	*
Plum	Insect Injury	Lowndes

Rhododendron	Phytophthora	*
Rose	Armillaria Root Rot	Crenshaw
Squash	Chemical Injury	
St. Augustinegrass	Anthracnose	Montgomery
		Mobile,
	Brown Patch	Montgomery
	Low soil pH	Elmore
		Elmore,
		Jefferson,
	Take-All Patch	Mobile
Tea Olive	Phytophthora	*
	Cultural	Montgomery
Tomato	Bacterial Leaf spot	Crenshaw
	Herbicide Injury	Monbile
	Low soil pH	Crenshaw
	Pith Necrosis (<i>Pseudomonas</i>)	Mobile
	Herbicide Injury	Lee, Mobile
	Southern Blight	Butler
Viburnum	Phytophthora	*
Virginia Pine	Armillaria Root Rot	*
White Oak	Animal Injury	Madison
Zoysia	Dollar Spot	Montgomery
	Ectotrophic root-infecting fungus	Shelby
Zoysia, Emerald	Take-All Patch	Shelby
Zoysia, Meyer	Cultural	Macon

We saw 96 and 98 samples in April and May, respectively. Common problems in April included cedar-apple rust (*Gymnosporangium*) on red cedar and roseslug (or rose sawfly). In May, the most common problems were spring dead spot on bermudagrass, leaf gall (*Exobasidium*) on camellia, and roseslug. The roseslug damage has been largely on the widely popular 'Knockout' series of roses. Some clients thought this might be Japanese beetle damage, but in April or early May, the adult Japanese beetles haven't emerged yet. For a good description of the roseslug damage and control, see the following web page.

<http://soilplantandpest.utk.edu/pdf/OPandDUpdates/mar-28-2008.pdf>

Regional agents and Master Gardeners can also find weekly updates from the Birmingham Plant Diagnostic Lab on the ACES Sharepoint site.

Table 3. 2010 April Problems Seen In the Birmingham Plant Diagnostic Lab.

<u>Plant</u>	<u>Problem</u>	<u>County</u>
Azalea	Anthraco nose	Jefferson
Azalea	Azalea Leaf Miner	Jefferson
Azalea	Lace Bugs	Jefferson
Bermudagrass	Spring Dead Spot	Jefferson
	Winter Damage	Tuscaloosa
	White Grubs	Jefferson
Birch, River	Spiny Witch-Hazel Gall Aphids	Jefferson
Blackberry	Cane and Leaf Rust	Jefferson
Blueberry	Mummyberry	Chilton, Henry
Box Elder	Erophyid Mites	Jefferson
Cleyera	Cercospora Leaf Spot	Jefferson
Dogwood	Botryosphaeria Canker and Dieback	Jefferson
Gardenia	Cold Damage	Jefferson
Gardenia	Phyllostica Leaf Spot	Jefferson
Hosta	Hosta Virus X (HVX)	Shelby
Hydrangea	Chemical Injury	Shelby

Ivy, English	Phytophthora Root/Leaf Spot	Jefferson
Lemon	Brown Soft Scale	Jefferson
Magnolia, Southern	Phyllosticta Leaf Spot	Jefferson
	Phytophthora Root Rot	Jefferson
Mint	Fourlined Plant Bug	Jefferson
Oak, Red	Herbicide Damage	Jefferson
Oak, Southern Red	Horned Oak Gall	Jefferson
Pittisporum	Cold Damage	Jefferson
Plum	Plum Curculio	Jefferson
Red Cedar, Eastern	Cedar Apple Rust	Jefferson (3)
	Quince Rust	Jefferson
Rose	Aphid	Jefferson
	Rose Slug	Jefferson (2)
Yaupon, Dwarf	Cold Damage	Jefferson (2)
Zoysiagrass	Brown Patch	Chilton
	Take All Root Rot	Tuscaloosa

Table 4. 2010 May Problems Seen In the Birmingham Plant Diagnostic Lab.

<u>Plant</u>	<u>Problem</u>	<u>County</u>
Angel Trumpet	TwoSpotted Spider Mite	Jefferson

Azalea	Lacebugs	Jefferson
Basil	Bacterial Leaf Spot (<i>Pseudomonas</i>)	Jefferson
Bentgrass	Pythium Root Dysfunction	*
Bermudagrass	Spring Dead Spot	Jefferson, Marshall
Blueberry	Twig Blight (<i>Phomopsis</i>)	Lee
Camellia	Leaf Gall (<i>Exobasidium</i>)	Jefferson (2)
Camillia	Tea Scale	Jefferson
Cucumber	Angular Leaf Spot	Lauderdale
Cypress, Italian	Cercosporidium Blight	Shelby
Cypress, Leyland	Cercosporidium Needle Blight	Shelby
Fig	Chemical Damage	Jefferson
Gallardia	Leaf Smut	Jefferson
Hackberry	Leaf gall (Psyllid)	Jefferson
Hickory	Phylloxera Stem Gall	Jefferson
Holly, Chinese	Cottony Camellia Scale	Jefferson
Holly, Foster	Spittle Bug damage	Jefferson
Holly, Japanese	Black Root Rot (<i>Thielaviopsis</i>)	Jefferson (2)
Hydrangea, French	TwoSpotted Spider Mites	Jefferson
Hydrangea, Oakleaf	Bacterial Leaf Spot (<i>Xanthamonas</i>)	Jefferson
Juniper	Spruce Spider Mites	Jefferson
	Kabatina Blight	Jefferson
Magnolia, Southern	Phytophthora Root Rot	Jefferson
Maple, Red	Gloomy Scale	Jefferson

Mondograss	Pythium Root and Crown Rot	Shelby
Moon Vine	Bacterial Leaf Spot	Shelby
Oak	Lecanium Scale	Jefferson
Peach	Oriental Fruit Moth	Jefferson
Pluot	Bacterial Spot (<i>Xanthomonas</i>)	Blount
Rose	Rose Slug	Jefferson (3)
	Botrytis Blight	Jefferson
	Thrips Damage	Jefferson
Squash	Angular Leaf Spot	Lauderdale
Tomato	Flea Beetles	Jefferson
	Bacterial Canker	Cullman
	Herbicide Damage	Jefferson (4)
	Fusarium Wilt	Bibb
	Pythium Stem/Root Rot	Blount
Watermelon	Fusarium Wilt	Henry

April Insect Report From The Auburn Plant Diagnostic Lab (C. Ray)

County	Host	Category	Identification	Scientific Name
Tuscaloosa		Miscellaneous	Giant Water Bug	Belastomatidae
Baldwin	Home	Household - Miscellaneous	Stonefly	Plecoptera
	Home	Household - Miscellaneous	House Centipede	<i>Scutigera coleoptera</i>
Mobile	Human Ear	Medical	"Inch Worm"	Geometridae
Tuscaloosa		Miscellaneous	Oil Beetle	<i>Meloe</i> sp.
Lee	Lawn	Household - Miscellaneous	a bumble bee	<i>Bombus griseocollis</i>
Calhoun	Home	Household -	Eastern	<i>Reticulitermes</i>

