

# TIMELY INFORMATION

## Agriculture & Natural Resources

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PP-659

### SEPTEMBER PLANT PROBLEM REPORT FROM THE AUBURN PLANT DIAGNOSTIC LAB

### SEPTEMBER PLANT PROBLEM REPORT FROM THE BIRMINGHAM PLANT DIAGNOSTIC LAB

### SEPTEMBER INSECT REPORT FROM THE AUBURN PLANT DIAGNOSTIC LAB

### DISEASE POSSIBILITIES FOR OCTOBER

#### LAB NOTES

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

September was dry across most of the state.

We received 130 plant samples in September. This number was higher than plant sample numbers in June (119), July (120) or August (99). This is unusual.

Our field crop samples included soybeans with anthracnose, pod and stem blight, bacterial pustule, bacterial leaf spot, suspect stem canker, and Asian soybean rust (mostly survey except for one sample); sorghum with anthracnose, rust, and zonate leaf spot; and peanuts with tomato spotted wilt virus, early leaf spot, and late leaf spot.

In September, Asian soybean rust was detected in 10 counties (Pike, Bullock, Elmore, Escambia, Autauga, Washington, Clarke, DeKalb, Dallas, Macon, & Lee) by Ed Sikora, Mary Delaney, Dennis Delaney and the Rust Soybean Group. Thus far in October, rust has been detected in the following counties: Sumter, Coffee, Marengo, Henry, Geneva, Dale, Perry, Chilton, Houston, Chambers, Tallapoosa, Barbour, Talladega, Tuscaloosa, Shelby, St. Clair, Pickens, Lowndes, Greene, Etowah, Cherokee, Lauderdale, Lawrence, Franklin, Limestone, Madison, Colbert, Russell, Fayette, Jackson, & Calhoun.

Vegetable samples included tomato with tomato yellow leaf curl virus (confirmed by PCR at the University of Florida), and pepper with tomato spotted wilt virus. The occurrence of the TYLCV was the first report of this virus in a field situation. It was found on transplants from Florida in 2005 and in a greenhouse in 2006 (J. Jacobi report). The 2008 occurrence was in Henry County. Plants were stunted with leaf edge yellowing and some leaves were cupped upward. White flies transmit this virus. See Ed Sikora or [www.nfiec.efas.ufl.edu/tomatohealth/forcoctober1819/tylcv/](http://www.nfiec.efas.ufl.edu/tomatohealth/forcoctober1819/tylcv/) for control.

Ornamentals samples showed a variety of diseases including the following: powdery mildew on elm and nuttall oak; *Cercospora* leaf spots on dogwood, hydrangea, and rose; phytoplasma symptoms on coneflower; *Cercosporidium sequoiae* blight on Leyland cypress; *Phytophthora* spp. (not *P. ramorum*) leaf spots on pieris, rhododendron, viburnum, star magnolia, osmanthus, camellia, mountain laurel; also *Rhizoctonia solani* aerial blight on zinnia and *Sclerotium rolfsii* on mint.

The *Phytophthora* genus leaf spots were detected with the ELISA method on 26 of the 45 leaf spot samples submitted by the Alabama Department of Agriculture Inspectors. DNA from the samples was recently sent to a USDA lab for PCR analysis to determine if any of the species were *P. ramorum*. Results were all negative for *P. ramorum*.

The only turf grass disease seen in September was large patch (brown patch) on zoysia. See ANR-492.

Table 1. 2008 September Plant Diseases Seen In the Plant Diagnostic Lab at Auburn.

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Blueberry	Botryosphaeria Canker	Tuscaloosa
	Phytophthora Crown & Root Rot	Tuscaloosa
Centipede	Brown Patch ( <i>Rhizoctonia solani</i> )	Elmore
Coneflower	Anthracnose	Lee
	Fusarium Root Rot	Elmore
	Suspect Phytoplasma	Lee
Daylily	Anthracnose ( <i>Colletotrichum</i> )	Elmore
Dogwood, Kousa	Cercospora Leaf Spot	Dekalb
	Septoria Leaf Spot	Chilton
Elm	Powdery Mildew	Elmore
Hydrangea	Cercospora Leaf Spot	Escambia
Iris	Anthracnose	Elmore
Leyland Cypress	<i>Cercosporidium sequoiae</i> Needle Blight	Randolph
Mint	Southern Blight ( <i>Sclerotium rolfsii</i> )	Calhoun
Monkey Grass	Phyllosticta Leaf Spot	Lee
Oak, Nuttall	Iron Chlorosis	*
	<i>Phyllactinia</i> sp. Powdery Mildew	*
Pine, Loblolly	Phytophthora Root Rot	*
Pepper	Tomato Spotted Wilt Virus	Bullock
Peanut	Late Leaf Spot ( <i>Cercosporidium arachidicola</i> )	Baldwin, Escambia
	Tomato Spotted Wilt Virus	Henry

<u>Plant</u>	<u>Disease</u>	<u>County</u>
Periwinkle	<i>Phytophthora nicotiana</i> Blight	Lee
Rose	Cercospora Leaf Spot	Dekalb
Rudbeckia	Anthracnose ( <i>Colletotrichum</i> )	Elmore
	Fusarium Root Rot	Elmore
Sorghum	Phytophthora Crown Rot	Elmore
Sorghum, Forage	Cercospora Leaf Spot	Baldwin
	Rust ( <i>Puccinia</i> sp.)	Baldwin
Sorghum, Grain	Anthracnose ( <i>Colletotrichum</i> )	Macon
	Zonate Leaf Spot ( <i>Cercospora</i> )	Macon
Sorghum, Sweet	Rust ( <i>Puccinia</i> sp.)	Baldwin
	Zonate Leaf Spot ( <i>Cercospora</i> )	Baldwin
Soybean	Asian Soybean Rust ( <i>Phakopsora pachyrhizi</i> )	Baldwin
	Bacterial Leaf Spot	Talladega
St. Augustine	Take-All Patch ( <i>Gaeumannomyces graminis</i> var. <i>graminis</i> )	Elmore, Mobile (2)
Tomato	Root-knot Nematode ( <i>Meloidogyne</i> sp.)	Tuscaloosa
	Tomato Yellow Leaf Curl Virus	Henry
Zinnia	<i>Rhizoctonia solani</i> Stem Blight	Lee
Zoysia	Brown Patch ( <i>Rhizoctonia solani</i> )	Montgomery

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\*Counties are not reported for greenhouse, nursery, or golf course samples.

