

2008 PLANT DISEASE CLINICS ANNUAL SUMMARY

Extension Plant Pathology maintains two plant disease clinics as educational resources for county extension agricultural faculty to use to aid their clients in diagnosing and correcting disease-related plant problems. The Athens Plant Disease Clinic (Room 2405, Miller Plant Sciences Bldg, Athens, GA 30602) which includes the Homeowner IPM plant disease clinic is operated by Holly Thornton. The Following plant disease samples are processed in Athens: commercial fruit, ornamentals, and turf; Christmas trees and forestry; all homeowner samples; legume forages and small grains; urban ornamental landscapes, and mushrooms and wood rots. As most are aware, there is a \$10 processing fee for all physical homeowner samples submitted to the diagnostic clinic in Athens.

In Tifton, the diagnostician of the Plant Disease Clinic is Jason Brock . It is located in Room 116, Horticulture Building of the main Tifton Campus, 4604 Research Way, Tifton, GA 31793. Diagnoses of and control recommendations for commercial samples of field crops, grain forages, pecans and vegetables are handled at this location.

Diagnoses and educational recommendations are returned to the county faculty. The clinics maintain a computerized database of samples and their diagnoses through the DDDI system, as well as a reference library for use by extension agents, specialists, researchers and students. Monthly homeowner reports are also available via our departmental clinic homepage. (<http://www.plant.uga.edu/Extension/Clinics/PDC.htm>).

CLINIC SUMMARIES: 2008 PLANT SAMPLE SUBMISSION

CROP	COMMERCIAL SAMPLES	HOMEOWNER IPM SAMPLES	TOTAL
FIELD CROPS	237	0	237
VEGETABLES	296	60	356
FRUITS & NUTS	165	40	205
HERBACEOUS ORNAMENTALS	102	38	140
WOODY ORNAMENTALS	128	107	235
TREES	71	110	181
TURF	434	241	675
MISCELLANEOUS	7	15	22
TOTAL	1440	611	2051

FIELD CROP DISEASES
TOTAL DIAGNOSES: 237 {C= 237; H = 0}

HOST	DISEASE/DISORDER	CAUSAL ORGANISM	# SAMPLES AFFECTED
Alfalfa C = 1 H =	Rust	<i>Uromyces striatus</i>	1
Corn C = 38 H =	Northern Corn Leaf Blight Southern Corn Leaf Blight Northern Corn Leaf Rust Southern Corn Rust Common Rust Stalk Rot Nematode Injury Environmental Chemical Injury No Disease	<i>Exserohilum turcicum</i> <i>Helminthosporium maydis</i> <i>Puccinia polysora</i> <i>Puccinia sorghi</i> <i>Erwinia</i> sp. Probable Drought/Scald	4 4 2 10 2 2 2 2 2 6 4
Cotton C = 19 H =	Leaf Spot Leaf Spot Leaf Spot Chemical Injury No Disease	<i>Alternaria</i> sp. <i>Cercospora</i> sp. <i>Stemphylium</i> sp. Possible <i>Rhizoctonia</i> sp.	1 3 8 1 1 5
Fescue, Tall C = 3 H =		<i>Bipolaris</i> sp. <i>Pythium</i> sp. <i>Rhizoctonia</i> sp.	1 1 1
Hay C = 1 H =		<i>Bipolaris</i> sp.	1
Oat C = 2 H =	Loose Smut Virus	<i>Ustilago avenae</i> Barley yellow dwarf	1 1

Peanut C = 56 H =	Seedling Disease	<i>Lasiodiplodia</i> sp.	1
	Seedling Disease	<i>Rhizoctonia</i> sp.	1
	Collar/Pod Rot	<i>Diplodia</i> sp.	2
	Virus	Tomato spotted wilt	8
	Aerial Blight	<i>Rhizoctonia</i> sp.	1
	Limb rot	<i>Rhizoctonia</i> sp.	2
	White Mold	<i>Sclerotium rolfsii</i>	2
	False White Mold	<i>Phanerochaete</i> sp.	1
	Early Leaf Spot	<i>Cercospora arachidicola</i>	1
	Funky Leaf Spot		4
	Leaf Scorch	<i>Leptosphaerulina crassiasca</i>	2
	Crown Rot	<i>Aspergillus</i> sp.	1
	Pod Rot	<i>Rhizoctonia</i> sp.	1
	Cylindrocladium Black Rot	<i>Cylindrocladium crotalariae</i>	4
		<i>Cercospora</i> sp.	1
	<i>Aspergillus niger</i>	1	
	<i>Rhizoctonia solani</i>	2	
No Disease		18	
Insufficient Sample		1	
Slime Mold		1	
Chemical Burn	Possible	1	
Rye C = 3 H =		<i>Epicoccum</i> sp.	1
		<i>Alternaria</i> sp.	1
		<i>Colletotrichum</i> sp.	1
Sorghum C = 6 H =		<i>Helminthosporium</i> sp.	1
		<i>Curvularia</i> sp.	1
	Nematode Damage	Possible	1
	Unknown		1
	TDTD		1
No Disease		1	
Tobacco C = 47 H =	Black Shank Race 1	<i>Phytophthora parasitica</i> var. <i>nicotianae</i>	1
	Black Shank	<i>Phytophthora parasitica</i> var. <i>nicotianae</i>	10
	Target Spot	<i>Rhizoctonia solani</i>	3
	White Mold	<i>Sclerotium rolfsii</i>	1
	Brown Spot	<i>Alternaria</i> sp.	1
	Collar Rot	<i>Sclerotinia sclerotiorum</i>	1
	Blue Mold	<i>Peronospora tabacina</i>	2
		<i>Rhizoctonia</i> sp.	4
		<i>Pythium</i> sp.	5
		<i>Rhizoctonia solani</i>	6
	Environmental		2
	Environmental	Lightning	1
No Disease		10	

