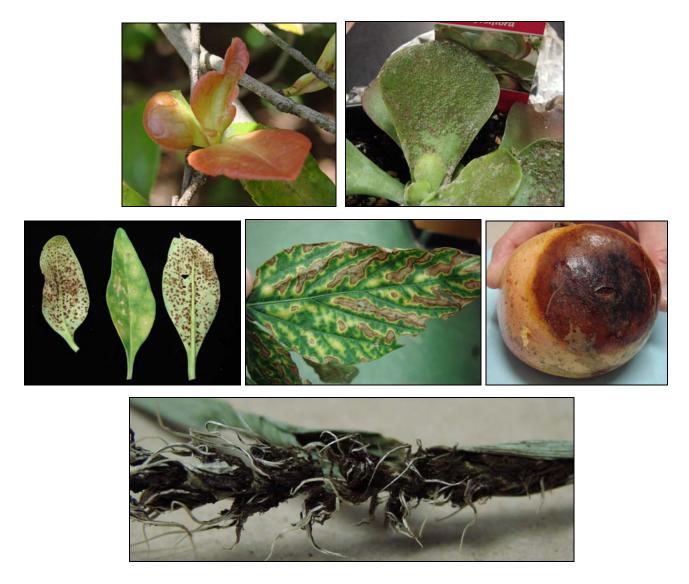
Plant Disease Clinic Annual Report 2007



The University of Georgia College of Agricultural and Environmental Sciences Department of Plant Pathology Compiled by Jan Fowler and Holly Thornton

Plant Disease Clinic Annual Report 2007

Introduction	ii
Plant Disease Clinic Summaries	
Plant Sample Diagnoses	1
Monthly Sample Submission	1
Homeowner Samples and Diagnoses (Graph)	3
Commercial Samples and Diagnoses (Graph)	4
Homeowner Sample Submission by County	5
Commercial Sample Submission by County	7
Summary of Diagnoses by Crop	
Field Crop	9
Vegetable	13
Fruits & Nuts	18
Herbaceous Ornamentals	21
Tree	26
Woody Ornamentals	30
Turf and Forage	36
Miscellaneous	40
2006-07 Commercial Sample Comparison (Graph)	41
2006-07 Homeowner Sample Comparison (Graph)	41
2007 Commercial vs. Homeowner Sample Comparison (Graph)	42

INTRODUCTION

Ms. Jan Fowler and I present to you the 2007 Annual Plant Disease Clinic Report. Ms. Fowler helped compile the report from our diagnostic records and will continue to provide diagnostic service to the Cooperative Extension Service on a part-time basis through summer 2009.

There are two plant disease diagnostic clinics maintained by the Plant Pathology Department in The College of Agricultural and Environmental Sciences at the University of Georgia. Commercial turf, fruits, forage crops, greenhouse, ornamental nursery, and homeowner samples, are analyzed in the Plant Disease Clinic in Athens. Samples of commercial field crops, pecans, and vegetables are diagnosed at the Plant Disease Clinic in Tifton, GA. Diagnoses and management recommendations are returned to the county faculty. The clinics maintain a computerized database of samples and their diagnoses, and a reference library for use by Extension agents, specialists, researchers and students.

Extension Plant Pathology specialists also participate in digital plant diagnostics using the DDDI system. This system helps provide a more timely diagnosis and recommendation to a number of plant disease samples.

Some pathogens identified in the 'Crop Summaries' section are listed as both genus and species, whereas others are identified as the genus and "sp." Our plant disease clinic does not routinely identify plant pathogens to species because species identification is very time-consuming and often not necessary for management recommendations. In cases where only one species is known or where species are easily identifiable, the species of the pathogen is listed.

The following abbreviations are used throughout the summaries: **PDC**: Plant Disease Clinic **C**: Commercial **IPM**: Homeowner IPM Clinic **H**: Homeowner **TDTD**: To deteriorated to diagnose. This indicates that the plant sample submitted to the clinic was too deteriorated to properly diagnose. **LSPEP**: Lower stam, root or opvironmental problem. This diagnosis indi-

LSREP: Lower stem, root or environmental problem. This diagnosis indicates that no pathogens were associated with the part of the plant submitted and that the origin of the problem either was occurring lower in the plant or was due to environmental/cultural conditions.