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

We received 127 samples during the month of September. This is the largest number of samples we received in any one month this year. Usually sample numbers are winding down at this time of the year and June or July is our biggest month for samples.

Most areas received very little rain during the month of September (0.4 in. was recorded at the Birmingham Airport). September is usually one of the drier months, but this was one of the driest Septembers on record. Although we started out with good soil moisture because of rainfall from Hurricane Faye in late August, soils quickly dried out because of the lack of rain.

Some of the most unusual plant problems seen last month included crown gall on blackberry, Southern blight on creeping Jenny and Scaveola, Velvet blue spread on a dead oak branch, and cucumber mosaic virus on green and hot peppers.

Velvet blue spread (*Pulcherricium caeruleum*) is a fungus that resembles blue velvet upholstery or felt and grows on dead oak and hardwood branches. It is definitely one of the more colorful fungi around. See the following web page for pictures and information about this fungus: [http://botit.botany.wisc.edu/toms\\_fungi/july2000.html](http://botit.botany.wisc.edu/toms_fungi/july2000.html).

The rainfall at the end of August from Hurricane Faye caused an increase in the numbers of fairy rings in lawns, golf courses and parks. The most common we saw was the green-spored Lepiota (*Chlorophyllum molybdites*), a poisonous mushroom. Turfgrass damage was minimal, in most cases. But for information on the green-gilled Lepiota and fairy rings in turfgrass, see the following web publications: [http://botit.botany.wisc.edu/toms\\_fungi/aug99.html](http://botit.botany.wisc.edu/toms_fungi/aug99.html), [http://www.uaex.edu/Other\\_Areas/publications/PDF/FSA-7539.pdf](http://www.uaex.edu/Other_Areas/publications/PDF/FSA-7539.pdf).

Table 2. 2008 September Problems Seen In The Birmingham Plant Diagnostic Lab.

<u>Plant</u>	<u>Problems</u>	<u>County</u>
African Violet	Broad Mite	Jefferson
Apple	Cedar-Apple Rust	Jefferson
Aucuba	False Spider Mites	Jefferson
Azalea	Azalea Lacebug	Jefferson(2)
Azalea, Native	Botryosphaeria Canker	Shelby
Bentgrass	Anthracnose	*
Bermudagrass	Bipolaris Leaf Spot	Blount
Blackberry	Crown Gall ( <i>Agrobacterium</i> )	Marion
Boxwood, Common	Black Twig Borer	Jefferson
	Boxwood Leafminer	Jefferson(2)

<u>Plant</u>	<u>Problems</u>	<u>County</u>
	Macrophoma Leaf Spot	Madison
Boxwood, English	Phytophthora Root Rot	Jefferson
Cantaloupe	Alternaria Leaf Spot	Jackson
Cherrylaurel	Southern Red Mites	Jefferson
Cotoneaster	White Peach Scale	Jefferson
	Armillaria Root Rot	Jefferson
Creeping Jenny	Rhizoctonia Crown and Stem Rot	Jefferson
	Southern Blight ( <i>Sclerotium</i> )	Jefferson
Cypress, Leyland	Maskell Scale	Jefferson
Dogwood, Flowering	Black Twig Borer	Jefferson (2)
Dogwood, Kousa	Cercospora Leaf Spot	Jefferson
Indian Hawthorn	Entomosporium Leaf Spot	Jefferson
Elm	Twig Girdler	Jefferson
Euonymus, Japanese	Anthrachnose ( <i>Colletotrichum</i> )	Jefferson
	Euonymus Scale	Jefferson
Fern, Japanese Painted	Rhizoctonia Crown Rot	Jefferson
Hackberry	Asian Woolly Hackberry Aphid	Jefferson
	Sooty Mold	Jefferson
Holly, Chinese	Anthrachnose ( <i>Colletotrichum</i> )	Madison
Hosta	Anthrachnose ( <i>Colletotrichum</i> )	Jefferson
Hydrangea, Bigleaf	Cercospora Leaf Spot	Jefferson (2)

<u>Plant</u>	<u>Problems</u>	<u>County</u>
Hydrangea, Oakleaf	Phytophthora Root Rot	Jefferson
Ivy, English	Phytophthora Root Rot	Shelby
Jasmine, Florida	Phytophthora Root Rot	Jefferson
Lavender	Phytophthora Root Rot	Jefferson
Lily, Canna	Lesser Canna Leafroller	Jefferson
Leucothoe, Coastal	Powdery Mildew	Jefferson
Maple, Japanese	Leaf Scorch	Jefferson
Maple, Red	Discula Anthracnose	Shelby/Tuscaloosa
	Sooty Mold	Shelby
Petunia, Mexican	Wax Scale	Jefferson
Oak, Pin	Bacterial Leaf Scorch	Jefferson
Oak, White	Velvet Blue Spread (Saprohyte)	Shelby
Orange	Citrus Mealybug	Jefferson
Passionflower	Passion Vine Butterfly	Jefferson
Peach	Armillaria Root Rot	Chilton
Peony	Cladosporium Stem and Leaf Blotch	Jefferson
Pepper	Cucumber Mosaic Virus	Marion
Persimmon, Japanese	Stink Bug Injury	Jefferson
Rose	Armillaria Root Rot	Jefferson
Rosemary	Root Rot, Undetermined	Jefferson
	Southern Purple Mint Moth	Jefferson (2), Shelby (2)

<u>Plant</u>	<u>Problems</u>	<u>County</u>
Scaevola	Southern Blight	Jefferson
Sugarberry	Asian Woolly Hackberry Aphid	Jefferson
Tomato	Early Blight	Jefferson
	Tomato Spotted Wilt Virus	Jefferson
	Two-Spotted Spider Mites	Jefferson (2)
Verbena	Aphids	Jefferson
	False Spider Mites	Jefferson
Zoysia	Fairy Ring ( <i>Chlorophyllum</i> )	Jefferson (2)
	Ground Pearls	Lauderdale
	Take-all Root Rot	Jefferson
	Two-Lined Spittlebugs	Jefferson

\*Counties are not reported for nursery, greenhouse, and golf courses samples.