Wheat C = 61 H =	Virus	Soil-borne wheat mosaic	1
	Powdery mildew	<i>Erysiphe</i> sp.	8
	Rust	<i>Puccinia</i> sp.	5
	Loose Smut	<i>Ustilago tritici</i>	2
	Leaf Rust	<i>Puccinia recondita</i>	1
	Take-all	<i>Gaeumannomyces graminis</i> var <i>.tritici</i>	3
		<i>Stagonospora</i> sp.	2
		<i>Xanthomonas</i> sp.	1
		<i>Drechslera</i> sp.	5
	Unknown		1
	Saprophyte Organisms		4
	TDTD		1
	Environmental/Nutritional/Cultural		10
	No Disease		9
No Disease following Agdia virus screen		6	
Possible virus		2	

FRUITS & NUTS
TOTAL DIAGNOSES: 205 {C= 165; H= 40}

HOST	DISORDER/DISEASE	CAUSAL ORGANISM	# SAMPLES AFFECTED
Apple C = 3 H = 4	Bot Canker Dieback White Rot Leaf Spot Rot-Bot or White No Disease	<i>Botryosphaeria</i> sp. Possibly <i>Botryosphaeria</i> sp <i>Fusicoccum</i> sp. Fungal-Possible	1 1 1 1 2 1
Blackberry C = 17 H = 6	Leaf and Cane Rust Orange Felt Virus Nematode-Root Knot Unknown Cultural Orange Cane Blotch Anthracnose Cane Blight-Possible LSREP Possible Spray Injury Unable To Determine No Disease	<i>Kuehneola</i> sp. Tobacco ringspot <i>Meloidogyne</i> sp. <i>Rhizoctonia</i> sp. <i>Fusicoccum</i> sp. <i>Pythium</i> sp. <i>Elsinoe</i> sp.	4 1 1 1 1 1 1 2 2 1 1 1 1 1 3 1 1

Blueberry C = 109 H = 1	Powdery Mildew		2
	Root Rot	<i>Rhizoctonia</i> sp.	1
	Funky Leaf Spot		1
	Virus-Possible	Red ringspot	2
	Blight	<i>Cylindrocladium</i> sp.	1
	Root Rot	<i>Pythium</i> sp., <i>Phytophthora</i> sp. & <i>Rhizoctonia</i> sp.	1
	Dieback	<i>Fusicoccum</i> sp. & <i>Botryosphaeria</i> sp.	12
	Root Rot	<i>Pythium</i> sp. &/or <i>Phytophthora</i> sp.	5
	Canker	<i>Botryosphaeria</i> sp.	2
	Fruit Spot	<i>Exobasidium</i> sp.	1
	Root Rot-Possible		1
	Scorch-Bacterial		2
	Nematode Damage	?Ring	1
	Rust		1
	Unknown-Possible Virus		3
		<i>Botrytis</i> sp.	1
		<i>Phomopsis</i> sp.	3
	<i>Pythium</i> sp.	4	
	<i>Cercospora</i> sp.	3	
	<i>Fusarium</i> sp.	1	
	<i>Botryosphaeria</i> sp.	6	
	<i>Rhizoctonia</i> sp.	2	
No Disease		7	
TDTD		1	
Environmental	Cold/Frost Damage/Drought	7	
Unknown		24	
Site Problem		1	
Possible Chemical Injury		9	
Possible Fertilizer Burn		1	
Nutritional Issues		3	
Leaf Spot-Secondary		1	
Cherry C = 2 H =	Root Rot	<i>Phytophthora</i> sp.	1
	Environmental	Cold injury	1
Citrus C = H = 1	No Disease		1
Fig C = 1 H = 1	Cultural No Disease	Stresses	1 1
Grapefruit C = H = 1	Melanose-Possible		1

Grape, Wine C = 3 H =	Unknown No Disease		2 1
Lemon C = H = 6	Melanose-Possible No Disease Unable To Determine		1 3 2
Muscadine C = 2 H = 9	Scorch Cane and Leaf Spot Bitter Rot Dead Arm Unknown No Disease Unable to Determine	<i>Phomopsis</i> sp.-Possible <i>Melanconium</i> sp.	1 1 1 1 2 4 1
Peach C = 1 H = 2	No Disease Bacterial Spot Gummosis	<i>Xanthomonas campestris</i> pv. <i>pruni</i>	1 1 1
Pecan C = 7 H = 4	Anthracnose Water Split Chemical Injury-Probable Lichen No Disease Unable To Determine Plant ID Associated w/limbs	<i>Glomerella cingulata</i> Resurrection Fern <i>Penicillium</i> sp .or <i>Aspergillus</i> sp.	2 1 1 1 2 2 1 1
Plum C = 1 H = 2	Dieback Scorch Black Knot	<i>Botryosphaeria</i> sp.-Possible <i>Dibotryon morbosum</i>	1 1 1
Pomegranate C = H = 2	No Disease		2
Raspberry C = H = 1	No Disease		1

Strawberry C = 19 H =	Root & Crown Rot	<i>Phytophthora</i> sp. & <i>Pythium</i> sp.	1
	Leaf Spot	<i>Phomopsis</i> sp.	1
	Root Rot	<i>Rhizoctonia</i> sp.	1
	Leaf Blotch		1
	White Mold	<i>Sclerotium rolfsii</i>	2
	Leather Rot	<i>Phytophthora</i> sp.	1
	Angular Leaf Spot		1
	Environmental	Cold damage	1
	Unknown		3
	Nutritional Issues		2
	Insect Damage		3
Spray Injury	Herbicide/other	2	