		Structural	Subterranean Termite	<i>flavipes</i>
Pittsburgh, PA	Home	Household - Miscellaneous	Brown Marmorated Stink Bug	<i>Halyomorpha halys</i>
Calhoun	Home	Household - Miscellaneous	Southern Yellow Jacket, queen	<i>Vespula squamosa</i>
Jefferson	Green Ash	Ornamental	a soldier beetle	Cantharidae
Tuscaloosa	Sawtooth Oak	Ornamental	Brown June Beetle	<i>Phyllophaga</i> sp.
St. Clair	Clover	Miscellaneous	Digger or Mining Bees	Andrenidae
Crenshaw	Maple	Ornamental	Maple Leaf Ocellate Gall	<i>Acericecis ocellaris</i>
Montgomery	Home	Household - Stored Products	Varied Carpet Beetle	<i>Anthrenus verbasci</i>
Limestone	Gardenia	Ornamental	Citrus Whitefly	<i>Dialeurodes citri</i>
Montgomery	Leyland Cypress	Ornamental	Minute Cypress Scale	<i>Carulaspis minima</i>
Winston	Home	Household - Miscellaneous	Blue Bottle Fly larvae	<i>Calliphora vicina</i>
Montgomery	Garden	Household - Miscellaneous	False Bombardier Beetle	<i>Galerita</i> sp.
Cullman	Oak	Ornamental	Linden Looper	<i>Erranis tiliaria</i>
St. Clair	Oak	Ornamental	Linden Looper	<i>Erranis tiliaria</i>
Monroe	Pine	Ornamental	Acute Mealybug	<i>Oracella acuta</i>
Houston	Centipede Sod	Turfgrass	white grub	<i>Phyllophaga</i> sp.
Elmore	Oak	Ornamental	Oak Lecanium	<i>Parthenolecanium corni</i> complex
Elmore	Oak	Ornamental	Possible May Beetle damage	<i>Phyllophaga</i> sp.

May Insect Report From The Auburn Plant Diagnostic Lab (C. Ray)

County	Host	Category	Identification	Scientific Name
Tuscaloosa	Alfalfa Hay	Forage Crops	Dark Mealworm Beetle	<i>Tenebrio obscurus</i>
Calhoun	Ball fields	Turfgrass	Springtails	Entomobryidae
Montgomery	Home	Household - Miscellaneous	May Beetles & Sugar Cane Beetle	<i>Phyllophaga</i> sp. & <i>Eutheola humilis</i>
Walker	English Dogwood	Ornamental	a sawfly	Tenthredinidae
Walker	Red Oak	Ornamental	Common Oak Moth caterpillar	<i>Phoberia atomaris</i>
Clay	Oak	Ornamental	Common Oak Moth caterpillar	<i>Phoberia atomaris</i>
Clay	Oak	Ornamental	a sawfly	<i>Perclista</i> sp.
Lee	Structure	Household -	Formosan Termite	<i>Coptotermes</i>

		Structural		<i>formosanus</i>
Lee	Maple	Ornamental	Woolly Alder Aphid cast skins	<i>Paraprociophilus tessellatus</i>
Clay	Persimmon	Fruits & Nuts	Persimmon Borer	<i>Sannina uroceriformis</i>
Lee	Building	Household Structural	- Sugarcane Beetle	<i>Eutheola humilis</i>
Montgomery	Gardenia	Ornamental	Citrus Whitefly	<i>Dialeurodes citri</i>
Lauderdale	Watermelon	Row Crops	Striped Cucumber Beetle	<i>Acalymma vittatum</i>
Houston	Home	Household Miscellaneous	- Plaster Beetle	<i>Cartodere constricta</i>
Houston	Home	Household Miscellaneous	- Book Louse	Liposcelidae
Houston	Home	Household Miscellaneous	- Foreign Grain Beetle	<i>Ahasverus advena</i>
Lee	Herbarium Specimen	Stored Product	a tortricid larvae	Tortricidae
Walker	Human	Household Miscellaneous	- a Corrinid spider	<i>Castianeira</i> poss. <i>descripta</i>
Lowndes	Plum	Small Fruits	probable stink bug/plant bug damage	
Tuscaloosa	Maple	Ornamental	Cottony Maple Leaf Scale and/or Cottony Maple Scale	<i>Pulvinaria</i> sp.
Cullman	Grape	Small Fruits	insect feeding damage, possible Rose Chafer	<i>Macroductylus subspinosus</i>
Elmore	Hydrangea	Ornamental	Spider Mites	Tetranychidae
Cullman	Home	Household Structural	- Southern Dark Winged Termite	<i>Reticulitermes virginicus</i>
Calhoun	Home	Household Miscellaneous	- European Hornet	<i>Vespa crabo</i>
Mobile	St. Augustine sod	Turfgrass	Chinch Bugs & Ground Pearls	<i>Blissus</i> sp. & Margarodidae
Geneva	Home	Household Stored Product	- Maize Weevil	<i>Sitophilus zeamais</i>
Montgomery	Unknown	Household Structural	- Southern Dark Winged Termite	<i>Reticulitermes virginicus</i>
Dekalb	River Birch	Ornamental	Witch Hazel Aphid	<i>Hamamelistes spinosus</i>
Colbert	Hospital	Household Miscellaneous	- Springtails	Entomobryidae
Limestone	Hospital	Household Miscellaneous	- Springtails	Entomobryidae

Calhoun	Home	Household Miscellaneous	-	Queen Southern Yellow Jacket	<i>Vespula squamosa</i>
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Disease Possibilities For June

Table 3 lists some of the plant diseases which arrived in our lab during previous Junes. Brief comments on disease symptoms and control recommendations are included. For specific disease control recommendations, see the Alabama Pest Management Handbook or individual 2009 spray guides. Also, remember the importance of sanitation.

As with May, the first half of June has been relatively wet. Tomato spotted wilt virus was diagnosed recently on tomato in Russell County in June. Soybean rust was diagnosed the end of May in Washington County on soybean. It was also seen on kudzu in Baldwin County in June.

Table 3. Brief Disease Descriptions and Control Recommendations For Diseases Often Seen in June.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
Alfalfa	Spring Black Stem & Leaf Spot (<i>Phoma medicaginis</i>)	Black spots on stems and leaves.	---
Amaryllis	Stagnospora Leaf Spot (<i>Stagnospora</i>)	Dark red, elliptical leaf spots.	Sanitation.
Apple	Bitter Rot (<i>Colletotrichum</i>)	Brown circular-irregular spots develop on fruit. The spots enlarge internally as cone shaped areas of brown rotted tissues. Masses of spores develop in tiny clumps (sometimes in concentric rings) on the surface of the browned fruit spots. Spores may be cream-colored or salmon-colored. Leaf spots are not commonly seen.	Follow the regular spray schedule as described in the AL Pest Management (P.M.) Handbook. Sanitation.
	Cedar-Apple Rust (<i>Gymnosporangium juniperae-virginianae</i>)	Large (3-6mm diameter), bright yellow spots; sometimes tiny black specks can be seen on upper leaf surface of spots; sometimes orange spores bodies can be seen on lower leaf surface spots.	See AL P.M. Handbook for protective spray treatments; collect and destroy all fallen leaves this fall; remove nearby red cedars and other junipers if possible.
	Fire Blight (<i>Erwinia</i>)	Dieback of branches	Pruning 10-16 or more

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
	<i>amylovora</i>)	until canker forms at base of dieback.	inches from edge of dieback. Streptomycin sprays in commercial situation.
	Frogeye Leaf Spot (<i>Botryosphaeria</i>)	Brown, circular spots with purple margins and brown centers.	Sanitation; protective fungicide sprays.
	Nectria Canker	Sunken lesion on trunk with swollen callus tissue around it.	Pruning.
	Phytophthora Crown & Root Rot	Lower foliage becomes yellowed; dieback of select branches; roots become water-soaked and brown rotted.	Remove damaged plants; improve soil drainage & reduce irrigation.
Arbor-vitae	Phomopsis Dieback	Tip browning and dieback.	Sanitation. See AL P. M. Handbook.
	Phytophthora Root Rot	Lower foliage becomes yellowed; dieback of select branches; roots become water-soaked and brown rotted.	Remove damaged plants; improve soil drainage & reduce irrigation.
Aucuba	Botryosphaeria Canker	Sunken, cracked branch lesions.	Pruning 4-5 inches from edge of damage.
	Phytophthora Root Rot	Lower foliage becomes yellowed; dieback of select branches; roots become water-soaked and brown rotted.	Remove damaged plants; improve soil drainage & reduce irrigation.
Azalea	Leaf & Flower Gall (<i>Exobasidium</i>)	Leaves and flowers become swollen, leathery, and pale green. Tissue may be covered with white, closely appressed mold layer.	Sanitation.
	Phomopsis Dieback	Branches dieback; at the base of dieback, small cankers are present.	Prune out damage making cut 3-4 inches beyond the damage edge.
	Phytophthora Crown &	Lower trunk and roots	Sanitation. See the AL