Auburn Entomology Report-September (C. Ray)

County	Host	Category	Identification	Scientific Name
Mobile		Miscellaneous	Swamp Milkweed Leaf Beetle	<i>Labidomera clivicollis</i>
Elmore	Home	Household-Miscellaneous	Flesh Flies	<i>Sarcophaga</i> sp.
Lee	Clematis	Ornamental	Leafhopper Burn	Cicadellidae
Lee	Petunia	Ornamental	Flower Thrips, Flat Mites, Spider Mites and possibly Snail Damage	<i>Frankliniella</i> sp., <i>Brevipalpus</i> sp., & <i>Tetranychus</i> sp.
Clarke	Buildings	Household-Miscellaneous	Sugarcane Beetle	<i>Euethola humilis</i>
Mobile	Buildings	Household-	Sugarcane Beetle	<i>Euethola humilis</i>



County	Host	Category	Identification	Scientific Name
		Miscellaneous		
Etowah	Figs	Fruits & Nuts	Sap Beetles	<i>Carpophilus</i> sp.
Shelby	Home	Household-Miscellaneous	A Checkered Beetle	<i>Cymatodera</i> sp.
Lee	Lawn	Household-Miscellaneous	An Ant	<i>Trachymyrmex septentrionalis</i>
Lee	Lawn	Household-Miscellaneous	Ants	<i>Paratrechina virdula</i> , <i>Trachymyrmex septentrionalis</i> & <i>Solenopsis</i> sp. probably <i>invicta</i>
Lee	Lawn	Household-Miscellaneous	Ants	<i>Dorymyrmex elegans</i> & <i>Solenopsis invicta</i>
Lee	Lawn	Household-Miscellaneous	An Ant	<i>Solenopsis</i> probably <i>invicta</i> (no majors present)
Mobile		Miscellaneous	Orchard Spider	<i>Leucauge venusta</i>
Jefferson	Lawn	Household-Miscellaneous	A Spider Wasp	Pompilidae
Jefferson	Home	Household-Miscellaneous	Hatchling Smokey Brown Cockroaches, Juvenile House Centipedes, Maize Weevil, Ring-Legged Earwigs, Juvenile Orb-Weaver, Jumping Spider, Ground Spider A, Ground Spider B	<i>Periplaneta fuliginosa</i> , <i>Scutigera coleoptrata</i> , <i>Sitophilus zeamais</i> , <i>Euborellia annulipes</i> , Araneidae, Salticidae, <i>Trachelas</i> sp., <i>Metaltella simoni</i>
Tuscaloosa	Home	Household-Miscellaneous	A Bumblebee	<i>Bombus impatiens</i>

County	Host	Category	Identification	Scientific Name
Tuscaloosa	Muscadine Grapes	Fruits & Nuts	A Bumblebee	<i>Bombus impatiens</i>
Houston		Miscellaneous	Orchard Spider	<i>Leucauge venusta</i>
Houston	Home	Household-Miscellaneous	Aphodiine Dung Beetles	<i>Ataenius</i> sp.
Houston		Miscellaneous	Wolf Spiders	<i>Hogna</i> ? sp.
Calhoun	Beans/Peas	Row Crops	Juvenile Stink Bug	Pentatomidae
Dallas	Japanese Maple	Ornamentals	Polyphemus Moth Larva	<i>Telea polyphemus</i>
Montgomery	Rosemary	Miscellaneous	Southern Purple Mint Moth	<i>Pyrausta laticlava</i>
Bullock		Miscellaneous	Hickory Horned Devil	<i>Citheronia regalis</i>
Limestone	Dog Feces?	Miscellaneous	Masked Chafer Grub	<i>Cyclocephala</i> sp.
Hale	Azalea	Ornamental	Azalea Lace Bug	<i>Stephanites pyrioides</i>
Clay		Miscellaneous	A Twig Ant	<i>Pseudomyrmex pallidus</i>

#### Disease Possibilities For October

We expect to continue to see incidences of soybean rust on soybean and kudzu on senescing or pre-senescent foliage. To this date (Oct. 20), soybean rust has been found in 51 counties during 2008. For more information, see [www.sbrusa.net](http://www.sbrusa.net).

In October, we 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 pansies in the fall, watch for Thielaviopsis black root rot on pansies and Myrothecium crown rot. See page 25 for more on pansy diseases.

Helminthosporium-type leaf spots are common on grasses in the fall when temperatures are in the 60-70°C range.

Cercospora or Cercospora leaf spots are common problems 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 2008 Pest Management Handbook or the 2008 Southeastern Vegetable Extension Workers Vegetable Crop Handbook.

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 AL Pest Management Handbook or individual spray guides or fact sheets for details.