This report includes both physical samples submitted to the Plant Disease Clinics and results from analyses of digital samples submitted through the DDDI system. The DDDI database includes the samples contained herein and serves as a record keeping system for our diagnostic clinics (www.dddi.org/uga).

Addresses for submission of physical samples to the Plant Disease Clinics are:

Athens Clinic:	Commercial turf, ornamentals, forestry, and fruits
	Homeowner Samples
Address:	Plant Disease Clinic
	2106 Miller Plant Sciences Bldg.
	Athens, GA 30602-4356

Tifton Clinic:	Commercial vegetables, row crops, pecans
Address:	Tifton Plant Disease Clinic
	Room 116
	4604 Research Way
	Tifton, GA 31793

Information at preparation of samples for submission can be found at: <u>http://plantpath.caes.uga.edu/extension/DiseaseLibrary.html</u>.

Сгор	Commercial Samples	Homeowner IPM Samples	Total
Field Crops	220	5	225
Vegetables	303	57	360
Fruits & Nuts	105	26	131
Herbaceous Ornamentals	87	47	134
Woody Ornamentals	148	91	239
Trees	80	84	164
Turf	400	195	595
Miscellaneous	7	8	15
Total*	1350	513	1863

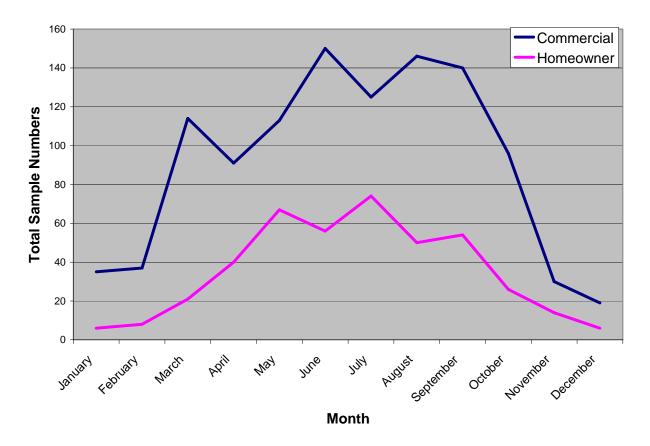
CLINIC SUMMARIES: 2007 PLANT SPECIMEN DIAGNOSES

*The total number of diagnoses shown here is larger than the total number of samples received (shown by Monthly Sample Submission) because some samples have more than one problem or diagnosis.

The largest crop category received by the diagnostic clinics for both Commercial and Homeowner samples is turfgrass, followed by vegetables (Commercial) and Woody Ornamentals (Homeowner).

	# S	amples
Month	Commercial	Homeowner
January	35	6
February	37	8
March	114	21
April	91	40
May	113	67
June	150	56
July	125	74
August	146	50
September	140	54
October	96	26
November	30	14
December	19	6
Total	1096	422