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
	Root Rot	become brown and water soaked; foliage dieback.	Pest Management Handbook.
Bahia	Dollar Spot (<i>Sclerotinia</i>)	Individual grass blades show white spots/ brown or black borders. Small areas of the field are initially affected.	Maintain proper fertility.
Bean, Garden	Alternaria Leaf Spot	Brown circular-irregular reddish brown spots become circular with concentric rings.	Protective fungicide sprays; Sanitation at end of growing season.
	Anthrachnose (<i>Colletotrichum</i>)	Reddish, irregular spots of varying sizes on all parts of foliage.	See AL Pest Management Handbook.
	Bacterial Blight (<i>Xanthomonas</i>)	Irregular spots (small and large) become dried and light brown in the center and dark, water-soaked on the edge.	Protective spray treatments.
	Fusarium Stem/Root Rot	Lower stems/roots become dried and reddish-brown.	Rotation for 7 or more years.
	Mosaic Virus	Yellow and green alternating patches on leaves.	Remove damaged plants. Control insects.
	Pythium Crown Rot, Root Rot	Tissues become light brown and wet rotted.	Improve soil drainage; see the AL Pest Management Handbook.
	Rhizoctonia Aerial Blight	Leaves develop brown spots and blotches. Damaged tissues may dry and fall apart.	Sanitation. See the AL Pest Management Handbook for anthracnose control.
	Rhizoctonia Stem Rot	Lower stems develop brown sunken lesions.	Rotation; Terraclor or Fumigation.
	Root-Knot Nematode (<i>Meloidogyne</i>)	Galls on roots.	Rotation, solarization or fumigation.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
	Southern Blight (<i>Sclerotium rolfsii</i>)	White fungal mat on lower stems near soil line; crowns decay.	Terraclor; Sanitation.
Beech	Anthrachnose (<i>Discula</i>)	Necrotic blotches in leaf and along veins.	Remove all fallen leaves from area this fall.
Begonia	Bacterial Leaf Spot/ Blight	Angular, water-soaked spots; leaf drop.	Remove damaged leaves or plants; do not water over-head.
	Pythium Crown Rot	Lower stem tissues brown and soft.	See AL P.M. Handbook.
Begonia, Angel Wing	Bacterial Leaf Spot (<i>Xanthomonas</i>)	Dark brown, angular spots with water soaked edges.	Sanitation. Do not water over-head.
Bentgrass	Brown Patch (<i>Rhizoctonia</i>)	Foliage develops brown blotches and circular-irregular brown patches of turf.	See AL P.M. Handbook.
	Pythium Blight	Turf grass develops greasy black spots, blotches on leaves. Foliage dies.	See AL P.M. Handbook.
	Ring Nematode	Roots poorly developed; plant yellowed, stunted.	See ANR-523.
	Rust (<i>Puccinia</i>)	Foliage develops a red-orange powdery coating on leaf blades.	See AL P.M. Handbook.
Bermuda	Brown Patch (<i>Rhizoctonia</i>)	Foliage develops brown blotches. Circular-irregular brown patches of turf.	See AL P.M. Handbook.
	Dollar Spot (<i>Sclerotinia</i>)	White, bleached spots about the size of a silver dollar appear in lawn; individual grass blades show white spots with dark borders.	See AL P.M. Handbook; see Circular ANR-493; collect grass clippings.
	Helminthosporium "Melting Out" (<i>Bipolaris cynodontis</i> ; <i>Exserohilum</i>)	Circular-elongate spots with brown centers and purple-black borders.	Sanitation; protective fungicide sprays. See AL P.M. Handbook.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
	<i>rostratum</i>)	Leaves, sheaths, stems, crowns and roots may be attacked.	
	Leaf Rust (<i>Puccinia</i>)	Leaves are off-color, rusty colored and later brown.	See the AL P.M. Handbook.
	Ring Nematode (<i>Criconemella</i>)	Roots poorly developed; plants yellowed, stunted.	See ANR-523.
	Sting Nematode (<i>Belonolaimus</i>)	Roots poorly developed; plants yellowed, stunted.	See ANR-523.
	Take-All Patch (<i>Gaeumannomyces</i>)	Grass yellows and thins with black lesions on roots.	See ANR-523.
Birch, River	Anthrachnose (<i>Cryptocline</i>)	Necrotic blotches in leaf and along veins.	Remove all fallen leaves from area this fall.
	Phyllosticta Leaf Spot	Brown, circular leaf spots.	Sanitation. Protective sprays of Cleary's 3336 may be used.
Blackberry	Anthrachnose (<i>Colletotrichum</i>)	Black irregular-circular spots, blotches on leaves, canes; dieback.	See ANR-50
	Cercosporrella Rosette	Blossoms are abnormally thickened with pointed petals. Canes develop bunched growth habit. Fruit does not set.	Sanitation and protective fungicide sprays.
	Crown Gall (<i>Agrobacterium</i>)	Irregular swollen area (gall) develops on lower branches and crown and roots.	Sanitation; crop rotation; Galltrol.
	Septoria Leaf Spot	Round and irregular round, brown leaf spots.	Sanitation. See the AL Pest Management Handbook under 'Leaf Spot'.
Blueberry	Anthrachnose Fruit Rot (<i>Colletotrichum</i>)	Sunken, light blue-brown spots, sometimes with circular, black specks (fruiting bodies).	Sanitation. See the AL Pest Management Handbook.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
	Botryosphaeria Blight	New shoots develop brown sunken cankers; growth beyond the canker dies.	Sanitation; Benlate protective sprays.
	Botrytis	Gray-brown blotches on leaves and fruit; gray fruit rot.	Sanitation; Benlate protective sprays.
	Mummy Berry (<i>Monilinia</i>)	Fruit becomes small & shriveled; twig cankers and blossom blight may also develop.	Remove all plant debris in the fall. Prune protective sprays of fungicide such as Captan.
	Phytophthora Root Rot	Brown, water-soaked lesions that become dried.	Ridomil; See AL Pest Management Handbook.
Boxwood	Macrophoma Blight	Leaves and some twigs become yellowed/ brown; affected tissues may contain tiny black specks, the fruiting bodies of the fungus.	Eliminate stress problems; pruning. See AL Pest Management Handbook.
	Phytophthora Root Rot	Foliage dieback; roots become brown and water-soaked, decayed.	Sanitation. See the AL Pest Management Handbook.
	Volutella Blight	Plants show yellowing and dieback. Cankers on stems & some dying leaves develop tiny orange specks, fruiting bodies of fungus.	Eliminate stress problems; pruning. See AL Pest Management Handbook.
Buddleia	Phyllosticta Leaf Spot	Numerous small brown circular spots.	Sanitation. Cleary's 3336 or Domain.
Butterbeans	Pythium Root Rot	Roots are brown and water-soaked.	See Vegetable Spray Guide.
Cabbage	Alternaria Leaf Spot	Gray irregular spots.	See Pest Management Handbook.
Camellia	Anthracoese	Large, brown, roughly	Sanitation of fallen