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

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Amaranth	Pythium Damping Off	Plants collapse due to a soft, wet rot or stem at soil line.	Sanitation. Improve soil drainage. Reduce irrigation.
Apple	Botryosphaeria Canker	Slightly sunken, cracked lesion.	Pruning.
Arbor-vitae	Botryosphaeria Dieback	Dry, cracked, sunken lesions on branches.	Pruning.
	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.
Aster	Phoma Blight	Tip dieback.	Sanitation; Cleary's 3336 may give protective control; eliminate stress situations.
	Rust	Small yellow leaf spots followed by small orange-colored powdery masses that develop in centers of the spots. Eventually, spots turn brown. If disease is severe, infected	Sanitation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		leaves will turn completely brown.	
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 labeled on ornamentals may help.
Azalea	Anthracnose ( <i>Colletotrichum</i> ) Cercospora Leaf Spot	Circular-irregular light brown colored leaf spots. Brown circular or angular leaf spots of variable size.	See the AL Pest Management Handbook. See the AL 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.
Azalea Liners and Container	Phytophthora Root Rot	Brown, water-soaked dying roots.	Sanitation. See AL Pest Management Handbook.
	Rhizoctonia Root Rot	Brown, dried dying roots.	Sanitation. See AL Pest Management Handbook.
Bahia	Bipolaris Leaf Spot	Small, brown, elongated brown spots.	Frequent harvest.
Basil	Rhizoctonia Stem Rot	Brown, dry decay (lesions) on lower stems.	Sanitation. Crop rotation. Deep turn soil.
Begonia	Pythium Root Rot	Roots become light brown, water-soaked, decayed. Plant foliage will wilt, yellow, and dieback.	Sanitation. See the AL 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 AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Pythium Blight	Patches of turf become water-soaked and brown.	See the AL Pest Management Handbook.
	Pythium Root Rot	Roots become water-soaked and light brown.	See the AL Pest Management Handbook.
	Rhizoctonia Blight	Foliage blight.	See the AL Pest Management Handbook.
	Spiral Nematode Damage	Patches of turf yellow and dieback; roots are poorly developed with poor feeder root development.	Maintain good turf management practices. See ANR-523. There are no pre- or post plant nematicides labeled for home use except for Clandosan. See the AL Pest Management Handbook.
Bermuda	Bipolaris and Helminthosporium Leaf Spot ( <i>Drechslera</i> )	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 AL Pest Management Handbook.
	Brown Patch ( <i>Rhizoctonia</i> )	Browning patches in lawn; brown irregular leaf spots.	Sanitation. See the AL Pest Management 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 AL Pest Management Handbook.
	Ring Nematode ( <i>Criconemoides</i> )	Patches or areas of turf become yellowed.	See the AL Pest Management Handbook.
	Rust ( <i>Puccinia</i> )	Orange, powdery dusting on leaves; affected areas develop into brown blotches.	See ANR-621 and the AL Pest Management Handbook.
	Sting Nematode ( <i>Belonolaimus</i> )	Patches or areas of turf become yellowed.	See the AL Pest Management Handbook.
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	Frequent cutting; maintain good fertility, especially with potassium levels.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		numerous.	
Birch, River	Anthrachnose ( <i>Cryptocline</i> )	Leaf spots and blight; lesions often occur along leaf veins.	Remove all fallen leaves in the fall.
Bird of Paradise	Pythium Root Rot	Foliage wilts; lower leaves become yellow-brown. Roots become light brown and soft rotted.	Sanitation. Eliminate wet soil conditions.
Blackberry	Coniothyrium Cane Blight	Reddish brown sunken lesions.	Sanitation.
	Septoria Leaf Spot	Circular or almost circular cream colored spots with red borders.	Sanitation. See the AL Pest Management Handbook.
Black-Eyed Susan	Bacterial Leaf Spot	Small, dark, angular leaf spots with dark, wet-looking edges.	Sanitation. Do not water over-head.
Boxwood	Macrophoma Leaf Spot	Leaves turn yellow with numerous small black spots; leaf drop follows; dieback.	Follow recommended horticultural practices to maintain healthy boxwoods. Prune out dieback areas of plant. See the AL Pest Management Handbook.
	Phytophthora Root Rot	Foliage dieback and wilt. Roots become brown and soft rotted.	Remove damaged plants. Improve soil drainage and/or reduce irrigation. For commercial situations, see the AL Pest Management Handbook under Phytophthora.
	Pythium Root Rot	Foliage dieback & wilt. Roots become light brown & soft-rotted.	Remove stress situations if appropriate. See Phytophthora Root Rot above.
	Volutella Blight	Brown stem cankers and leaf blight; orange wet spore masses.	Sanitation; Cleary's 3336; remove stress.
Cabbage	Pythium Damping-Off	Water-soaked, slightly discolored lower stem areas. Small plants collapse at the lower stem rot area.	Sanitation. Reduce irrigation if appropriate.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
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.
Camellia	Phyllosticta Leaf Spot	Brown, circular-slightly irregular leaf spots.	Sanitation.
Camellia, Japonica	Canker ( <i>Gloemerella cingulata</i> )	Sunken elliptical-oval shaped lesions on branches; dieback.	Pruning off dieback branch sections. Cleary's 3336 or Halt will provide protective disease control.
Camellia, Sasanqua	Colletotrichum Leaf Spot and Dieback	Leaf spots and small, sunken, cracked lesions are stems; dieback.	Pruning, leaf sanitation; Cleary's 3336 or Halt as protective treatment if desired.
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.
Cedar, Eastern Red	Kabatania Tip Blight	Needles turn brown; usually inner needles affected first.	Sanitation.
Celosia	Root Knot Nematode ( <i>Meloidogyne</i> )	See ANR-689.	Crop rotation. See ANR-689.
Centipede	Anthracnose	Leaf spots present. Usually this disease is not severe.	Cleary's 3336 or Halt. See the AL Pest Management Handbook.
	Brown Patch ( <i>Rhizoctonia</i> )	Browning patches in lawn; brown, irregular leaf spots.	Sanitation; See AL Pest Management Handbook.
	Sheath & Ring Nematode Problems	Patches or areas of turf become yellowed.	See the AL Pest Management Handbook.
Chrysanthemum	Take-All Patch ( <i>Gaeumannomyces</i> )	Areas or patches of turf become thinned as individual plants yellow and die.	See the AL Pest Management Handbook.
	Alternaria Blight	Dark brown, irregular spots on foliage.	Sanitation; See AL 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 AL Pest Management Handbook under Fusarium wilt.
	Pythium Root Rot	Foliage wilts; dieback; lower leaves become yellow-brown. Roots become light brown and soft rotted.	Remove damaged plants. See the AL Pest Management Handbook.
	Stem Blight, <i>Pseudomonas syringae</i> and <i>Erwinia carotavora</i>	Black, wet rotting of stem.	---
Cherry, Ornamental	Cercospora Leaf Spot	Irregular-circular brown leaf spots.	Sanitation of leaves in the fall.
Cleyera	Phytophthora Root Rot	Foliage yellowing & dieback. Roots become brown, wet, and decayed.	Sanitation. Reduce water availability.
Coleus	Anthracnose ( <i>Colletotrichum</i> )	Circular-irregular brown lesions on foliage.	Sanitation; Cleary's 3336.
	Root Knot Nematode ( <i>Meloidogyne</i> )	See ANR-689.	Sanitation. See ANR-689.
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.
	Rhizoctonia & Fusarium Stem Rot	Brown, dry spots and cankers on stems, usually lower stems; foliage dieback.	Remove damaged plants. Crop rotate.
Coreopsis	Anthracnose ( <i>Colletotrichum</i> )	Round or oval, brown leaf spots; stem cankers.	Sanitation. Protective sprays of Cleary's 3336 or Halt.
Crape Myrtle	Cercospora Leaf Spot	Brown angular leaf spots of variable size.	Sanitation and protective sprays of Cleary's 3336.
	Powdery Mildew	White, powdery, dusty	See the AL Pest