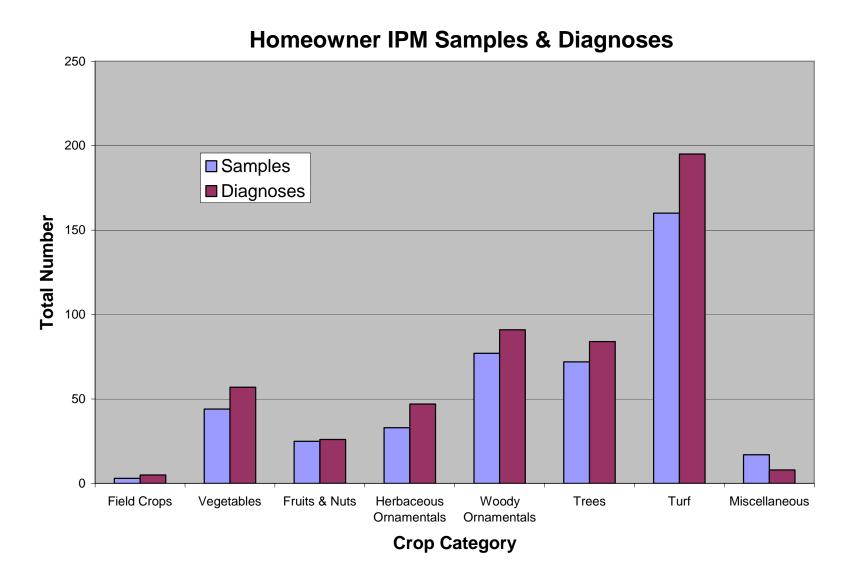
Monthly Sample Submission Summary 2007

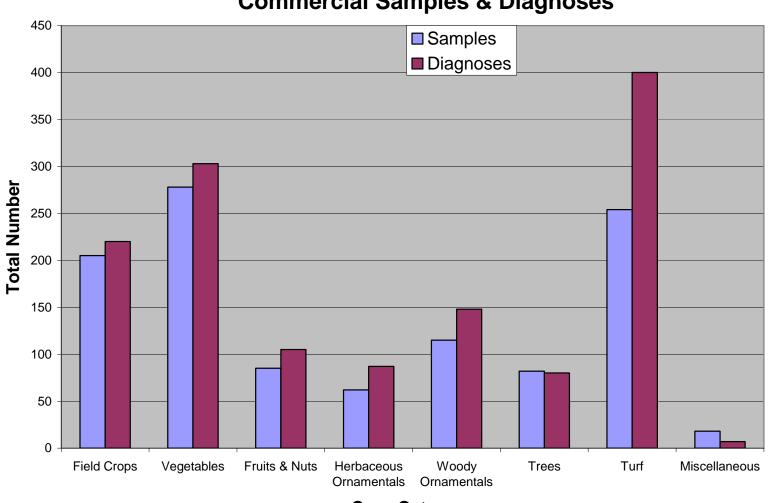


Monthly Sample Submission (Commercial & Homeowner)

As is shown above, our busiest months in the diagnostic clinics are March and June through October. Sample numbers decrease dramatically during the winter months for obvious reasons.

Comparisons of the number of samples submitted to the clinic to the number of diagnoses made are shown below (pages 3-4) for both homeowner and commercial samples. The numbers oftentimes differ due to the fact that some plant samples have multiple pathogenic organisms contributing to the death of the plant. This is especially true for turfgrasses samples and diseases.





Commercial Samples & Diagnoses

Crop Category

Distribution of HOMEOWNER Samples by County 2007

County	# of Samples
Appling	1
Atkinson	2
Bacon	1
Baker	4
Baldwin	
Banks	2
Barrow	4
Bartow	9
Berrien	5
Bibb	31
Bryan	1
Burke	1
Camden	1
Candler	3
Carroll	13
Chatham	6
Cherokee	6
Clarke	21
Clayton	1
Cobb	5
Coffee	1
Columbia	3
Cook	1
Coweta	16
Crawford	1
Crisp	2
Dade	2 2 2 6
Decatur	2
DeKalb	6
Dooly	3
Dougherty	16
Douglas	
Echols	2 2 2 1
Effingham	2
Elbert	1
Evans	1
Fannin	2
Fayette	28
Floyd	1
Forsyth	3
Franklin	1

County	# of Samples
Fulton	4
Gilmer	1
Glynn	1
Gordon	1
Grady	7
Greene	3
Gwinnett	17
Hall	1
Harris	8
Henry	5
Houston	2
Jackson	9
Jeff Davis	3
Jefferson	9 3 3 7
Jenkins	7
Johnson	1
Laurens	1
Lee	10
Lincoln	1
Long	2
Lowndes	2 3 2 4
Lumpkin	3
Macon	2
Madison	4
Miller	1
Mitchell	1
Monroe	20
Morgan	10
Muscogee	9
NA	4
Newton	7
Oconee	2
Paulding	2
Pickens	
Pierce	8
Pulaski	3
Rabun	3 3 1
Randolph	
Richmond	3
Rockdale	4
Schley	6

County	# of Samples
Stephens	4
Thomas	1
Toombs	4
Troup	2
Union	1
Upson	1
Walker	2
Walton	1
Ware	15
Webster	1
Whitfield	3
Wilkes	3