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
	(<i>Colletotrichum</i>)	circular leaf spots; orange spores in a zonate pattern on leaf spot surface.	leaves. See the AL Pest Management Handbook.
	Leaf Gall (<i>Exobasidium</i>)	Soft flesh swellings (galls) on twigs, flowers, and leaves. Green galls turn white.	Sanitation before galls become white.
Campanula	Phytophthora Crown Rot	Lower stem becomes brown and water soaked.	Sanitation. Reduce irrigation. Crop rotates to ageratum, perennial salvia, verbena, lantana, marigold, or basil.
Cantaloupe	Bacterial Wilt (<i>Erwinia</i>)	Leaves wilt; this is quickly followed by leaf/stem collapse.	Control cucumber beetles.
	Gummy Stem (<i>Mycosphaerella</i>)	Elongated, brown, wet lesions on stems; cracking of stem lesions.	Protective fungicide sprays; sanitation in the fall.
	Watermelon Mosaic Virus	Foliage and fruits develop alternating patches of yellow and green tissues. Growth and crop productivity is reduced.	Rogue out infected plants; control insects; control weeds.
Cedar, Deodara	Rhizoctonia Root Rot	Roots become dry rotted and brown.	----
Centipede	Brown Patch (<i>Rhizoctonia</i>)	Foliage develops brown blotches. Circular-irregular patches of turf will turn brown.	See the AL P. M. Handbook.
	Dollar Spot (<i>Sclerotinia</i>)	See Bermuda.	See AL P.M. Handbook.
	Fairy Ring	Arc pattern of dead grass. Sometime mushrooms present along arc.	See ANR-372.
	Slime Mold (<i>Physarum</i>)	Black powdery sporangia on grass	---

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
		blades.	
	Take-All Patch (<i>Gaeumannomyces</i>)	Dieback and yellowing; black stolon lesions; stress associated.	See the AL Pest Management Handbook and ANR-823.
Cherry, Flowering	Cherry Leaf Spot (<i>Blumerilla</i> sp.)	Circular-irregular brown spots that develop shot holes as they age.	Remove all fallen leaves from the area in the fall.
	Phyllosticta Leaf Spot	Pale brown leaf spots with dark edges.	Sanitation of fallen leaves.
	Septoria Leaf Spot	Reddish-brown circular- angular leaf spots ($\frac{1}{8}$ - $\frac{1}{4}$ inch diameter).	Sanitation.
Cherry Laurel	Shot Hole (<i>Xanthomonas</i>)	Reddish spots with dark red or black edges; centers of angular spots may fall out.	Sanitation; See AL Pest Management Handbook.
Chrysanthemum	Pythium Crown/Root Rot	Lower stem/crown area becomes water-soaked, brown, rotted.	See AL P.M. Handbook.
Collards	Alternaria Leaf Spot	Gray circular-irregular spots.	---
	Black Rot (<i>Xanthomonas</i>)	Leaf edges have V- shaped black lesions; veins become black; inner core of lower stem becomes black.	Rotation for 2-3 years; Fumigation.
Coreopsis	Anthrachnose	Red, brown circular spots, sometimes with white centers.	Sanitation; keep foliage as dry as possible. Protective sprays of Cleary's 3336 may help.
Corn	Bacterial Stalk Rot (<i>Erwinia</i> , <i>Pseudomonas</i> spp.)	Stalks disintegrated into a soft mass, often with an unpleasant odor.	Maintain balanced fertility, good soil drainage and good air circulation between plants.
	Crazy Top (<i>Sclerophthora</i>)	Symptoms vary; generally excessive tillering with rolling and twisting of upper leaves; abnormal leafy	Avoid wet soils; sanitation.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
		development of the tassel.	
	Common Rust (<i>Puccinia sorghi</i>)	Circular-elongate, brown pustules are scattered over upper & lower leaf surfaces. Yellowing & death of leaves and leaf sheaths may occur.	Resistant varieties.
	Northern Corn Leaf Blight (<i>Helminthosporium turcicum</i>)	Long, elliptical, gray-green or tan lesions, 2.5-15 cm in length develop first on lower leaves. Disease progresses upward.	Resistant varieties.
	Southern Corn Leaf Blight (<i>Helminthosporium cochliobolus</i>)	Tan lesions (.25-1.5 inches long) are elongate with parallel sides and brown borders; yellow halos may be present.	Resistant varieties.
Cotton	Alternaria Leaf Spot	Gray-brown irregular leaf spots.	See Bill Gazaway.
	Ascochyta Leaf Spot	Light brown circular spots with dark brown margins; spots will coalesce to involve large areas of the leaf surface.	See Bill Gazaway.
	Black Root Rot (<i>Thielaviopsis</i>)	Poor growth; yellowing of lower leaves; black lesions on roots.	See Bill Gazaway.
	Fusarium Lower Stem Rot	Lower stems develop red-brown sunken lesions.	Seed treatment.
	Pythium Root Rot Seedling Disease	Roots become brown, soft, water-soaked. Seedlings may fall over the soil line.	See treatment.
	Rhizoctonia Lower Stem/Root Rot	Brown lesions/cankers near soil line.	---

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
Crabapple	Cedar-Apple Rust (<i>Gymnosporangium</i>)	See Apple - Cedar-Apple Rust.	---
Crepe Myrtle	Botryosphaeria Canker	Elongated, sunken cankers with cracked edges; sometimes associated with stress.	Sanitation.
	Cercospora Leaf Spot	Brown leaf spots (circular-irregular) of approximately ½ inch diameter.	---
	Powdery Mildew (<i>Erysiphe</i>)	Leaves show white dusting; yellowing; new growth distorted.	See AL P.M. Handbook.
Cryptomeria	Cytospora Canker	Sunken, elliptical shaped cankers.	Pruning out cankers, making cuts 3-4 inches beyond canker margin.
Cucumber	Anthrachnose	Small (about ¼ inch), cream-colored leaf spots. When spores are produced, a zonate pattern of orange acervuli may develop.	Sanitation of damaged plant parts. For a protective fungicide, see the AL Pest Management Handbook.
	Powdery Mildew	White powdery dusting on leaves; blight.	See the AL Pest Management Handbook.
	Rhizoctonia Stem Rot	Brown elongated lesions on lower stems.	---
Cypress, Arizona	Kabatina Blight	Blight of older, inner foliage.	Sanitation.
Daisy, Gerbera	Powdery Mildew (<i>Erysiphe</i>)	Leaves show a white dusting; yellowing followed by browning.	See AL P. M. Handbook.
Daylily	Kabatiella Leaf Spot	Brown leaf spots with a yellow halo sometimes; when there are several leaf spots, the leaf may develop a yellow streak.	Sanitation. Cleary's 3336 protective sprays may help.
	Pythium Crown & Root	Lower stems & roots	Sanitation; reduce