<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		patches on foliage; later leaf blotch develops.	Management Handbook.
Cryptomeria	Phomopsis Tip Blight	Tips of twigs turn yellow then brown after twig cankers form. Disease generally begins with lower foliage.	----
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.	Sanitation. See the AL Pest Management Handbook.
Cypress, Italian	Seiridium Canker	Dieback; sunken, cracked cankers on branches; resin ooze.	Sanitation. See AL Pest Management Handbook and ANR-1160.
Cypress, Leyland	Botryosphaeria Canker	Elongated, sunken, cracked, elliptical cankers.	Pruning.
	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.
	Seiridium Canker	Sunken lesions on stem/branches.	Sanitation.
Dahlia	Botrytis Leaf Blight	Brown leaf spots and blotches develop.	Sanitation of damaged foliage. Improve air circulation. Cleary's 3336 or Halt may be used.
Daisy, Gerbera	Powdery Mildew	White, powdery dusting on leaf surfaces.	See ANR-407. Clean up dead leaves in the late fall. Removed damaged plants. Reduce irrigation & improve drainage.
Daphne, Winter	Phytophthora Root Rot	Foliage dieback, wilt and yellowing of lower foliage. Roots become brown and soft rotted.	Remove damaged plants. Reduce irrigation and improve drainage.
Daylily	Rust ( <i>Puccinia hemerocallidis</i> )	Leaves develop small yellow spots or flecks. Yellow spots become covered with orange powdery masses. Leaves	Sanitation. Banner Maxx and Heritage are effective fungicides for protective disease control in commercial situations. In

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		eventually die.	homeowner situations, Ferti-loam System Fungicide and Spectricide Immunoz may be applied to help provide protective disease control.
Dianthus	Pythium Crown & Root Rot	Lower stem and roots become dark, and water-soaked. Foliage dieback, wilt and yellow-brown lower foliage.	See the AL Pest Management Handbook.
	Rhizoctonia Crown Rot	Lower stems become brown and dry rotted.	Sanitation. See the AL Pest Management Handbook.
Dogwood	Cercospora Leaf Spot	Small (3-5 mm), brown, irregular spots scattered over leaf surfaces.	Sanitation.
	Phyllosticta Leaf Spot	Small, light brown, cream-colored spots with dark brown borders develop on leaves.	Sanitation.
Eleagnus	Phytophthora Root Rot	Roots become brown, water-soaked, and decayed. Foliage develops dieback and older leaves turn yellow.	Sanitation. Correct wet situations. Subdue may be used in nursery situations, following label directions.
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.
Fern, Bird's Nest	Aphelenchoides Foliar Nematode	Foliar blight blotches spreading upward from the frond bases.	Sanitation. See the AL Pest Management Handbook.
Fern, Boston	Anthracnose	Medium brown, irregular leaf spots, blotches.	Sanitation. Cleary's 3336 may be used.
	Pythium Root Rot	Outer root cortex easily slips from inner core; plants yellow and dieback.	Sanitation. See AL Pest Management Handbook.
Fern, Shaggy Shield	Anthracnose ( <i>Colletotrichum</i> )	Light-dark brown foliage blotches.	Sanitation. See the AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Fern, Tassell	Anthracnose ( <i>Colletotrichum</i> )	Light-dark brown foliage blotches.	Sanitation. See the AL Pest Management Handbook.
	Cercospora Blight	Foliar spots and blight.	Sanitation. See the AL Pest Management Handbook under “Leaf Spot and Anthracnose”.
Fescue	Anthracnose	Light brown leaf spots and blotches.	See the AL Pest Management Handbook for brown patch control.
	Helminthosporium Leaf Spot	Small, brown elongated spots (1 or 2 x 3 or 4 mm.)	See the AL 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.
Gardenia, Dwarf	Phytophthora Root Rot	Roots become brown, water-soaked, and rotted; foliage dieback.	Sanitation; remove wet conditions. See AL Pest Management Handbook.
Geranium	Botrytis Blight	Gray-brown decay of blossoms and leaves.	Sanitation. See the AL Pest Management Handbook.
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	Anthracnose	Black circular or irregular leaf spots.	Sanitation. Cleary’s 3336 or Halt may help provide protection.
	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 AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phytophthora Root Rot	Foliage dieback; lower foliage yellowing; roots become wet rotted and brown.	Sanitation. Reduce water levels in the area. See AL Pest Management Handbook and ANR-1087.
Holly, Inkberry	Anthracnose ( <i>Colletotrichum</i> )	Brown, circular-irregular spots.	Sanitation. Cleary's 3336 protective sprays, if desired.
Holly, Japanese	Armillaria Root Rot	Branch dieback; decay of roots or lower trunk; black fungal threads on the surface of roots or bark; white, thin fungal mat under bark; light brown mushroom.	Remove tree and roots.
	Black Root Rot ( <i>Thielaviopsis basicola</i> )	Roots develop black lesions and root tips; plants show poor growth and development; yellowing of lower foliage.	Sanitation. See AL Pest Management Handbook.
	Botryosphaeria Canker	Sunken elliptical shaped lesions on branches.	Pruning.
Holly, Yaupon	Colletotrichum Dieback	Leaf spot and twig/branch cankers; dieback.	Pruning; see the AL 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	Bacterial Leaf Spot	Angular, black, water-soaked spots.	Sanitation. Do not irrigate overhead.
	Cercospora Leaf Spot	Brown angular leaf spots of variable size.	Sanitation. See the AL Pest Management Handbook.
	Powdery Mildew	White, powdery dusting on leaves.	See ANR-407.
Hydrangea, Big Leaf	Corynespora Leaf Spot	Usually light brown circular, oval spots sometimes with target pattern.	Sanitation; Cleary's 3336, Halt, or Daconil may be used as protective sprays.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Impatiens	Alternaria Leaf Spot	Brown, oval leaf spots.	Sanitation.
	Pythium Crown Rot	Lower trunk becomes brown and soft-decayed.	Sanitation; correct wet soil problem; see AL Pest Management Handbook.
Iris, Japanese	Rhizoctonia Root Rot	Brown, dry root lesions and root rot develops.	Sanitation. PCNB, Cleary's 3336, or Halt may help provide protection from infection.
Ivy, English	Anthracnose ( <i>Colletotrichum</i> )	Irregular brown leaf spots (3-10 mm diam.) and dark brown elliptical lesions on stems.	Sanitation; See AL Pest Management Handbook.
	Phytophthora Stem, Root, and Leaf Rot	Brown, water-soaked dying stems, roots, leaf area.	Sanitation. See the AL Pest Management Handbook.
Jasmine	Phytophthora Root Rot	Dieback; roots become soft rotted and brown.	Sanitation; reduce water levels in the soil.
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 AL 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.
Juniper, Creeping	Phytophthora Root Rot	Dieback; yellowing of lower foliage; roots become brown and soft rotted.	See AL Pest Management Handbook and ANR-1173.
Kiwi	Alternaria Leaf Spot	Brown, irregular, small-large (2-5 mm spots).	Sanitation.
Kudzu	Asian Soybean Rust	Small, angular brown leaf spots; light orange specks may be present on surface	----