Distribution of COMMERCIAL Samples by County 2007

County	# of Samples
Appling	5 2 17
Atkinson	2
Bacon	17
Banks	
Barrow	1
Bartow	2
Berrien	38
Bibb	5
Bleckley	5
Brantley	2
Brooks	1
Bulloch	10
Burke	18
Butts	1
Calhoun	2
Camden	2 3 1
Candler	1
Carroll	4
Catoosa	1
Chatham	5
Cherokee	3
Clarke	28
Clay	1
Clinch	7
Cobb	16
Coffee	15
Colquitt	13
Columbia	20
Cook	13
Coweta	3
Crisp	5
Dade	1
Dawson	2
Decatur	7
DeKalb	12
Dodge	8
Dooly	10
Dougherty	13
Douglas	5
Early	3
Echols	17

County	# of Samples
Effingham	
Emanuel	8 11
Evans	7
Fayette	7 5
Floyd	8
Forsyth	10
Fulton	7
Gilmer	2
Glynn	2 1
Gordon	6
Grady	20
Gwinnett	
Habersham	8 3 7 2 2 5 9 1
Hall	3
Harris	7
Hart	2
Henry	2
Houston	5
Irwin	9
Jasper	1
Jeff Davis	12
Jefferson	5 2 7
Jenkins	2
Lamar	
Lanier	8
Laurens	7
Lee	2
Libertv	1
Lincoln	1
Lowndes	58
Lumpkin	2
Macon	18
Madison	2 1
Marion	
McDuffie	48
Meriwether	1
Miller	19
Mitchell	11
Monroe	1
Montgomery	4
Morgan	12

County	# of Samples
NA	223
Newton	2
Oconee	13
Oglethorpe	1
Paulding	1
Peach	1
Pickens	1
Pierce	20
Polk	2
Pulaski	9
Quitman	2 9 1 3 1
Rabun	3
Randolph	1
Richmond	35
Rockdale	7 2 6
Schley	2
Screven	6
Seminole	11
Spalding	1
Stephens	1
Sumter	4
Tattnall	7
Telfair	2
Tift	23
Troup	1 12
Turner	12
Union	3 2 6 2
Walker	2
Walton	6
Ware	2
Washington	2
Wayne	5 7 5
Webster	7
Wheeler	5
White	1
Wilcox	15
Worth	11

CROP SUMMARIES

The following sections contain summaries of diagnosed samples organized by crop category. The following abbreviations are used throughout the summaries: PDC: Plant Disease Clinic C: Commercial IPM: Homeowner IPM Clinic H: Homeowner TDTD: To deteriorated to diagnose. LSREP: Lower stem, root or environmental problem. This diagnosis indicated that no

pathogens were associated with the part of the plant submitted and that the origin of the problem either was occurring lower in the plant or was due to environmental/cultural conditions

FIELD CROPS

(Total # Diagnoses: C = 220; H = 5)

Diagnostic Responsibilities:

Tifton Clinic – Tobacco, Corn, Cotton, Soybean, Peanut Athens Clinic – Homeowner samples

Host	Disease	Causal Organism	# Samples
Alecia, hay C = 1 H = 0	Rust		1
Alfalfa C = 4 H = 0	Wilt Crown and Stem Rot Crown and Stem Rot No disease	Undetermined Sclerotinia sp. Sclerotinia trifoliorum	1 1 1 1
Amaranth C = 2 H = 0	Root rot LSREP	<i>Pythium</i> sp.	1 1
Bahia grass C = 2 H = 2	Head Blight Anthracnose	<i>Fusarium</i> sp. <i>Colletotrichum</i> sp. <i>Helminthosporium</i> sp. <i>Sclerotinia</i> sp.	1 1 1 1
Bermuda, hay C = 2 H = 0		<i>Helminthosporium</i> sp. <i>Colletotrichum</i> sp.	1 1

Host	Disease	Causal Organism	# Samples
Clover C = 1 H = 2	Black/Sooty Blotch No disease Unknown		1 1 1
Corn C = 14 H = 0	Southern Corn Leaf Blight Southern Rust Ear Rot Smut No disease	Bipolaris maydis Puccinia polysora Fusarium sp. Ustilago maydis Helminthosporium sp.	2 2 1 1 6
Cotton C = 14 H = 0	Rhizoctonia Soreshin Fusarium Wilt Leaf spot Leaf spot No disease	Rhizoctonia solani Rhizoctonia sp. Fusarium sp. Stemphylium sp. Alternaria sp.	1 1 1 7 2 2
Fescue, Tall C = 2 H = 0	Rust	<i>Bipolaris</i> sp.	1 1
Grain, small C = 1 H = 0	Powdery Mildew		1
	Leaf Spot	<i>Pyricularia</i> sp.	3
Oat C = 5 H = 0	Virus No disease LSREP	Barley yellow dwarf	3 1 1