HERBACEOUS ORNAMENTALS
TOTAL DIAGNOSES: 140 {C = 102; H = 38}

HOST	DISORDER/DISEASE	CAUSAL ORGANISM	# SAMPLES AFFECTED
Amaryllis C = 1 H =	Red Blotch	<i>Stagnospora</i> sp.	1
Argyranthemum C = 1 H =	Leaf Spot	<i>Cercospora chrysanthemi</i>	1
Aspidistra C = H = 1	Leaf Spot	<i>Fusarium</i> sp.-Possibly	1
Banana Plant C = H = 2	Root Rot Unable To Determine	<i>Pythium</i> sp. & <i>Phytophthora</i> sp.	1 1
Begonia C = 3 H =	Root Rot No Disease	<i>Pythium</i> sp. & <i>Phytophthora</i> sp.	1 2
Canna C = 1 H =	Root & Stem Rot	<i>Phytophthora</i> sp.	1
Cabbage, Orn C = 1 H =.	White Mold	<i>Sclerotinia sclerotiorum</i>	1
Cactus C = H = 1	No Disease		1
Cereus,Nightblooming C = 1 H =	No Disease		1
Chrysanthemum C = 3 H =	Root & Crown Rot Bacterial Soft Rot Root Rot	<i>Fusarium</i> sp. <i>Erwinia</i> sp. <i>Pythium</i> sp.	1 1 1
Clematis C = H = 1	Leaf Spot	Fungal	1

Cleome C = 1 H =	White Mold	<i>Sclerotinia sclerotiorum</i>	1
Coleus C = H = 2	Powdery Mildew Web & Aerial Blight	<i>Oidium</i> sp. <i>Rhizoctonia</i> sp.	1 1
Daylily C = 2 H = 1	Daylily Leaf Streak No Disease Unknown	<i>Auerobasidium microstictum</i> Possibly Fungal/Viral	1 1 1
Daisy, Gerbera C = 2 H =	Powdery Mildew Bloom Blight	<i>Botrytis</i> sp./ <i>Sclerotinia</i> sp.	1 1
Dianthus C = 4 H = 1	Crown Rot Black Root Rot Leaf Spot Root Rot Complex No Disease	<i>Fusarium</i> sp. <i>Thielaviopsis</i> sp. <i>Alternaria</i> sp. Pythium sp., Phytophthora sp. & Rhizoctonia sp.	1 1 1 1 1
Dracena C = H = 1	Leaf Spot	Immature, Fungal Spot	1
Echinacea C = 4 H =	Stem Rot Leaf Spot No Disease	<i>Botrytis</i> sp. & <i>Rhizoctonia</i> sp. <i>Alternaria solani</i> Oedema	1 1 1 1
Eranthemum C = 1 H =	No Disease		1
Eupatorium C = 1 H =	No Disease		1
Fern C = H = 1	Unable To Determine		1
Fig Leaf Fig C = H = 1	Anthracoese		1

Fuchsia C = 1 H =	No Disease		1
Geranium C = 5 H =	Root Rot Bacterial Blight Black Leg No Disease	<i>Pythium sp. & Phytophthora sp.</i> <i>Xanthomonas campestris</i> pv. <i>pelargonii</i> <i>Pythium sp.</i>	1 1 1 2
Hollyhock C = 2 H = 1	Anthracnose No Disease Rust	<i>Colletotrichum malvarum</i> <i>Puccinia malvacearum</i>	1 1 1
Hosta C = 9 H = 2	Leaf Blight Leaf Spot Virus No Disease	<i>Alternaria sp.</i> <i>Cercospora sp.</i> Hosta virus X	1 1 3 6
Impatiens C = 4 H =	No Disease		4
Indigofera C = 1 H =	No Disease		1
Iris C = 4 H = 4	Southern Blight Leaf Spot Root Rot Slime Mold Soft Rot, Bacterial Secondary Anthracnose No Disease	<i>Sclerotium rolfsii</i> <i>Heterosporium iridis</i> <i>Pythium sp. & Rhizoctonia sp.</i> <i>Erwinia sp.</i> <i>Colletotrichum sp.</i>	1 1 1 1 2 1 1
Ivy C = 3 H = 4	Anthracnose Leaf Spot Root Rot No Disease Cultural Issues	<i>Colletotrichum sp.</i> Bacterial <i>Pythium sp.</i> Over Watering	2 1 2 1 1
Kalanchoe C = 2 H =	Powdery Mildew No Disease		1 1
Leucanthemum C = 1 H =	No Disease		1

Liriope C = 3 H = 2	Root & Crown Rot No Disease	<i>Phytophthora</i> sp.	1 4
Miscanthus C = 1 H =	No Disease		1
Mondo Grass C = 3 H =	Anthrachnose Crown Rot	<i>Colletotrichum</i> sp. <i>Rhizoctonia</i> sp.	2 1
Oxalis C = H = 1	Rust	<i>Puccinia sorghi</i>	1
Orchid C = 2 H = 3	Virus Virus Wood Rotting Fungi No Disease Unknown	Cymbidium mosaic Tomato spotted wilt	1 1 1 1 1
Pachysandra C = 6 H =	Roots Blight No Disease	Coenocytic hyphae <i>Volutella</i> sp.	1 4 1
Pansy C = 8 H =	Root Rot Black Root Rot Root Rot Environmental/Nutritional Stress	<i>Pythium</i> sp. & <i>Phytophthora</i> sp.	2 3 2 1
Penstemon C = 2 H =	Root Rot No Disease	<i>Pythium</i> sp. & <i>Phytophthora</i> sp.	1 1
Peony C = 2 H =	Root Rot No Disease	<i>Pythium</i> sp.	1 1
Petunia C = 1 H =	No Disease		1
Phlox C = 3 H =	Root Rot Black Root Rot	<i>Pythium</i> sp. <i>Thielaviopsis</i> sp.	2 1