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		of spots.	
Lantana	Bacterial Leaf Spot ( <i>Xanthomonas</i> )	Dark brown or black, angular spots, sometimes with yellow border.	Sanitation. Do not irrigate overhead.
Leucothoe	Botryosphaeria Leaf Spot	Brown, circular-angular leaf spots & blotches.	Sanitation. Cleary's 3336 may be used.
	Colletotrichum Leaf Spot	Circular-oval, brown leaf spots & blotches.	Sanitation. Cleary's 3336 may be used.
	<i>Phytophthora cinnamomi</i> Root Rot	Roots develop a brown, water-soaked root decay. Plants develop dieback and yellowing of lower foliage.	Sanitation. Remedy wet soil conditions.
Leyland Cypress	Botryosphaeria Canker	Sunken, cracked lesions on branches & trunk.	Prune out cankers, making cuts 3 inches beyond damage. Dip shears into alcohol between cuts.
	Cercosporidium Blight	Dieback; sunken cankers with resin oozing.	See the AL Pest Management Handbook.
Liriope	Anthracnose ( <i>Colletotrichum</i> )	Leaf spots and leaf blight.	Sanitation of spotted leaves; Cleary's 3336 or Halt may help protect foliage.
Loquat	Anthracnose ( <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.
Magnolia, Japanese	Botryosphaeria Leaf Spot	Brown, circular-angular leaf spots & blotches.	Sanitation. Cleary's 3336 may be applied as protective spray treatments.
	Colletotrichum Leaf Spot	Circular-oval, brown leaf spots & blotches.	Sanitation. Cleary's 3336 may be applied as protective spray treatments.
	Phyllosticta Leaf Spot	Brown, circular leaf spots sometimes with dark brown margins.	Sanitation. Cleary's 3336 may be applied as protective spray treatments.
	Powdery Mildew	Leaves develop a powdery white dusting or coating	Sanitation of fallen leaves. Prune to help decrease

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		on upper leaf surfaces or young twig surfaces, buds. New leaves may be distorted.	humidity levels.
Magnolia, Southern	Algal Leaf Spot	Circular green or reddish green, slightly raised spots with wavy edges.	Usually not a serious problem. See AL Pest Management Handbook.
	Phyllosticta Leaf Spot	Circular to oval light colored spots with dark brown margins.	Sanitation. See the AL Pest Management Handbook.
	Pythium Root Rot	Roots become light brown, water-soaked, rotted. Foliage shows wilt, dieback, yellowing of older leaves, leaf edge scorch.	Sanitation. Reduce soil water levels. See the AL Pest Management Handbook.
	Rhizoctonia Root Rot	Roots become brown and dry rotted. Foliage shows wilt, dieback, yellowing of older leaves, leaf edge scorch.	Sanitation.
Maple	Anthracnose ( <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.
	Phyllosticta Leaf Spot	Circular brown spots with dark brown or purple margins.	Sanitation in the fall.
Maple, Red	Botryosphaeria Crown Rot	Sunken, cracked, brown area at base of trunk.	Tree removal.
	Tar Spot ( <i>Rhytisma</i> )	Black, hard, irregularly-shaped leaf spots.	Sanitation.
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.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Muscadine	Anthracnose ( <i>Colletotrichum</i> )	Circular gray-white spots with black margins; shot holes.	See AL Pest Management Handbook.
Mustard	Black Rot ( <i>Xanthomonas campestris</i> pv. <i>campestris</i> )	Black v-shaped spots at leaf edges; eventually lower stems become rotted and black under surfaces.	Sanitation. Crop rotation away from crucifers for 2 years.
	Cercospora Leaf Spot	Light brown, irregular spots (3-10 mm) on foliage.	Sanitation; rotation.
Nandina, Dwarf	Tylenchus Nematode Root Damage	Plants are stunted.	Plant removal. See A. Hagan.
Oak	Anthracnose	Small-large, brown spots/blotches on leaves; some blotches follow along veins.	Sanitation of fallen leaves in fall.
Oak, Over-Cup	Fusiform Rust ( <i>Cronartium quercuum</i> fusiforme)	Small, black, circular spots develop on leaves. In the spring, tiny orange spore masses (urediospores) develop on the surface of the leaf spots. Also brown thread-like structures (teliospores) protrude from the spots on lower leaf surfaces in early-mid summer.	Sanitation of fallen leaves; removal of infested pine trees or branches with canker.
Oak, Nuttall	Phytophthora Root Rot	Dieback, wilt. Roots become brown and rotted.	Tree removal. Improve soil drainage. In nurseries, see the AL Pest Management Handbook.
Oak, Pin	Xylella Scorch Disease	Dieback with leaf edge scorch.	Sanitation.
Oak, Red	Hypoxylon Canker	Hard gray or black fungal bodies (flattened, thick, stromatic masses of fungal tissue [stroma]) develop under the bark on trunks or branches. The swollen stromatic growth causes bark to break apart and fall off of the tree, exposing the gray or black, hard stroma.	Sanitation.