Disease	Causal Organism	# Samples
Crown Rot	Aspergillus sp.	3
Leaf Scorch	Leptosphaerulina crassiasca	1
Limb Rot	Rhizoctonia sp.	1
Early Leaf Spot	Cercospora arachidicola	3
Late Leaf Spot	Cercosporidium personatum	1
Funky Leaf Spot		1
Virus	Tomato spotted wilt	7
	<i>Diplodia</i> sp.	2
White Mold	Sclerotium rolfsii	2
Cylindrocladium Black Rot	Cylindrocladium crotalariae	1
Nematode Damage	Meloidogyne sp.	1
Unknown		2
	Rhizoctonia sp.	1
	Neocosmospora sp.	3
	<i>Rhizoctonia</i> solani	2
No disease		14
No disease		3
Gray Leaf Spot	Cercospora sp.	1
	Rhizoctonia sp.	1
No disease		1
Charcoal Rot	Macrophomina sp.	4
Rust		1
Bacterial Disease		1
	Peronospora manshurica	13
Root Rot		1
Stem Blight	•	1
Wilt		1
Stem Canker/Lesion	Phomopsis / Diaporthe sp.	1
White Mold	Sclerotium rolfsii	1
Leaf Spot	Cercospora sp.	1
	Neocosmospora sp.	1
No disease		41
TDTD		1
Unknown		3
	Crown Rot Leaf Scorch Limb Rot Early Leaf Spot Late Leaf Spot Funky Leaf Spot Virus Collar Rot White Mold Cylindrocladium Black Rot Nematode Damage UnknownNo diseaseNo diseaseGray Leaf SpotNo diseaseCharcoal Rot Rust Bacterial Disease Downy Mildew Root Rot Stem Blight Wilt Stem Canker/Lesion White Mold Leaf SpotNo disease TDTD	Crown Rot Leaf Scorch Limb Rot Early Leaf Spot Late Leaf Spot Virus Collar Rot White Mold Cylindrocladium Black Rot Nematode Damage UnknownAspergillus sp. Leptosphaerulina crassiasca Rhizoctonia sp. Cercospora arachidicola Cercosporidium personatumNo diseaseCollar Sp. Virus Cylindrocladium Black Rot Nematode Damage UnknownCollar Rot Virus Sclerotium rolfsii Cylindrocladium crotalariae Meloidogyne sp. Rhizoctonia sp. Neocosmospora sp. Rhizoctonia solaniNo diseaseCercospora sp. Rhizoctonia solaniNo diseaseCercospora sp. Rhizoctonia solaniNo diseaseMacrophomina sp. Phakopsora pachyrhiziStem Blight Wilt Stem Canker/Lesion White Mold Leaf SpotPeronospora manshurica Rhizoctonia sp. Phomopsis sp. Phomopsis sp. Phomopsis sp. Phomopsis sp. Necosmospora sp. Rust Bacterial Disease Downy Mildew Rot Rot Rot Rot Rot Rot Stem Blight Wilt Stem Canker/Lesion White Mold Leaf SpotNo disease Phomopsis sp. Phomopsis sp. Phomopsis sp. Phomopsis sp. Necosmospora sp. Necosmospora sp. Necosmospora sp. Necosmospora sp. Necosmospora sp.No disease TDTDNo disease Phomopsis sp. Phomopsis sp. Phomopsis phomopsis sp. Phomopsis sp. Phomopsis sp. Phomopsis sp. Phomopsis phomopsis sp. Phomopsis sp. Phomopsis phomopsis sp. Phomopsis phomopsis sp. Phomopsis phomopsis sp. Phomopsis sp. Phomopsis sp. Phomopsis sp. Phomopsis sp. Phomopsis sp. Phomopsis sp.