Plumbago C = 1 H =	No Disease		1
Poinsettia C = 1 H =	No Disease		1
Rudbeckia C = H = 1	No Disease		1
Scabiosa C = 1 H =	Crown Rot	<i>Sclerotinia sclerotiorum</i>	1
Snapdragon C = H =	Rust	<i>Puccinia antirrhini</i>	1
Succulent C = 1 H =	No Disease		1
Thrift C = 1 H =	TDTD		1
Verbena C = 3 H =	Black Root Rot Crown Rot No Disease	<i>Thielaviopsis basicola</i> <i>Rhizoctonia</i> sp.	1 1 1
Veronica C = 2 H =	Crown Rot Downy Mildew	<i>Phytophthora</i> sp. <i>Peronospora grisea</i>	1 1
Vinca C = 1 H = 5	White Mold Stem, Petiole ,Leaf Blight Aerial Blight Root Rot Nematode Damage No Disease	<i>Sclerotinia sclerotiorum</i> <i>Phytophthora</i> sp. <i>Phytophthora</i> sp. <i>Rhizoctonia</i> sp. Possible	1 1 1 1 1 1
Violet, African C = H = 3	Leaf Spot Cultural Issues Virus	Cold Water INSV-Possible	1 1 1

Water Lily C = 1 H =	No Disease		1
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TREES
TOTAL DIAGNOSES: 181 {C = 71; H = 110}

HOST	DISEASE/DISORDER	CAUSAL ORGANISM	# SAMPLES AFFECTED
Aralia C = H = 1	Anthracnose	Possible	1
Banana C = 1 H =	No Disease		1
Buckeye C = H = 1	LSREP	Physiological Scorch	1
Catalpa C = H = 1	Leaf Spot-Fungal	Likely	1
Cedar, Red C = 2 H =	Needle Blight No Disease	<i>Cercosporidium</i> sp.	1 1
Cedar/Juniper C = H = 2	Unknown	<i>Pestalotia</i> sp. or <i>Seiridium</i> sp.	1 1
Cephalotaxus C = 1 H =	Root Rot	<i>Pythium</i> sp. <i>Phytophthora</i> sp. <i>Rhizoctonia</i> sp.	1
Chamaecypris C = H = 1	No Disease		1
Cherry C = H = 4	Shot Hole LSREP No Disease Unable To Determine	Most likely environ. stress	1 1 1 1
Conifer C = H = 1	No Disease		1

Crabapple C = H = 1	Rust	<i>Gymnosporangium</i> sp.	1
Crepe Myrtle C = 2 H = 1	Sooty Mold No Disease Lichens		1 1 1
Cryptomeria C = 11 H = 4	Root Rot No Disease Unable To Determine	<i>Phytophthora</i> sp.	2 12 1
Cupressus C = 1 H =	Unable to Diagnose		1
Cypress C = 1 H =	No Disease		1
Cypress, Arizona C = H = 1	Needle Blight	<i>Cercosporidium</i> sp.	1
Cypress, Leyland C = 18 H = 10	Needle Blight Root Rot Tip Dieback Canker Insect Infestation No Disease LSREP Tip Blight Unknown	<i>Cercosporidium</i> sp. <i>Phytophthora</i> sp. <i>Pestalotia</i> sp. <i>Seiridium</i> sp. Scale, Mites <i>Pestalotia</i> sp. Cultural <i>Sphaeropsis</i> sp.	3 1 1 4 2 12 1 2 1 1
Dogwood C = 3 H = 5	Root Rot Foliage Diagnosis Leaf Spot No Disease Herbicide Damage Leaf Scorch	<i>Pythium</i> sp. <i>Phytophthora</i> sp. <i>Rhizoctonia</i> sp. <i>Botrytis</i> sp. <i>Macrophoma</i> sp. Possible	1 1 1 3 1 1
Elliotia C = 1 H =	Root Rot	<i>Pythium</i> sp. & <i>Phytophthora</i> sp.	1

Elm C = H = 2	Stem Canker Secondary Bot Canker No Disease Powdery Mildew	<i>Fusarium</i> sp. <i>Fusicoccum</i> sp.	1 4 1
Ginkgo C = H = 1	Stress-Likely	Cultural +/-or Environmental	1
Hickory C = H = 1	Wood Rot		1
Loquat C = 1 H =	Leaf Spot	<i>Monochaetia</i> sp.	1
Magnolia C = 5 H = 13	Root Rot Canker Sooty Mold No Disease LSREP TDTD Unknown Fungal Leaf Spot Artillery Fungus Unable To Determine	<i>Phytophthora</i> sp. <i>Phomopsis</i> sp. Resubmit ?Environmental Issues <i>Sphaerobolus</i> sp. Possibly a Fungal Leaf Spot	1 1 2 5 4 1 1 1 1 1 1
Maple C = 4 H = 16	Leaf Spot/Burn Secondary Organism No Disease No Disease-Insect Damage Canker Anthracnose LSREP Herbicide Damage Unknown Mushroom	<i>Phyllosticta</i> sp. <i>Pestalotia</i> sp. Tree Cricket Damage <i>Fusicoccum</i> sp. Possible Cultural Possible Old Wounds Polypore	6 1 3 1 1 2 3 1 1 1
Michelia C = 2 H =	Root Rot No Disease	<i>Pythium</i> sp.	1 1
Myrtle C = 1 H =	No Disease		1

Oak C = 3 H = 8	Powdery Mildew Rust No Disease Root & Butt Rot Oak Leaf Blister Algal Leaf Spot Canker Insect Damage	<i>Phyllactinia</i> sp. <i>Cronartium quercuum</i> f.sp. <i>fusiforme</i> <i>Ganoderma</i> sp. <i>Taphrina deformans</i> <i>Cephaleuros virescens</i> <i>Hypoxylon</i> sp.	1 1 4 1 1 1 1 1
Palm C = 5 H = 3	Bud Rot Crown & Bud Rot Leaf Spot Leaf Spot False Smut No Disease Unable To Determine	<i>Phytophthora</i> sp. <i>Fusarium</i> sp. <i>Drechslera</i> sp. <i>Pestalotiopsis</i> sp. <i>Graphiola</i> sp.	1 1 1 1 1 2 1
Pear C = 2 H = 12	Leaf Spot Secondary Organism Fire Blight No Disease Spray Injury Unable To Determine Unknown	<i>Entomosporium</i> sp. <i>Phoma</i> sp. <i>Erwinia amylovora</i> Possible-Herbicide	1 1 4 4 1 1 2
Photinia C = H = 2	Chemical Injury Unable To Determine	Possible	1 1
Pine C = 2 H = 4	Root Rot No Disease LSREP Slime Mold Fungal Heart Rot	<i>Annosum</i> sp. Site Issue	1 2 1 1 1
Plum C = 1 H =	No Disease		1
Poplar C = 1 H =	No Disease		1
Redbud C = 1 H =	No Disease		1