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
	Rot	become brown & water-soaked; foliage dieback occurs.	irrigation.
	Root Knot Nematode (<i>Meloiodogyne</i>)	Round-irregular galls on roots.	Crop rotation to grasses or other suppressive plants. See ANR-856.
	Rust (<i>Puccinia hemerocallidis</i>)	Leaves develop small yellow spots which eventually produce orange spots masses that are visible as orange, powdery spots.	Sanitation; Protective sprays of Banner Maxx, Heritage, Eagle, Immunox or Fertiloam System Fungicides.
Delphinium	Bacterial Stalk Rot (<i>Rectobacterium</i> [formerly <i>Erwinia</i>] <i>carotavorum</i>)	Dark brown-black, water-soaked stem decay.	Strict sanitation.
Dianthus	Pythium Root Rot	Foliage wilts, yellows; collapses.	Sanitation; Reduce irrigation; improve soil drainage. Plant a different type of bedding plant.
Dogwood	Anthracoise (<i>Discula</i>)	Small-large irregular brown spots/blotches often with purple margins. Dieback usually follows.	See the AL P. M. Handbook.
	Phyllosticta Leaf Spot	Light brown circular leaf spots with dark borders.	Sanitation of fallen leaves.
	Phytophthora Root Rot	Roots become brown and water-soaked. With slight pressure, the outer cortex of the root will slip away from the central root core.	See the AL P. M. Handbook.
	Powdery Mildew (<i>Microsphaeria</i>)	White dusting on upper leaf surfaces.	Cleary's 3336 or Domain.
	Spot Anthracnose (<i>Elsinoe</i>)	Small reddish circular spots develop on blossoms and leaves. Defoliation may result	See the AL P. M. Handbook.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
		when spotting is severe.	
Elm	Dutch Elm Disease	Wilt; dieback; interveinal yellowing of leaves; vascular browning.	Sanitation of dying branches of trees.
Elm, Winged	Botryodiplodia Canker	Elliptical sunken lesion with cracked edges.	Sanitation. Make pruning cuts 4-5 inches from edge of damage.
	Dutch Elm Disease	Wilt; dieback; interveinal yellowing of leaves; vascular browning.	Sanitation of dying branches or trees.
Fern, Boston	Rhizoctonia Blight	Sections of fronds develop spots and blight. Cut out damaged areas, remove all clippings from the area. Apply a protective fungicide according to the AL Pest Management Handbook.	Sanitation. Cleary's 3336 or Halt will provide protective disease control.
Fescue	Brown Patch (<i>Rhizoctonia</i>)	See Centipede.	See the AL P. M. Handbook.
	Helminthosporium Leaf Spot	Small, elongate, reddish-brown spots develop. Spotting may be severe enough to cause total blight (death) of the foliage.	See the AL P. M. Handbook.
Fescue, Tall	Brown Patch (<i>Rhizoctonia solani</i>)	Patches of dying grass showing crown rot and leaf spots.	See ANR-492 and the Pest Management Handbook.
	Pythium Blight	See Bentgrass.	---
Fig	<i>Corticium salmonicolor</i> Blight	Pink mycelial mat develops on stem cankers.	Pruning.
Genseng	Fusarium Root Rot	Roots become decayed and dark brown-black.	Crop rotation for 10 or more years.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
		Decay is a dry rot.	
Geranium	Alternaria Leaf Spot	Black, small, angular leaf spots.	See AL P. M. Handbook.
	Botrytis Blight	Blossoms and leaves develop brown blotches.	See AL P. M. Handbook.
	Pythium Stem Rot	Dark brown, water-soaked lesions (cankers) develop on stems.	Sanitation.
Grape	Anthrachnose (<i>Colletotrichum</i>)	Brown round-irregular spots (about 1/8 inch or larger) on foliage/stem.	Sanitation; See the AL P. M. Handbook.
	Black Rot (<i>Guignardia</i>)	Dark brown circular spots on leaves and fruit.	Protective fungicide sprays; Sanitation.
	Botrytis Blight	Leaves/fruit develop a gray brown blotches/rot.	See AL P. M. Handbook.
Hawthorn, Indian	Cedar Quince Rust (<i>Gymnosporangium claviceps</i>)	Bright yellow leaf spots; small orange, finger-like aecial cups on fruit.	Sanitation. Remove junipers in the area. See the AL Pest Management Handbook.
	Entomosporium Leaf Spot	Black spots develop on the foliage. Spot coalescence may occur.	See the AL P. M. Handbook.
Holly	Phytophthora Root Rot	Roots are black or brown and water-soaked.	See the AL P. M. Handbook.
Hollyhock	Rust (<i>Puccinia</i> sp.)	Yellow leaf spots; sometimes dark red swollen, soft telia bodies develop on lower leaf surface.	Sanitation.
Hosta	Alternaria Leaf Spot	Gray, brown circular leaf spots.	Sanitation.
Hydrangea	Bacterial Leaf Spot (<i>Pseudomonas</i>)	Dark brown, angular leaf spots with dark, water-soaked edges.	Sanitation. Do not water over-head. See the AL Pest Management