Host	Disease	Causal Organism	# Samples
Tobacco	Collar Rot	Sclerotinia sclerotiorum	2
C = 43	Brown Spot	Alternaria sp.	2
H = 0	Black Shank Black Shank Race-1	Phytophthora nicotianae var. parasitica	6
	Stem Rot Stalk Rot	Phytophthora nicotianae var. parasitica	4
	Virus	Sclerotium rolfsii	1
	Virus	<i>Erwinia</i> sp.	1
		Tomato spotted wilt	6
		Tobacco mosaic	1
		Rhizoctonia sp.	1
		Rhizoctonia solani	5
		<i>Pythium</i> sp.	3
		Pseudomonas sp.	1
	No Disease		8
	TDTD		1
	LSREP		1
Wheat	Virus	Soil-borne wheat	1
C = 5	No Disease		2
H = 0	LSREP		2

VEGETABLES (Total # Diagnoses: C = 303; H = 57)

Diagnostic Responsibilities:

Tifton Clinic – Commercial Athens Clinic – Homeowner

Host	Disease	Causal Organism	# Samples
Arugula C = 1 H = 0	Root Rot	<i>Pythium</i> sp.	1
Basil C = 2 H = 0	Root Rot Stem and Leaf Blight	<i>Pythium</i> sp. <i>Phytophthora</i> sp.	1 1
Bean, Lima C = 1 H = 1	Unknown No disease		1 1
Bean, Snap C = 14 H = 4	Ashy Stem Blight Cottony Leak Leaf Spot/Blight No Disease LSREP Unknown TDTD	Macrophomina phaseolina Pythium sp. bacterial Rhizoctonia solani Pythium sp.	1 1 2 1 9 1 1 1
Cabbage C = 9 H = 0	Root Rot LSREP No Disease Unknown	<i>Pythium</i> sp. <i>Rhizoctonia</i> sp. <i>Rhizoctonia solani</i> Cold injury	1 1 1 1 1 4
Cantaloupe C = 17 H = 0	Gummy Stem Blight Root Rot Powdery Mildew Virus Crown Decline No Disease	<i>Mycosphaerella citrullina Pythium</i> sp. Poty	2 2 2 3 1 7
Carrot C = 1 H = 0		Rhizoctonia solani	1

Host	Disease	Causal Organism	# Samples
Collard C = 7 H = 3	Root Rot Nematode Damage Downy Mildew No Disease LSREP	<i>Pythium</i> sp. possible <i>Peronospora parasitica</i> <i>Alternaria</i> sp.	1 1 1 5 1
Corn, Sweet C = 8 H = 1	Common Rust Purple Sheath Northern Corn Leaf Blight No Disease Undetermined	Puccinia sorghi Exserohilum turicum	1 1 1 5 1
Cucumber C = 14 H = 0	Virus Gummy Stem Blight Downy Mildew Phytophthora Blight No Disease TDTD	Cucumber mosaic Mycosphaerella citrullina Pseudoperonospora cubensis Pythium sp. Phytophthora capsici	1 1 2 1 1 7 1
Eggplant C = 2 H = 0	Anthracnose	Phomopsis sp.	1 1
Gourd C = 1 H = 0	Leaf Spot	Alternaria sp.	1
Greens, Mustard C = 1 H = 1	Leaf Spot LSREP	<i>Cercospora</i> sp.	1 1
Greens, Turnip Greens, Micro C = 7 H = 4	Virus Virus Root rot Leaf Spot No Disease LSREP TDTD	Gemini <i>Rhizoctonia</i> sp. <i>Cercospora</i> sp. <i>Pythium</i> sp. &/or <i>Phytophthora</i> sp.	1 1 2 1 2 1 2
Kale C = 0 H = 3	LSREP TDTD	Pythium sp. &/or Rhizoctonia sp.	1 1 1

Host	Disease	Causal Organism	# Samples
Okra C = 2 H = 0	Wilt No Disease	possible <i>Fusarium</i> sp.	1 1
Onion C = 11 H = 0	Stem Lesion Leaf Blight Basal Plate Rot Sour Skin Neck Rot Bacteria No Disease TDTD	Botrytis sp. Stemphylium sp. Fusarium sp. Burkholderia cepacia Botrytis sp. Botrytis allii probable Pantoea sp. probable Erwinia sp.	1 1 1 1 1 1 1 1 1
Parsley C = 0 H = 1	Crown Rot	Sclerotinia sclerotiorum	1
Pea C = 2 H = 2	Stems Stems Unknown	<i>Rhizoctonia</i> sp. <i>Pythium</i> sp. <i>Fusarium</i> sp.	1 1 1 1
Pepper C = 33 H = 1	Virus Fruit Rot Leaf Spot Leaf Spot Stem Lesions Anthracnose Leaf Spot Root and Stem Rot Roots LSREP	Tomato spotted wilt Possibly <i>Erwinia</i> sp. <i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> (copper sensitive) <i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> (copper insensitive) <i>Erwinia</i> sp. <i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> Possibly <i>Pythium</i> sp. <i>Phytophthora</i> sp. <i>Pythium</i> sp. <i>Xanthomonas</i> sp.	2 1 5 1 1 1 1 3 1 5 3 1
	No Disease Unknown TDTD	Sunscald	7 1 1