Spruce C = H = 1	LSREP	Environmental - Drought	1
Thuja C = 1 H =	Root Rot	<i>Phytophthora</i> sp.	1
Unknown C = H = 7	Compound Stresses Old Wound Sooty Mold Leaf Spot Unknown	Cultural/Environmental <i>Phyllosticta</i> sp.	3 1 1 1 1
Weigela C = H = 1	No Disease		1
Willow C = H = 4	Leaf Spot LSREP No Disease Compound Stresses	Possibly-Fungal Cultural +/-or Environmental	1 1 1 1
Yew C = H = 2	Insufficient Sample No Disease		1 1
Zelkova C = 1 H =	No Disease		1

TURF
TOTAL DIAGNOSES: 675 {C = 434; H = 241}

HOST	DISEASE/DISORDER	CAUSAL ORGANISM	# SAMPLES AFFECTED
Bentgrass C = 101 H =	Anthracnose Nematode Damage Cultural Issues Sulfide Accumulation Undetermined Algae Yellow Spot Cyanobacteria Rust No Disease	<i>Colletotrichum</i> sp. <i>Pythium</i> sp. <i>Rhizoctonia</i> sp. Suspect/Send for Analysis Thatch, Water, Environmental Possibly <i>Rhizoctonia</i> sp. Basidiomycete	22 40 6 12 8 2 1 1 1 2 1 1 4
Bermuda C = 128 H = 34	Take-all Large Patch Slime Mold Fairy Ring ETRI No Disease Cultural Issues Insect Damage TDTD Unable To Determine Unknown Resubmit Possible GGG Anthracnose Dollar Spot Spring Dead Spot Leaf Smut Stress Organisms Suspect Nematode Damage	<i>Gaeumannomyces graminis-graminis</i> <i>Rhizoctonia</i> sp. <i>Physarum</i> sp. or Other Clamp Fungi Thatch, Compacted Soils, Drought Possible <i>Gaeumannomyces graminis-graminis</i> <i>Rhizoctonia</i> sp. <i>Sclerotinia</i> sp. <i>Pythium</i> sp. <i>Colletotrichum</i> sp. Possibly- <i>Ophiosphaerella</i> sp. <i>Ophiosphaerella</i> sp. <i>Helminthosporium</i> sp./ <i>Bipolaris</i> sp. <i>Drechslera</i> sp.	36 4 2 3 11 6 26 2 1 4 1 2 2 21 3 9 2 1 3 1 1 12 1 7 1

Carpet grass C = H = 1	Insufficient Sample		1
Centipede C = 62 H = 57	Take-all Large Patch Fairy Ring ETRI Root Rot Cultural Issues Cultural Issues Insect Damage TDTD No Disease Insufficient Sample Unable To Determine Unknown Stress Organisms/Pathogens Stress-Environmental Clamp Fungi Nematodes	<i>Gaeumannomyces graminis-graminis</i> <i>Rhizoctonia</i> sp. Possible GGG <i>Pythium</i> sp. Thatch, Compacted Soils Nutritional <i>Curvularia</i> sp. <i>Rhizoctonia</i> sp. <i>Pythium</i> sp. Polypore Chinch Bugs	40 1 2 8 2 17 1 2 11 4 1 1 6 1 1 1 7 10 1 1
Cynodon C = 4 H =	Take-all	<i>Gaeumannomyces graminis-graminis</i> <i>Pythium</i> sp. <i>Curvularia</i> sp. <i>Rhizoctonia</i> sp.	1 1 1 1
Fescue C = 12 H = 11	Brown Patch Rust Unknown Cultural Issues Rust Rust Rust No Disease	Compaction, Too wet/dry, Thatch <i>Fusarium</i> sp. <i>Pythium</i> sp. <i>Rhizoctonia</i> sp. <i>Colletotrichum</i> sp. <i>Puccinia</i> sp. <i>Puccinia coronata</i>	1 1 2 7 1 1 1 1 1 1 1 1 5

Grass C = 5 H = 15	Take-all Slime Mold ETRI TDTD Cultural Issues Mushroom Conk No Disease Disease Possible Stress Organisms	<i>Gaeumannomyces graminis-graminis</i> 24560 <i>Rhizoctonia</i> sp.	5 1 4 1 4 1 1 1 1 1
Papsalum,Seashore C = 9 H =	Take-all Cultural/Environmental/Site	<i>Gaeumannomyces graminis-graminis</i> <i>Helminthosporium</i> sp. <i>Curvularia</i> sp. <i>Pythium</i> sp.	2 4 1 1 1
Ryegrass C = 3 H =	Root Rot LSREP No Disease	<i>Pythium</i> sp. Environmental-Cold Damage	1 1 1
St. Augustine C = 76 H = 49	Take-all Smut Fairy Ring Large Patch ETRI Slime Mold Insect Damage Cultural Issues No Disease Stress Organisms Nematode-Suspect Unable To Determine Insufficient Sample ETRI Mycelium	<i>Gaeumannomyces graminis-graminis</i> <i>Ustilago</i> sp. Clamp Fungi <i>Rhizoctonia</i> sp. Possibly GGG <i>Curvularia</i> sp. <i>Rhizoctonia</i> sp. Chinch Bugs Dry, Wet, Compacted Soils, Thatch, Mowing Practices 	64 1 3 6 5 1 3 8 6 22 1 1 1 1 1 1
Sod C = 2 H =	ETRI	<i>Gaeumannomyces graminis-graminis</i>	2