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
			Handbook.
	Cercospora Leaf Spot	Circular-irregular, light brown spots about ¼ inch diameter or larger.	Sanitation of all damaged leaves. See the AL Pest Management Handbook.
	Colletotrichum Petal Blight	Orange-brown circular spots, blotches.	Cleary's 3336 or Domain.
	Phytophthora Crown/Root Rot	Roots develop a wet brown decay that becomes dried with age.	Sanitation. See AL Pest Management Handbook.
	Pythium Root Rot	Poor growth of foliage; root decay.	Remove & destroy all damaged plants. Reduce watering; improve drainage. Subdue drenches may be used following label directions.
Impatiens	Impatiens Necrotic Spot Virus	Black circular spotting occurs on the foliage. New growth becomes stunted.	Control thrips; sanitation.
	Pythium Root Rot	Roots become soft, brown and water-soaked.	See the AL P. M. Handbook.
	Rhizoctonia Stem Rot	Sunken, brown, dry, lesions.	Sanitation. See the AL Pest Management Handbook.
Iris	Heterosporium Leaf Spot	Small-large brown, oval spots.	Sanitation. See AL Pest Management Handbook.
Ivy, English	Anthrachnose (<i>Colletotrichum</i>)	Brown circular-irregular spots on the foliage. Spot coalescence may occur.	See the AL P. M. Handbook.
	Bacterial Leaf Spot (<i>Xanthomonas</i>)	Black, angular, water-soaked spots on foliage.	See AL P. M. Handbook.
	Rhizoctonia Leaf & Stem Rot	Brown, dry lesions on leaves/stems.	Sanitation; Cleary's protective sprays.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
Juniper	Cercospora Blight	Inner sections of branches turn brown and needles drop.	Benlate protective sprays. Sanitation.
	Kabatina Tip Blight	Tips of branches dieback.	Sanitation; see AL Pest Management Handbook.
	Phoma Needle Blight	Needle browning.	Sanitation. Fungicides labeled to control Phomopsis should help.
	Phomopsis Blight	Branches dieback beginning at twig tips.	Sanitation; see the AL P. M. Handbook.
	Phytophthora Root Rot	Roots become browned, water-soaked.	See the AL P. M. Handbook.
Juniper, Shore	Phytophthora Root Rot	Roots become brown and water soaked.	See the AL Pest Management Handbook.
Kudzu	Bacterial Leaf Spots (Suspect <i>Pseudomonas</i>)	Circular yellow spots with dark centers.	----
Leucothoe	Pythium Root Rot; may be secondary	Roots become water-soaked, slightly brown, rotted; foliage yellows; dieback; wilt.	Sanitation; reduce irrigation; improve soil drainage; remove some soil in root zone area of damaged plant before replanting.
Leyland Cypress	Pestalotia Tip Blight	Foliage tips become brown.	Eliminate stress.
	Phomopsis Dieback	Tips of branches dieback.	See AL Pest Management Handbook.
	Sphaeropsis Dieback	Twigs dieback. Cankers develop.	Pruning.
Liriope	Anthracoze	Brown spots, blotches on leaves and leaf tips.	Sanitation; See AL P. M. Handbook.
Lilac	Powdery Mildew	A white dusting appears on upper leaf surface. Eventually, leaf tissue becomes necrotic where the mildew was.	Sanitation of fallen leaves. See the AL Pest Management Handbook for protective fungicide use.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
Magnolia, Saucer	Powdery Mildew	White dusting on leaf surface; leaf surface become brown.	See the AL Pest Management Handbook.
Magnolia, Southern	Algal Leaf Spot (<i>Cephaleuros</i>)	Green-red, slightly elevated, circular spots with wavy leaf spot edges.	Sanitation of fallen leaves.
Maple	Anthrachnose (<i>Kabatiella</i>)	Brown circular-irregular spots/blotches occur on leaves; large leaf areas may be involved. Defoliation may result.	Sanitation. See the AL P. M. Handbook.
	Nectria Canker	Sunken lesion on trunk with swollen callus tissue around it.	Pruning.
	Phyllosticta Leaf Spot	Circular (sometimes) irregular leaf spots. Leaf spots borders are often distinctive. Severe spotting will result in defoliation.	Sanitation. See the AL P. M. Handbook.
Maple, Red	Phytophthora Crown & Root Rot	Lower foliage becomes yellowed; dieback of select branches; roots become water-soaked and brown rotted.	Remove damaged plants; improve soil drainage & reduce irrigation.
Mondo Grass	Anthrachnose (<i>Colletotrichum</i>)	Brown spots blotches develop on leaves, often at/near leaf tips.	Sanitation. Cleary's or Domain protective sprays or a benomyl product labeled for ornamentals.
Nectarine	Bacterial Spot	See Peach.	See Peach.
	Brown Rot	See Peach.	See Peach.
Oak	Algal Leaf Spot (<i>Cephaleuros</i>)	Red-green circular spots.	Sanitation.
	Anthrachnose (<i>Apiognomonina</i>)	Brown, irregular-shaped and sized spots/blotches on leaves. Often, blotches will follow along leaf	Sanitation of leaves in the fall. See AL P. M. Handbook.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
		veins. Early leaf drop will occur when disease is severe.	
	Oak Leaf Blister (<i>Taphrina</i>)	Brown, puckered spots (1/8-1/2 inch diameter) develop. Spots may merge. Leaf drop will occur when disease is severe.	Sanitation. See AL P. M. Handbook.
	Slime Flux	Sap and microorganisms contained in sap drain down tree trunk.	No control available.
	Xylella Scorch	Oaks develop brown leaf edges; dieback.	Tree removal.
Oak, Water	Oak Leaf Blister	Circular concave/convex (blister) spots.	See Note #945.
Okra	Rhizoctonia Crown Rot	Brown, dry lesions on lower stems.	Sanitation; crop rotation for 1-2 years.
Palm	Graphiola Leaf Spot	Yellow leaf spots that develop small black, raised bodies.	Remove and destroy spotted leaves.
Paspalum	Brown Patch (<i>Rhizoctonia</i>)	Foliage blight in patches.	See AL P. M. Handbook in the Turfgrass Section.
Pea, Field	Anthracnose	Reddish circular-irregular spots.	See AL P. M. Handbook.
	Black Eye Cowpea Mosaic Virus/Other Mosaic Virus	Yellow and green mosaic pattern on leaves; reduced growth.	Plant resistant varieties- 'Mississippi Cream' or 'Pink Eye Purple Hull BVR'.
	Charcoal Rot (<i>Macrophomina</i>)	Lower stems become dried and off-color. When stem is split, inner tissues are gray and appear as if sprinkled with fine charcoal powder.	Sanitation; crop rotation or fumigation.
	Fusarium Crown/Root Rot	Brown or reddish-brown lesions at soil line and on roots.	Long crop rotations.
	Fusarium Wilt	Plants become yellow and wilted, starting with	Rotation for 6-12 years.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
		lower foliage. Sometimes damage is on one side of plant only. Vascular tissues are brown-streaked.	
	Rhizoctonia Stem Rot	The stem area just above the soil-line becomes browned with a large lesions that often develops on one side of the stem. Eventually the whole stem may become affected.	See the AL P. M. Handbook.
	Root-Knot Nematode (<i>Meloidogyne</i>)	Galls, irregular, on roots.	Rotate to grasses.
Peach	Bacterial Leaf Spot (<i>Xanthomonas</i>)	Brown or reddish-brown, irregular-circular spots which fall out leaves shot holes; may be yellowing around spots.	Sanitation; spray for commercial growers.
	Brown Rot (<i>Monilinia</i>)	Twigs may die; fruit develops a gray-brown rot. Gray mycelium & spores of fungus will develop during humid weather.	See AL P. M. Handbook; Sanitation.
	Gummosis (<i>Botryosphaeria</i>)	Bark becomes sunken and cracked; oozing of sap.	Sanitation.
	Rhizopus Soft Rot	Fruit becomes brown, rotted, and watery.	---
	Scab (<i>Cladosporium</i>)	On the fruit, small (1/16" diameter) olive, velvety spots may develop into large blotches. Spots/blotches are superficial. On twigs small (1/8-1/4 inch diameter), slightly raised, green-brown spots develop on lower	Protective fungicide sprays; sanitation.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
		leaf surfaces.	
Peanut	Crown Rot (<i>Aspergillus niger</i>)	Lower stem becomes dry rotted.	See A. Hagan.
	Early Leaf Spot (<i>Cercospora</i>)	Brown spots with halos develop on lower leaf surfaces.	Protective fungicide sprays; sanitation.
	Rhizoctonia Limb Blight	Brown lesions on stems.	See the AL P. M. Handbook.
	Rhizoctonia Seedling Disease	Brown sunken lesions on lower stems.	Seed treatment.
	Tomato Spotted Wilt Virus	Yellow ring-spots and line patterns on foliage; stunted plants.	Sanitation; control thrips.
Pear	Cedar-Hawthorne Rust (<i>Gymnosporangium globosum</i>)	Cedar cankers with orange urediospores and witches brooms. Pears with yellow leaf spots and orange aecial 'cups' on lower leaf surface and fruit.	See control for cedar apple rust.
	Fabraea Leaf Spot	Black circular leaf spots (2-4 mm) develop on the foliage. Severe spotting may cause early defoliation.	Sanitation. The regular spray schedule for apples/pears may give some protective control. For flowering pear, see the AL P. M. Handbook.
	Fireblight (<i>Erwinia</i>)	Dieback develops on branches. Dead branches become black. Black spots/blotches may develop along the leaf margins.	Prune out damage 10-14 inches beyond the margin of the damaged tissue.
	Frog Eye Leaf Spot (<i>Botryosphaeria</i>)	Brown circular spots with purple margins.	Sanitation; protective sprays of benomyl. See AL P. M. Handbook.
Peony	Tomato Spotted Wilt Virus	Yellow ring spots & line patterns.	Sanitation; control thrips.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
Pepper	Anthrachnose Fruit Rot	Black blotches (sometimes with orange spore pustules.	See AL P. M. Handbook.
	Bacterial Spot (<i>Xanthomonas</i>)	Dark brown, circular to irregular spots; shot holes; leaf yellowing & drop.	Protective fungicide sprays; sanitation.
	Bacterial Stem Rot (<i>Pectobacterium carotovorum</i> pv. <i>carotovorum</i>)	Black, wet decay.	Sanitation. Avoid wounds.
	Bacterial Wilt (<i>Pseudomonas</i>)	Plants rapidly wilt while green.	Crop rotation away from tomato, potato, pepper, eggplant for 3-5 years.
	<i>Phytophthora capsici</i> Crown Rot	Lower stems become brown and water-soaked.	Sanitation. Solarization or fumigation. See handbook.
	Southern Blight (<i>Sclerotium rolfsii</i>)	The lower stem near the soil line becomes softened and browned and decayed. A white mold will develop during humid warm weather.	See the AL P. M. Handbook.
	Tomato Spotted Wilt Virus	Plants stunted. New growth distorted. (Sometimes ring spots and bronzing are present.)	Sanitation. Control thrips.
Persimmon, Asiatic	Botryosphaeria Canker	Elliptical, sunken lesions with cracked edges.	Pruning.
Petunia	<i>Phytophthora</i> Foliage Blight/Root Rot	Brown, sometimes wet-looking lesions; dieback.	Sanitation; See AL P. M. Handbook.
Pine	Lophodermium Needle Cast (<i>Ploioderma</i>)	Needles turn brown and drop; very small (1-2 mm or 1/32 inch) football shaped, black fruiting bodies.	Protective fungicide sprays during the spring and fall.
Phlox	Pythium Root Rot	Small roots become stunted, water-soaked, and a light brown. Plants yellow, wilt and	Remove damaged plants. Reduce watering schedules; improve drainage.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
		dieback.	
Pittosporum	Cercospora Leaf Spot	Brown, circular-irregular blotches about ½ inch diameter.	Sanitation of fallen leaves; protective Daconil or Bravo sprays.
Plum	Bacterial Leaf Spot (<i>Xanthomonas</i>)	See Peach Bacterial Leaf Spot.	---
	Black Knot (<i>Dibotryon</i>) (<i>Plowrightia</i>)	Black, elongated, irregular gall-like tissue on branches; dieback.	See Circular ANR-217. Only Captan and Ferbam are available for spray treatments.
	Plum Leaf Scald (<i>Xylella</i>)	Leaf edges become brown, often zonated-brown. Dieback.	Remove trees to prevent disease spread.
Potato, Irish	Late Blight (<i>Phytophthora infestans</i>)	Brown blotches on leaves/stems.	See AL P. M. Handbook.
	Rhizoctonia Lower Stem Rot	Dry, brown decay.	Sanitation.
	Root-Knot Nematode	Tubers develop knots on skin surface.	Rotation; solarization.
	Scab (<i>Streptomyces</i>)	Small (0.12-0.25 inch or 5-8 mm diameter) brown lesions which may be sunken or raised.	Crop rotation; Maintain soil moisture; Avoid over-liming; Maintain soil pH at 5.3-5.5. Use scab tolerant varieties.
	Stem Soft Rot (<i>Erwinia</i>)	Stems become black, soft, watery, with a foul smell.	Sanitation. Avoid wounding.
	White Mold (<i>Sclerotium rolfsii</i>)	Plants wilted; a white mold often present at the soil line.	See AL P. M. Handbook (commercial).
Privet	Cercospora Leaf Spot	Medium brown circular spots.	See AL P. M. Handbook.
Quince, Flowering	Cedar Quince Rust (<i>Gymnosporangium claviceps</i>)	Orange finger-like aecial cups on fruit; fruit rot; yellow leaf spots.	Sanitation. Remove near-by junipers. See the AL Pest Management Handbook.
Quince	Phytophthora Foliage Blight	Dark, brown, wet looking blotches.	Sanitation. Reduce overhead irrigation.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
	Phytophthora Root Rot	Foliage dieback; roots become brown and water-soaked.	Sanitation. Reduce irrigation.
Rhododendron	Cercospora Leaf Spot	Circular, oval, or irregularly shaped brown leaf spots.	Sanitation. See the AL Pest Management Handbook.
	<i>Phytophthora nicotiana</i> Blight	Brown, water-soaked spots.	Sanitation. Reduce irrigation. See the AL Pest Management Handbook.
	Phytophthora Root Rot	Roots become brown and water-soaked.	See the AL P. M. Handbook.
Rose	Black Spot (<i>Diplocarpon</i>)	Black spots with fringed borders develop on leaves. Defoliation will result from severe spotting.	Sanitation. See the AL P. M. Handbook.
	Botrytis Blossom Blight	Brown spots and blotches on petals; when conditions are cool and humid, a gray mold is seen.	Sanitation. See the AL Pest Management Handbook.
	Brown Canker (<i>Cryptosporella umbrina</i>)	Elongated brown lesion.	Sanitation – pruning. Protective sprays as for black spot.
	Mosaic Virus	Yellow line patterns, mosaics.	Plant removal.
	Powdery Mildew	White dusting on leaf surfaces; new growth distortion.	See AL P. M. Handbook.
	Rhizoctonia Crown Rot	Brown lesions at soil line.	Sanitation; Cleary's protective drenches.
Rudbeckia	Bacterial Leaf Spot	Dark brown, angular leaf spots with darker, water-soaked edges.	Sanitation. Do not water over-head.
Salvia	Phytophthora Root Rot	Roots brown, water-soaked.	Sanitation. See AL P. M. Handbook.
Shamrock, Purple (Oxalis)	Rust (<i>Puccinia sorghi</i>)	Small yellow spots on upper leaf surfaces;	---