<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Powdery Mildew	White or buff-colored dusting on leaves. Some leaf yellowing.	Sanitation.
	Xylella Bacterial Scorch ( <i>Xylella fastidiosa</i> )	Leaf edge scorch on older foliage initially; dieback, tree death.	Remove tree.
Oak, Water	Botryodiplodia Canker	Sunken, elliptical-oval lesions, often with cracked margins.	Sanitation. Make cuts approximately 4 inches beyond the edge of the cankers.
	Taphrina Leaf Blister	Light brown or gray, puckered leaf spots or 'blisters'.	Sanitation. See the AL Pest Management Handbook.
Okra	Alternaria Leaf Spot	Brown, circular-oval leaf spots.	Sanitation.
	Root Knot Nematode ( <i>Meloidogyne</i> )	Poor foliage growth; irregular galls develop on roots.	Sanitation. Crop rotation to a root knot resistant vegetable variety.
Orchid, <i>Oncidium</i> sp.	Colletotrichum Leaf Spot	Brown irregular spots.	Sanitation; Cleary's 3336.
Oxalis	Anthrachnose ( <i>Colletotrichum</i> )	Round or oval, brown leaf spots and stem spots.	Sanitation. Cleary's 3336 sprays may be applied as a protective measure.
Pansy	Anthrachnose ( <i>Colletotrichum</i> )	Brown stem lesions (cankers) on lower stems. Also brown circular-irregular leaf spots of variable size.	Sanitation; See the AL Pest Management Handbook.
	Cercospora Leaf Spot	Leaf spots are black, circular areas of feathery patterned discoloration.	Sanitation. See AL Pest Management Handbook.
	Myrothecium Crown Rot	Crowns brown and decaying with tiny black capped white spore masses.	Sanitation. See AL Pest Management Handbook.
	Phytophthora Root/Crown Rot	See description for Pythium.	See Pythium.
	Pythium Crown and Root Rot	Light-medium brown, water-soaked crowns and roots.	Sanitation; See AL Pest Management Handbook.
	Thielavopsis Root Rot	Black spots (lesions) on roots; plants stunted; lower leaves yellowed.	Sanitation; See the AL Pest Management Handbook.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Pea, Field	Cercospora Leaf Spot	Light brown, circular or irregularly shaped spots.	Sanitation. Remove severely damaged plants. See Ed Sikora.
Peanuts	Rhizoctonia Limb Rot	Large dead sections on stems.	See A. Hagan.
	Root Knot Nematode ( <i>Meloidogyne</i> )	Poor growth; dieback; galls on roots.	See Austin Hagan.
Pear	Anthracnose Fruit Rot ( <i>Colletotrichum</i> )	Sunken spots.	See AL Pest Management Handbook.
Pear, Bradford	Colletotrichum Leaf Spot	Round or oval brown spots.	Collect and remove all fallen leaves from the area this fall.
Pear, Callery	Anthracnose Leaf Spot	Circular brown spots.	Sanitation.
Pecan	Powdery Mildew	White or light gray-colored dusting or coating of upper leaf surfaces, twig tips, and buds. Infected areas become blighted. Some leaf deformity of new leaves.	Sanitation of fallen leaves in the fall. See the AL Pest Management Handbook.
	Scab ( <i>Cladosporium</i> )	Spots begin an olive roughened spots. Older spots are brown-black colored, again with a roughened surface.	See ANR-50 (Homeowners) or the AL Pest Management Handbook.
	Sooty Mold	A dry, thin, black coating on leaf and twig surfaces.	Control insects such as aphids or scales.
Peony	Leaf Spot ( <i>Cladosporium</i> )	Spots begin an olive roughened spots. Older spots are brown-black colored, again with a roughened surface.	Sanitation. Cleary's 3336 or Halt will provide some protective disease control.
Pepper	Anthracnose Fruit Rot	Soft, colorless, watery depressed spots on fruit.	Sanitation. See the AL Pest Management Handbook.
	Early Blight ( <i>Alternaria</i> )	Circular-oval brown lesions; sometimes zonate.	See AL Pest Management Handbook.
Periwinkle ( <i>Vinca</i> )	Phytophthora Aerial Blight	Sections of foliage become blighted. Stems develop brown lesions.	Sanitation.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phytophthora Root Rot	Roots become brown, soft and rotted.	Sanitation.
	Pythium Root Rot	Roots become brown, soft & rotted.	Sanitation.
	Stem Canker ( <i>Colletotrichum</i> ); May be secondary	Sections of lower stems become brown and dead.	Sanitation; Cleary's 3336.
Petunia	Phytophthora Root & Crown Rot	Lower stems and roots become brown and wet rotted. Plants wilt and collapse.	Sanitation, remove plants. Remove root-associated soil. Reduce irrigation.
Pine, Virginia	Lophodermium ( <i>Ploioderma</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 AL Pest Management Handbook.
Pittosporum	Phytophthora Root Rot	Foliage wilt and dieback; roots become brown, soft, and rotted.	Remove dying plants. Reduce water levels in the area, if appropriate. See the AL Pest Management Handbook.
Poinsettia	Bacterial ( <i>Erwinia</i> ) Stem Rot	Black, water-soaked spots or lesions on stems. Lesions may girdle stems.	Sanitation; pot-level irrigation; See AL Pest Management Handbook.
	Fusarium Root and Lower Stem Rot	Roots and lower stems become reddish-brown, dried and dead.	Sanitation; Banrot drenches.
	Pythium Stem and Root Rot	Lower stems and roots become medium brown, soft, water-soaked and rotted.	See AL Pest Management Handbook.
	Rhizoctonia Stem Rot & Root Rot	Lower stems develop dry, medium-dark brown surface lesions; roots may become brown and dried.	See AL Pest Management Handbook. Use Cleary's 3336 or Topsin M.
	Rhizopus 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.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
Poplar	Anthracoze	Brown, circular-irregular leaf spots which may follow along leaf veins.	Sanitation of fallen leaves in the fall.
Poppies, Iceland	Rhizoctonia Root Rot	Dieback, wilt, yellowing of lower foliage. Roots become brown and dry rotted.	Remove damaged plants. Remove root-associated soil.
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.
	Plectosporium Blight	Light brown, corky, raised, irregularly-shaped lesions on fruit, stems, petioles.	Sanitation.
	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 WP benomyl (not Benlate).
	Phytophthora Crown Rot	Dark brown, wet decay at lower stem area.	Sanitation. See AL Pest Management Handbook.
	Pythium Crown Rot	Dark brown, wet decay at lower stem area.	Sanitation. See AL Pest Management Handbook.
Rose	Black Spot ( <i>Diplocarpon rosa</i> )	Black, circular spots with irregular (feathery) edges; spotted leaves turn yellow and drop.	Sanitation of fallen leaves. See ANR-401 and the AL Pest Management Handbook.
	Cercospora Leaf Spot	Brown angular leaf spots of variable size.	Sanitation; See the AL Pest Management Handbook under black spot.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Phomopsis Cane Canker	Brown spindle-shaped sunken lesions.	Sanitation.
	Powdery Mildew	White, dusty blotches on leaves & canes; later areas become necrotic.	See the AL Pest Management Handbook.
Rosemary	Fusarium Root Rot	Roots become dry rotted. Foliage dieback.	Sanitation. Crop rotation.
	Pythium Root Rot	Roots become slightly discolored and wet rotted; foliage dieback.	Sanitation. Correct a wet soil problem.
Ryegrass	Brown Patch	Browning patches in the lawn; brown irregular leaf spots on grass blades.	See the AL Pest Management Handbook.
	Gray Leaf Spot	Gray irregular spots of variable size. Whole leaf blades may be blighted.	See the AL Pest Management Handbook.
	Pythium Blight	Patches of turf become water-soaked and brown.	See the AL Pest Management Handbook.
Smoke Tree	Cercospora Leaf Spot	Brown, circular or irregular leaf spots.	Collect and remove all fallen leaves in the fall-winter.
Snake Root ( <i>Eupatorium</i> )	Impatiens Necrotic Spot Virus	Foliage becomes discolored with mottled and necrotic areas on leaves.	Sanitation. Control thrips.
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.
	Asian Soybean Rust	Very small angular brown spots; sometimes orange specks develop on spot surface.	Consult with Ed Sikora.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
	Cercospora Leaf Spot ( <i>C. saji</i> na, frog-eye leaf spot)	Circular-angular, brown spots with a thin, dark red-brown margin; spots 1-5 mm diam.	Check with Ed Sikora.
	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.
	Rhizoctonia Stem Canker	Lower stems near soil line developed brown elliptical cankers.	Check with Ed Sikora.
	Stem Canker ( <i>Diaporthe phaseolarum</i> var. <i>caulivora</i> )	Small red-brown stem lesions, usually near a leaf node; lesions become large and black, sunken cankers. Leaves develop interveinal yellowing-necrosis; plants die.	Check with Ed Sikora.
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/Large Patch ( <i>Rhizoctonia</i> )	Browning patches in lawn; brown irregular leaf spots/blotches on grass blades.	See the AL Pest Management Handbook.
	Gray Leaf Spot ( <i>Piricularia</i> )	Gray irregular spots of variable size. Whole leaf blades may be blighted.	See the AL 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	Anthracose ( <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	Sanitation. See the AL Pest Management Handbook and Ed Sikora.