Turf C = 17 H =	Take-all Nematode-Suspect Algae Inconclusive No Disease	<i>Gaeumannomyces graminis-graminis</i> <i>Helminthosporium</i> sp. <i>Pythium</i> sp. <i>Rhizoctonia</i> sp. <i>Bipolaris</i> sp.	1 2 2 5 3 1 1 1 1
Turfgrass C = H = 9	Take-all Large Patch Cultural Issues Insect Damage	<i>Gaeumannomyces graminis-graminis</i> <i>Rhizoctonia</i> sp. <i>Curvularia</i> sp. Too Wet, Dry, Thatch Scale Insects	3 1 1 3 1
Unknown C = 15 H =	Take-all Nematodes-Suspect Cultural Issues	<i>Gaeumannomyces graminis-graminis</i> <i>Pythium</i> sp. <i>Colletotrichum</i> sp. <i>Rhizoctonia</i> sp. <i>Curvularia</i> sp. <i>Bipolaris</i> sp.	2 2 2 3 3 1 1 1
Zoysia C = H = 65	Take-all Large Patch Dollar Spot Fairy Ring Rust ETRI Cultural Issues Insufficient Sample LSREP Unknown Unable To Determine No Disease Possible Disease	<i>Gaeumannomyces graminis-graminis</i> <i>Rhizoctonia</i> sp. <i>Sclerotinia homoeocarpa</i> Possibly Thatch, compacted soils, wet/dry, mowing heights Environmental-Drought <i>Curvularia</i> sp. Multiple cultural issues	5 7 1 3 2 11 21 3 1 6 2 1 1 1

VEGETABLES
TOTAL DIAGNOSES: 356 {C = 296; H = 60}

HOST	DISEASE/DISORDER	CAUSAL ORGANISM	# SAMPLES AFFECTED
Bean, Snap C = 9 H = 5	Root Rot Stem Virus Crown Rot Black Root Rot Unknown No Disease	<i>Pythium</i> sp. <i>Colletotrichum</i> sp. <i>Rhizoctonia</i> sp. <i>Pseudomonas</i> sp. Bean common mosaic Soil line pathogen likely <i>Thielaviopsis</i> sp.	1 1 2 1 1 1 1 1 5
Bok Choy C = 1 H =		<i>Erwinia</i> sp.	1
Broccoli C = 6 H =	Leaf Spot Black Rot-Probable No Disease	<i>Cercospora</i> sp. <i>Xanthomonas</i> sp. <i>Xanthomonas</i> sp.	1 1 1 3
Cabbage C = 42 H = 2	Black Rot Downy Mildew Possible Burn LSREP-Environmental No Disease	Xanthomonas <i>Xanthomonas</i> sp. <i>Pseudomonas</i> sp. <i>Rhizoctonia</i> sp. Cold Damage	20 5 4 1 1 1 1 11
Cabbage, Napa C = 3 H =	No Disease	<i>Xanthomonas</i> sp.	1 2
Cantaloupe C = 12 H = 1	Powdery Mildew No Disease Burn	<i>Pseudomonas</i> sp. <i>Rhizoctonia</i> sp. <i>Phytophthora capsici</i> Chemical or Environmental	2 2 1 1 6 1
Carrot C = 1 H =		<i>Fusarium</i> sp.	1

Collard C = 9 H =	Downy Mildew Black Rot No Disease	<i>Xanthomonas</i> sp. <i>Rhizoctonia</i> sp. <i>Xanthomonas</i> sp.	3 1 1 1 3
Cucumber C = 10 H = 2	Anthracnose Downy Mildew Gummy Stem Blight Viruses Bacterial-Possible No Disease	<i>Cercospora</i> sp.	2 1 1 1 1 5 1
Eggplant C = 9 H =	Environmental No Disease Unknown	<i>Phomopsis</i> sp. <i>Xanthomonas</i> sp. Sun scald	2 1 1 4 1
Greens, Turnip Greens, Mixed C = 2 H = 5	Multiple Bacteria Leaf Spot White Spot Leaf Spot Burn or Possibly <i>Cercospora</i> TDTD Unable To Determine	<i>Xanthomonas</i> sp. <i>Pseudomonas</i> sp., Others <i>Pseudocercospora</i> sp. or <i>Cercospora</i> sp. <i>Pseudocercospora capsellae</i> <i>Cercospora</i> sp.	1 1 1 1 1 1 1
Lettuce C = 2 H =	No Disease		2
Okra C = 1 H = 2	Nematode Damage - RK Warty Pod No Disease	<i>Meloidogyne</i> sp. Nutritional/Physiological	1 1 1
Onion C = 6 H =	Multiple Bacteria Physical/Bacterial No Disease		1 2 3
Parsley C = H = 1	LSREP-Environmental	Cold Damage	1

Pepper C = 38 H = 6	Bacterial Spot-(Possible) Powdery Mildew Blossom End Rot Virus Herbicide Damage-Possible Leaf Spot-Possible No Disease	<i>Xanthomonas</i> sp. Tomato spotted wilt <i>Fusarium</i> sp. <i>Phytophthora</i> sp. <i>Rhizoctonia</i> sp. <i>Pythium</i> sp. <i>Xanthomonas</i> sp. Fungal	11(1) 1 2 1 1 1 2 1 3 1 1 18
Potato, Sweet C = 1 H =	Nematode Damage-Possible		1
Potato, White C = 3 H = 1	No Disease Unknown	<i>Erwinia</i> sp.	1 2 1
Pumpkin C = 4 H =	Downy Mildew Rot Virus	<i>Fusarium</i> sp. Poty	2 1 1
Radish C = 1 H =		<i>Cercospora</i> sp.	1
Squash C = 9 H = 5	Nematode Damage - RK Physiological/Nutritional Cultural Unknown Leaf Spot Fruit Rot No Disease	<i>Meloidogyne</i> sp. <i>Phytophthora capsici</i> Possible Bact Wilt or Vine borer <i>Cladosporium</i> sp. <i>Choanephora</i> sp.	1 3 1 1 1 1 1 5
Turnip C = 1 H =	No Disease		1