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
		orange powdery spots on corresponding lower leaf surfaces.	
Snapdragon	<i>Phytophthora parasitica</i> Crown Rot	Crowns become water-soaked, brown, rotted.	Sanitation. Avoid excessive irrigation. See AL P. M. Handbook.
Sorghum	Anthrachnose (<i>Colletotrichum</i>)	Leaves/stems develop black lesions.	---
	Rhizoctonia Root Rot	Dry brown rot on roots.	---
Soybean	Bacterial Leaf Spot	Dark, brown, angular spots with darker, water-soaked edges.	See Ed Sikora.
	Cyst Nematode (<i>Heterodera</i>)	Plants are stunted and yellow. Root systems are reduced and show a low incidence of Rhizobium nodules. White-yellow female bodies 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.
	Pythium Seedling Disease	Usually lower stem tissues and/or roots become translucent, brown and watery.	Used treated seed.
	Rhizoctonia Seedling Disease	Red-brown, dry decay of lower stems and roots.	Used treated seed.
	Root Knot Nematode (<i>Meloidogyne</i>)	Plants are stunted and yellowed. Roots develop knots or galls of variable shape and size.	Crop rotation; Use of resistant cultivars. See AL P. M. Handbook.
Squash	Bacterial Wilt (<i>Erwinia</i>)	Individual leaves wilt and turn brown. A sticky ooze will stream out of petiole when it is placed in warm water.	Control cucumber beetles; sanitation.
	Cucumber Mosaic Virus (CMV)	Leaves develop mottled green-yellow or dark	Remove affected plants; Control insects and

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
		green-light green coloration; new growth is stunted.	weeds.
	Phytophthora Crown Rot	Lower stem tissues become brown and wet.	Sanitation. Correct wet soil situations. Crop rotates.
	Root Knot Nematode (<i>Meloidogyne</i>)	Poor growth; wilting; root galls.	Crop rotation.
	Tobacco Ringspot Virus	Leaves show mosaic, stunting.	Sanitation; crop rotation for 2-4 years.
	Watermelon Mosaic Virus (WMV) II	See comments for CMV.	---
Squash, Zucchini	Mosaic Virus	A somewhat regular pattern of green and light green or yellow-white discoloration.	Sanitation. Control insects.
St. Augustine	Brown Patch (<i>Rhizoctonia</i>)	Brown leaf spots, blotches.	See the AL P. M. Handbook.
	Gray Leaf Spot (<i>Piricularia</i>)	Gray-brown oval or irregular spots on grass blades; spots may merge.	Protective fungicide sprays; Sanitation.
	Slime Mold	Wet, translucent, flat body that develops/becomes black and powdery with sporangia.	Wash off with hose. Growth is superficial.
	Take-All Patch (<i>Gaeumannomyces</i>)	Plants yellow and die. Stolons, roots develop black lesions.	See ANR-823.
Strawberry	Common Leaf Spot (<i>Mycosphaerella</i>)	Young leaf spots are small, round and deep purple. Older spots are about 1/16 inch diameter with white or brown centers and purple borders. Spots may coalesce.	See AL P. M. Handbook.
	Phytophthora Crown &	The crowns and roots	Sanitation. See the AL