Host	Disease	Causal Organism	# Samples
Potato, Irish C = 3 H = 1	Leaf Spot No Disease	Bacterial <i>Fusarium</i> sp. (possibly) <i>Erwinia</i> sp.	1 1 1 1
Pumpkin C = 0 H = 3	Blossom / Fruit Blight Crown Decline No Disease	Choanephora sp.	1 1 1
Rape C = 0 H = 1	Root rot	Pythium sp. &/or Rhizoctonia sp.	1
Spinach C = 2 H = 0	Root Rot Virus	<i>Pythium</i> sp. Cucumber mosaic	1 1
Squash C = 5 H = 2	Virus Virus Phytophthora Blight Downy Mildew No Disease	Squash mosaic Cucumber mosaic <i>Phytophthora capsici</i> <i>Xanthomonas</i> sp. <i>Pythium</i> sp. <i>Pseudoperonospora cubensis</i>	1 1 1 1 1 2
Tomato C = 42 H = 27	Leaf Mold Early Blight Leaf Spot Virus Virus Virus (possibly) Blossom End Rot Cat Facing No Disease Unknown LSREP TDTD Insufficient Sample	Fulvia fulva Alternaria sp. Xanthomonas campestris pv. vesicatoria Tomato spotted wilt Cucumber mosaic Tobacco mosaic Tobacco mosaic Tomato yellow leaf curl Pythium sp. Xanthomonas sp.	1 1 2 22 1 1 1 1 2 2 3 1 20 5 2 3 2 3 2

Host	Disease	Causal Organism	# Samples
Unknown Multiple Samples C = 0 H = 1	No Disease	Herbicide Damage	1
Watermelon C = 115 H = 1	Gummy Stem Blight Fruit Blotch Fusarium Wilt (probable) Virus Nematode Damage Crown Decline Powdery Mildew Virus Cottony Leak No Disease Unknown Insufficient Sample	Mycosphaerella citrullina Acidovorax avenae subsp. citrulli Fusarium sp. Poty Meloidogyne sp. Pythium sp. Fusarium sp. Erwinia sp. Rhizoctonia solani Pythium sp.	3 19 17 3 1 2 4 1 1 3 1 1 2 56 1 1
Zucchini C = 1 H = 0	Downy Mildew	Pseudoperonospora cubensis	1

(Total # Diagnoses: C = 105; H= 26)

Diagnostic Responsibilities:

Athens Clinic – Fruit (Commercial & Homeowner) Tifton Clinic – Commercial Nuts Athens Clinic – Homeowner Nuts

Host	Disease	Causal Organism	# Samples
Apple C = 3 H = 4	White Rot Bot Canker Leaf Spot Galling No disease	Botryosphaeria sp. Botryosphaeria sp. Botryosphaeria sp. Unknown Alternaria sp.	1 1 1 1 2
Blackberry C = 6 H = 4	Cane Blotch Fire Blight White Rot Cane & Leaf Rust Virus No Disease Unknown	Cephaleuros virescens Erwinia amylovora Kuehneola uredinis Tomato ringspot Fusicoccum sp.	1 1 2 1 1 2
Blueberry C = 56 H = 2	Twig Blight Root Rot Canker Root Rot Root Rot Root Rot No Disease Unknown LSREP	 Phomopsis sp. Pythium sp. Sphaeropsis sp. Phytophthora sp. Pythium sp. & Phytophthora sp. Rhizoctonia sp. Pythium sp. Phytophthora sp. Phytophthora sp. Pythium & Phytophthora sp. Alternaria sp. Phyllosticta sp. (Xyellela fastidiosa) 	1 4 1 2 1 4 1 4 3 1 1 1 5 13 15
Cherry C = 0 H = 1	Shot Hole	Blumeriella jaapi	1