Tomato C = 22 H = 27	Virus (Possible) Southern Stem Blight Early Blight Nematode Damage - RK Bacterial Spot Virus - Possible Bacterial Wilt Late Blight TDTD No Disease Herbicide Damage Fusarium Wilt Root Rot LSREP-Environmental Virus or Herbicide Blossom End Rot Blotchy Ripening Unable To Determine	Tomato spotted wilt <i>Sclerotium rolfsii</i> <i>Alternaria</i> sp. <i>Meloidogyne</i> sp. <i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> Tomato yellow leaf curl <i>Pseudomonas solanacearum</i> <i>Phytophthora infestans</i> <i>Fusarium</i> sp. <i>Rhizoctonia</i> sp. Cold Damage Environmental/Nutritional	7(3) 3 2 3 1 1 1 1 1 11 3 1 1 1 1 2 1 1 5
Unknown C = 1 H =	TDTD		1
Watermelon C = 102 H = 3	Gummy Stem Blight Gummy Stem Blight Gummy Stem Blight Fruit Blotch Fusarium Wilt Crown Decline Cottony Leak Root Rot Downy Mildew-Questionable Virus Viruses Unknown Spray Damage Physiological Physiological Multiple Bacteria Isolated LSREP-Environmental Leaf Spot No Disease	<i>Phoma</i> sp. Insensitive Sensitive <i>Fusarium</i> sp. <i>Pythium</i> sp. <i>Pythium</i> sp. Possible Poty <i>Pythium</i> sp. <i>Fusarium</i> sp. <i>Rhizoctonia</i> sp. <i>Alternaria</i> sp. <i>Phytophthora capsici</i> Cross-stitch Rind necrosis Drought <i>Cercospora</i> sp.	7 4 1 5 9 1 1 1 1 2 1 3 14 8 1 2 2 3 1 1 1 2 1 33

Zucchini C = 1 H =	Nematode Damage - RK	<i>Meloidogyne</i> sp.	1
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WOODY ORNAMENTALS
TOTAL DIAGNOSES: 235 {C = 128; H = 107}

HOST	DISEASE/DISORDER	CAUSAL ORGANISM	# SAMPLES AFFECTED
Abelia C = 2 H =	Botrytis Blight Questionable	<i>Botryotinia fuckeliana</i> <i>Sclerotinia</i> sp.	1 1
Althea C = 1 H =	No Disease		1
Arborvitae C = 6 H = 7	Anthracnose Coenocytic Hyphae Root Rot Bot Canker LSREP No Disease Unable To Determine Secondary	<i>Colletotrichum</i> sp. <i>Pythium</i> sp. & <i>Phytophthora</i> sp. <i>Fusicoccum</i> sp. Drought/Root Stress <i>Sphaeropsis</i> sp. & <i>Pestalotia</i> sp.	1 1 1 1 2 5 1 1
Aster C = 1 H =	Aerial Blight	<i>Rhizoctonia</i> sp.	1
Aucuba C = 1 H = 4	Powdery Mildew Unable To Determine Unknown No Disease		1 1 1 2
Azalea C = 10 H = 12	Leaf Spot Leaf Spot Root Rot Stem Rot Root & Stem Rot No Disease/Nutritional Cultural Issues Cultural Issues LSREP Unable To Determine	<i>Cercospora</i> sp. <i>Botryosphaeria</i> sp. <i>Pythium</i> sp. <i>Phomopsis</i> sp. <i>Armillaria</i> sp. Oedema Lichen	2 1 2 1 1 10 1 1 2 1
Barberry C = 1 H =	Anthracnose		1

Boxwood C = 6 H = 10	Root & Crown Rot Root Rot Root Rot Blight Dieback Powdery mildew Cultural Issues Various Disease Possibilities Unknown No Disease	<i>Phytophthora</i> sp. <i>Phytophthora</i> sp. <i>Pythium</i> sp. <i>Volutella</i> sp. <i>Phomopsis</i> sp. <i>Macrophoma</i> sp. Oedema	1 1 1 4 1 1 1 1 1 3
Brugmansia C = 2 H = 1	No Disease Cultural Issues	Oedema	2 1
Camellia C = 10 H = 9	Virus Petal Blight Root Rot Root Rot Leaf Spot Leaf Spot No Disease LSREP Viral Symptoms	Camellia ringspot <i>Ciborinia camelliae</i> <i>Rhizoctonia</i> sp. Basidiomycete Algal Fungal	2 1 1 1 2 1 6 4 1
Chamaecypris C = 1 H =	Bot Canker	<i>Sphaeropsis</i> sp.	1
Cleyera C = 1 H = 1	No Disease	<i>Macrophoma</i> sp.	1 1
Daphne C = 3 H =	Black Root Rot Root Rot	<i>Thielaviopsis</i> sp. <i>Phytophthora</i> sp.	2 1
Elaeagnus C = 4 H =	Bot Canker Root Rot No Disease	<i>Botryosphaeria</i> sp. <i>Phytophthora</i> sp.	1 1 2
Euonymus C = 1 H =	No Disease		1

Farfugium C = 1 H =	No Disease		1
Fig, Creeping C = 1 H =	Root Rot	<i>Pythium</i> sp.	1
Forsythia C = H = 1	Powdery Mildew		1
Gardenia C = 4 H = 6	Root Rot Root & Crown Rot Leaf Spot No Disease Unable To Determine Cultural Issues	<i>Phytophthora</i> sp. <i>Pythium</i> sp. & <i>Rhizoctonia</i> sp. <i>Elsinoe</i> sp.	2 1 1 4 1 1
Gogi Berry C = H = 1	Anthraxnose	<i>Colletotrichum</i> sp.	1
Hibiscus C = 4 H =	Leaf Spot Rust LSREP-Environmental No Disease	Bacterial-Possible <i>Kuehneola malvicola</i> Cold Damage	1 1 1 1
Holly C = 5 H = 10	Root Rot Bot Canker-Secondary Leaf Spot Unknown No Disease LSREP TDTD	<i>Thielaviopsis</i> sp. & <i>Pythium</i> sp. Fungal	2 1 1 3 4 3 1
Hydrangea C = 6 H = 1	Root Rot Leaf Spot Coenocytic Hyphae No Disease	<i>Phytophthora</i> sp. <i>Cercospora</i> sp. Possible <i>Pyt.</i> sp. or <i>Phyt.</i> sp.	2 3 1 1
Illicium C = 4 H = 2	Root Rot Basidiomycete Fungi No Disease/Oedema Unable To Determine	<i>Phytophthora</i> sp. Possible <i>Armillaria/Clitocybe</i>	1 1 2 2