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		<p>may dry and become shriveled and hard. One species of Colletotrichum will cause both fruit rot and stolon, crown rotting, and leaf spot. Stolons develop brown-black, sunken 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, (sometimes gray), 1-2 mm 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. Occasionally 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 AL Pest Management Handbook.
	Phytophthora & Pythium Crown/Root Rot	<p>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</p>	---

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		the severity of the crown, root damage. Wilting and dieback is a common symptom.	
Sweet Gum	Cercospora Leaf Spot	Circular-irregular brown leaf spots.	Sanitation of leaves in the fall.
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.
	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.
Sycamore	Bacterial Scorch ( <i>Xylella fastidiosa</i> )	Leaf edges become brown; older leaves are affected first; leaf drop; branch dieback; tree death.	Remove damaged tree.
Tomato	Anthracoze Ripe Rot ( <i>Colletotrichum</i> )	Symptoms appear on ripe fruit as small, slightly depressed, circular spots. Lesions of normal	Sanitation. See the AL Pest Management Handbook.



<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		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 or orange spores pustules. (Occasionally leaf/stem spot [small circular spots with yellow halos] and a brown lesion root rot may occur.	
	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 (2-4 mm) scabby, brown spots develop.	Sanitation. See the AL Pest Management Handbook.
	Cucumber Mosaic Virus	Plants are stunted with curled, distorted, mottled-yellow leaves.	Sanitation. Control aphids.
	Pepino Mosaic Virus	Yellow spots & bubbled areas on leaves; mild interveinal yellowing and leaf distortions; stunted and thin new growth; spread by contact.	Avoid mechanical transmission by workers. Sanitation.
	Septoria Leaf Spot	Small, circular, brown-gray leaf spots.	See the AL Pest Management Handbook.
	Tobacco Mosaic Virus	Plants are stunted with yellow-mottled leaves.	Sanitation.
	Tomato Spotted Wilt Virus	Plants are stunted, wilted, with yellow spots and ring spots; brown discolorations and spots may be present.	Sanitation. Control thrips.
	Tomato Yellow Leaf Curl	Stunting, reduced leaf size, leaf curl and leaf yellowing.	Sanitation. Control silver leaf white flies.
Turnip	Alternaria Leaf Spot	Gray-brown, oval, or	Sanitation. See the AL

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
		slightly irregular spot appear.	Pest Management Handbook for commercial recommendations.
	Anthracnose ( <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 AL Pest Management Handbook.
	Bacterial Leaf Spot	Very small (1 mm) dark, water-soaked angular-circular spots.	Sanitation.
	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.
	Cercospora Leaf Spot	White, tan, or light brown irregular spots, 2-10 mm diam.	See AL Pest Management Handbook under Cercospora; sanitation; rotation; copper sprays.
	White Spot ( <i>Pseudocercospora</i> )	White-cream-colored irregularly shaped spots.	---
Viburnum	Colletotrichum Leaf Spot	Brown, round, oval, or irregularly shaped spots or blotches may be on leaf edges or along veins.	Sanitation.
Wax Myrtle	Botryosphaeria Canker	Sunken lesions, sometimes with cracked edges, on branches or trunk.	Sanitation, pruning.
	Phytophthora Root Rot	Dieback, wilt, roots develop soft rot and brown color.	Sanitation, eliminate wet soil conditions.
Willow	Anthracnose	Irregular, small or large brown leaf spots or blotches.	Sanitation of fallen leaves.
	Cercospora Leaf Spot	Small circular, brown spots.	Sanitation of leaves in the fall. See the AL Pest Management Handbook.
	Rust ( <i>Melampsora</i> )	Rust-colored powdery spots that later become brown-colored.	Sanitation of leaves in the fall.
Willow, Weeping	Rust ( <i>Melampsora</i> )	Small yellow spots develop orange colored, powdery spore masses.	Removing all fallen leaves from the area usually helps. Kocide protective

<u>Plant</u>	<u>Disease</u>	<u>Description</u>	<u>Control</u>
			sprays may be used.
Zoysia	Algae (Nostoc)	This is a 'blue-green' alga that appears as green gelatinous bodies in turf grass or on driveways. These bodies appear most often in the fall. When conditions are dry, the bodies may rupture and black powdery masses of spores develop.	This is not a disease agent.
Zoysia	Bipolaris Blight ( <i>Helminthosporium</i> )	Small, brown leaf spots may cause large blight areas.	See the AL Pest Management Handbook under Helminthosporium.
	Brown Patch ( <i>Rhizoctonia</i> )	See Centipede Brown Patch.	---
	Curvularia Blight	Brown, round or elongate spots. (May be heat stress related.)	Check with A. Hagan.
	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 AL Pest Management Handbook.
	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

Remember that soil nematode samples should be taken soon, before cool weather sets in. Nematode mailing cartons are available by contacting the Publication Office. Please include area code when filling out the form. The charge for analysis is \$10 per sample.