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
	Root Rot	become brown and wet.	Pest Management Handbook.
Sunflower	<i>Xanthomonas axonopodis</i> pv. <i>zinniae</i>	Dark, water-soaked lesions (cankers) on stems; dieback.	Remove damaged plant; do not water by overhead sprinklers.
Sweet Potato	Fusarium Root Rot	Surface of root becomes browned and shriveled.	See AL P. M. Handbook.
Sycamore	Powdery Mildew (<i>Microsphaera</i>)	White coating develops on leaves; new leaves are deformed.	Sanitation of leaves in the fall.
	Xylella Scorch Disease	Leaf edges become browned; dieback.	Tree removal.
Thrift	Rhizoctonia Blight	Leaves develop brown spots and blotches.	Cleary's 3336 or a benomyl labeled for ornamentals will give protective control; sanitation.
Tomato	<i>Alternaria alternate</i> Leaf Spot	Small, circular, brown leaf spots.	Sanitation. See control comments for early blight.
	Bacterial Canker (<i>Corynebacterium clavibacter</i>)	Elongate brown, wet-looking lesions or cankers on stems; centers of cankers dry and look white.	Protective sprays; Sanitation. See the AL Pest Management Handbook under bacterial speck/spot.
	Bacterial Speck (<i>Pseudomonas syringae</i> pv. <i>tomato</i>)	Small, dark, greasy irregular spots on leaves and stems. A yellow halo may surround spots. Spots may merge together.	See AL Pest Management Handbook. Strict sanitation.
	Bacterial Spot (<i>Xanthomonas axonopodis</i> pv. <i>vesicatoria</i>)	Small, dark, greasy irregular spots on leaves and stems. Fruit spots are raised, brown and scabby.	See AL P. M. Handbook. Strict sanitation.
	Bacterial Wilt (<i>Ralstonia solanacearum</i>)	Rapid wilting of green plants.	Rotation. Fumigation or solarization.
	Blossom End Rot	Hard, black lesions at	See the AL P. M.

PLANTDISEASEDESCRIPTIONCONTROL

		blossom end of fruit.	Handbook.
Buckeye Rot (<i>Phytophthora</i>)	On fruits, spots are pale brown with concentric rings; spots small or large; fruit flesh decomposes.		Keep fruit off soil; Ridomil.
Colletotrichum Fruit Rot	Water-soaked, colorless rot.		Sanitation. See the AL Pest Management Handbook.
Cucumber Mosaic Virus	Leaves become thin and narrow (strap-shaped). Plants have reduced growth.		Remove damaged plants; control insects, weeds.
Early Blight (<i>Alternaria solani</i>)	Brown circular-irregular spots with target-like ring pattern.		Fungicide sprays; Sanitation in the fall.
Fusarium Wilt	Lower leaves become yellow and yellowing/wilting progresses up the plant. One sided effects may occur.		Rotation; Plant varieties resistant to Fusarium wilt.
Late Blight (<i>Phytophthora infestans</i>)	Brown lesions (blotches) on leaves/ stems.		See AL P. M. Handbook.
Leaf Mold (<i>Fulvia fulva</i>)	Gray fungal growth in blotches on leaves.		See AL P. M. Handbook.
Pith Necrosis (<i>Pseudomonas</i>)	Dieback, wilt above necrotic stem area. Internally, the stem is hollow with characteristic plant tissue threads across the hollow stem internal areas.		Sanitation. See the AL Pest Management Handbook under bacterial canker.
Potato Virus Y Group	Foliage stunted and mottled.		Sanitation. Control weeds. Control aphids.
Septoria Leaf Spot	Circular, gray leaf spots develop when temperatures are moderate in the spring.		See the S.E. Workers Vegetable Crop Handbook.
Southern Blight (<i>Sclerotium rolfsii</i>)	White fungal mat occurs at soil line where stem becomes decayed; plant		Terraclor; crop rotation.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
		die due to death of lower stem.	
	Tomato Spotted Wilt Virus	New growth becomes abnormally small, small yellow spots appear. Young leaves become bronzed in spots, patches or whole leaf areas involved. Fruit spotted. Plants wilt & die.	Sanitation; Control thrips.
	White Mold (<i>Sclerotinia</i>)	See Tomato Southern Blight.	---
Verbena	Powdery Mildew	White dusty coating on leaves; leaves yellow and later turn brown.	A benomyl product labeled for ornamentals or Cleary's 3336 or Domain.
Vinca, Catharanthus (Annual Periwinkle)	Anthracoise (<i>Colletotrichum</i>)	Brown cankers on lower stems.	See AL P. M. Handbook.
	Fusarium Crown Rot	Brown, dry rotting on stem at soil line.	Rotation or solarization.
	Phomopsis Stem Blight	A brown canker develops on stems.	Sanitation. Apply protective sprays of Cleary's 3336. See the AL P. M. Handbook.
	Phytophthora Foliage Blight	Dark brown lesions on stems and leaves; dieback.	Sanitation. Avoid wet situations. See the AL P. M. Handbook.
	Pythium/Phytophthora Crown/Root Rot	Roots become brown, water-soaked.	Sanitation. Avoid wet situations. See the AL P. M. Handbook.
	Rhizoctonia Aerial Blight	Leaves become dull green and then brown. Large areas of leaves become browned.	See AL P. M. Handbook.
	Tomato Spotted Wilt Virus	New growth is stunted. Older leaves may show black blotches.	Sanitation. Insecticides to control thrips.
Vinca Minor	Anthracoise (<i>Colletotrichum</i>)	Small-large brown blotches on leaves.	See the AL P. M. Handbook under perennial vinca.

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
Watermelon	Anthrachnose (<i>Colletotrichum</i>)	Roughly circular, black-brown lesions with irregular margins on leaves; black spots occur on fruit; lesions on stems and petioles are tan and elongated.	See the AL P. M. Handbook.
	Bacterial Fruit Blotch (<i>Acidovorax</i>)	Dark brown blotches on fruit.	Sanitation. See Ed Sikora.
	Fusarium Crown Rot	Brown dried lesions near soil line.	Plant Fusarium resistant varieties; crop rotation for 6-12 or more years.
	Fusarium Wilt	Vines become yellowed and wilted, beginning with the oldest foliage.	Rotation out of watermelon for 6-12 years.
	Gummy Stem (<i>Mycosphaerella</i>)	Elongate, brown and wet lesions form on stems; cracking. Brown-black spots may develop on leaves.	Protective fungicide sprays; Sanitation in the fall.
Wax Myrtle	Botryosphaeria Canker	Elliptical, sunken lesions with cracked edges.	Pruning.
Weeping Willow	Sphaeropsis Canker	Dieback to sunken lesions on branches.	Pruning.
Wheat	Scab (<i>Fusarium</i>)	Heads covered with pink spores.	Sanitation.
Yaupon, Dwarf	Phytophthora Root Rot	Roots become brown, water-soaked.	Sanitation.
Zinnia	Bacterial Leaf Spot (<i>Xanthomonas</i>)	Dark, water-soaked, angular spots, sometimes with a yellow halo around the spot edges.	Strict sanitation. Do not water over-head.
Zoysia	Bipolaris Blight, Leaf Spot/Crown Rot (also <i>Exserohilum rostratum</i>)	Small, brown, elongated spots on leaves and crowns.	See AL P. M. Handbook; Collect grass clippings.
	Brown Patch (<i>Rhizoctonia</i>)	See Centipede.	See Centipede.
	Dollar Spot (<i>Sclerotinia</i>)	See Bermuda	See Bermuda.
	Ring Nematode Damage	Dieback, yellowing	Eliminate stresses. See

<u>PLANT</u>	<u>DISEASE</u>	<u>DESCRIPTION</u>	<u>CONTROL</u>
	(<i>Criconemoides</i>) Rust (<i>Puccinia</i>)	thinning areas in lawn. Red-orange powdery dusting on leaf blades.	ANR-523. Collect grass clippings; Usually fungicides are not needed.
	Take-All Patch (<i>Gaeumannomyces</i>)	Scattered, individual plants yellow & die in an area; sections/areas of turf thin and yellow.	Keep soil pH near 6.0 (or slightly below), use only ammonia-based fertilizers.
Grasses	Slime Molds	White, gray, or brown thin, translucent sheet- like bodies on turf or other areas; turf may be covered by black, gray, or green powdery spores.	Physical removal; See AL P. M. Handbook.