Itea C = 2 H =	Anthrachnose Leaf Spot	<i>Gloeosporium</i> sp. <i>Cercospora</i> sp.	1 1
Jasmine C = 3 H = 5	Stem Canker Canker Root Rot Root Rot No Disease Unable To Determine	<i>Guignardia</i> sp. <i>Phomopsis</i> sp. <i>Rhizoctonia</i> sp. <i>Armillaria</i> sp.	1 1 1 1 3 1
Juniper C = 4 H = 6	Root & Crown Rot Root Rot No Disease LSREP Unable To Determine	<i>Phytophthora</i> sp. <i>Pythium</i> sp.	1 1 6 1 1
Lantana C = 3 H = 2	Foliar Nematode Nematode-RK No Disease Unable To Determine	<i>Aphelenchoides</i> sp. <i>Meloidogyne</i> sp.	1 1 2 1
Laurel C = H = 2	Root Rot No Disease	<i>Pythium</i> sp.	1 1
Laurel,Mtn. C = 2 H =	Leaf Spot Basidiomycete hyphae	<i>Cercospora</i> sp.	1 1
Lavandula C = 1 H =	Root Rot	<i>Pythium</i> sp.	1
Ligustrum C = 3 H = 1	Leaf Spot No Disease LSREP	<i>Cercospora</i> sp. <i>Pythium</i> sp., <i>Rhizoctonia</i> sp., & <i>Fusarium</i> sp.	1 1 1 1
Loropetalum C = 1 H =	No Disease		1
Mahonia C = 2 H =	Leaf Spot	<i>Cercospora</i> sp. <i>Alternaria</i> sp.	1 1

Nandina C = 4 H =	Root Rot Anthracnose No Disease	<i>Pythium</i> sp. <i>Rhizoctonia</i> sp.	1 1 1 1
Oleander C = H = 1	LSREP		1
Olive, Dwarf C = 1 H =	Crown Rot	Unknown	1
Osmanthus C = 2 H = 2	Tip Burn Anthracnose Leaf Spot	<i>Alternaria</i> sp. & <i>Phyllosticta</i> sp. <i>Colletotrichum</i> sp. Fungal	1 2 1
Pampas Grass C = 1 H =	No Disease		1
Pieris C = H = 1	Leaf Spot	Possibly Fungal	1
Platycodon C = 1 H =	No Disease		1
Podocarpus C = H = 1	No Disease		1
Rhaphiolepis C = 4 H = 1	Leaf Spot No Disease No Disease	<i>Cercospora</i> sp. Possibly Cultural	1 3 1
Rhododendron C = 4 H = 5	Leaf Spot Root Rot Leaf Spot Powdery Mildew No Disease Unable To Determine	<i>Pestalotia</i> sp. <i>Phytophthora</i> sp. Fungal	1 1 1 1 4 1

Rose C = 11 H = 10	Downy Mildew Blight Stem Canker Root Rot Root Rot Leaf Spot Canker Black Spot Leaf Spot Dieback/Root Rot LSREP No Disease Virus/Herbicide Damage Unable To Diagnose	<i>Botrytis</i> sp. <i>Phomopsis</i> sp. <i>Phytophthora</i> sp. <i>Pythium</i> sp. & <i>Phytophthora</i> sp. <i>Cercospora</i> sp. <i>Coniothyrium</i> sp. <i>Diplocarpon rosae</i> Fungal Cold Damage Possible Insufficient Sample/Root Dead	1 1 1 1 1 1 2 1 1 1 1 1 6 2 1
Sasanqua C = H = 1	Canker		1
Sidalcea C = 1 H =	No Disease		1
Silena C = 1 H =	Leaf Rust	<i>Uromyces</i> sp.	1
Spirea C = H = 2	No Disease Unknown		1 1
Ternstroemia C = 1 H =	Leaf Spot	<i>Cercospora</i> sp.	1
Unknown C = H = 1	Canker	Possibly Fungal	1
Viburnum C = 1 H = 1	No Disease Unknown		1 1

MISCELLANEOUS
TOTAL DIAGNOSES/ID 22 {C =7; H =15}

HOST(S)	DISEASE	CAUSAL ORGANISM	# SAMPLES AFFECTED
Unknown C = 5 H = 3	Black Root Rot	<i>Thielaviopsis basicola</i>	1
	Root Rot	<i>Pythium</i> sp.	2
	LSREP		1
	No Disease		1
	Unable To Determine		1
	Cultural		2
Fungi ID C = H = 9	Stinkhorn Fungus	<i>Clathrus</i> sp.	1
	Slime	Algae	1
	Slime Mold	<i>Fuligo septica</i>	1
	Slime Mold	<i>Diachera leucopodia</i>	1
	Mushroom	<i>Suillus decipiens</i>	1
	Gilled Mushroom		1
	Wood Rotter	<i>Aphyllophorales</i> sp.	1
	? In Corn	<i>Leucocoprinus</i> sp.	1
	Unknown		1
Misc. C = 2 H =	Wood	No Disease	1
	Kudzu	No Disease	1

Unknown C = H = 2	Do Not ID Plants		1
	Unable To Determine		1
No Host C = H = 1	Unable To Determine		1