Host	Disease	Causal Organism	# Samples
Citrus C = 3 H = 1	No Disease No sample sent	<i>Cercospora</i> sp.	1 2 1
Fig C = 0 H = 3	Anthracnose Secondary Organisms LSREP		1 1 1
Grape, wine C = 5 H = 1	Bitter Rot No Disease	<i>Melanconium fuligineum Botrytis</i> sp.	1 1 4
Muscadine C = 2 H = 1	Root Rot No Disease	<i>Pythium</i> sp. <i>Phytophthora</i> sp.	1 1 1
Peach C = 1 H = 1	Brown Rot No Disease	Monilinia fructicola	1 1
Pear, Pineapple C = 0 H = 1	LSREP		1
Pecan C = 5 H = 0	Unknown No Disease		2 3
Persimmon C = 3 H = 0	Leaf Spot No Disease Unknown	Cercospora sp.	1 1 1
Plum C = 0 H = 3	Canker Shot Hole LSREP	Blumeriella jaapi	1 1 1
Pomegranate C = 2 H = 3	Fruit Rot Heart Rot LSREP	<i>Pestalotia</i> sp.	2 1 1 1
Ribes C = 0 H = 1	LSREP		1

Host	Disease	Causal Organism	# Samples
Strawberry	Leaf Spot	<i>Mycosphaerella</i> sp.	1
C = 19	Root Rot	Phytophthora sp.	2
H = 0	Root Rot	<i>Pythium</i> sp.	1
	Root Rot		1
	Crown Rot	Phytophthora sp.	2
	Leaf Spot, bacterial	Xanthomonas sp.	1
	Root & Crown Rot	Rhizoctonia sp.	1
	Seedling & Basal Stem	Rhizoctonia sp.	1
	Rot		1
	Anthracnose (Possible)	Phomopsis sp.	2
		Pythium sp.	1
		Botrytis sp.	1
		Phytophthora sp.	1
	No Disease		2
	LSREP		1

HERBACEOUS ORNAMENTALS (Total # Diagnoses: C = 87; H = 47)

Diagnostic Responsibilities:

Athens Clinic - All Samples (Commercial & Homeowner)

Host	Disease	Causal Organism	# Samples
Agapanthus C = 1 H = 0	Soft Rot, bacterial	Erwinia carotovora	1
Agalinis C = 1 H =0	No Disease		1
Ajuga C = 2 H = 0	Crown & Root Rot Crown Rot	Phoma sp. Phoma sp.	1 1
Amaryllis C = 0 H = 1	No Disease		1
Argyranthemum C = 1 H = 0	Crown Gall	Agrobacterium tumefaciens	1
Acorus C = 0 H = 1	No Disease		1
Begonia C = 2 H = 2	Stem & Root Rot Root Rot No Disease	<i>Fusarium</i> sp. <i>Pythium</i> sp. <i>Pythium</i> sp.	1 1 1 1
Bromeliad C = 0 H = 1	Insufficient Sample		1
Cactus C = 0 H = 3	Sooty Mold No Disease LSREP		1 1 1
Calibrochoa C = 1 H = 0		Pythium sp. & Rhizoctonia sp.	1

Host	Disease	Causal Organism	# Samples
Callicarpa C = 1 H = 0	No Disease		1
Clematis C = 0 H = 1	No Disease		1
Chrysanthemum C = 6 H = 0	Root Rot Stem Rot No Disease	<i>Pythium</i> sp. <i>Fusarium</i> sp.	2 1 3
Coleus C = 0 H = 1	Downy Mildew	Peronospora sp.	1
Dahlia C = 1 H = 0	Stem Rot	Rhizoctonia sp.	1
Daylily C = 2 H = 1	Crown Rot Root Rot No Disease	Rhizoctonia sp. Pythium sp. & Fusarium sp.	1 1 1
Euphorbia C = 1 H = 0	Root Rot	<i>Pythium</i> sp.	1
Fern C = 1 H = 2	No Disease		3
Geranium C = 2 H = 0	No Disease		2
Helleborus C = 1 H = 2	Crown Rot Downy Mildew	Phytophthora sp. Peronospora pulveracea Cladosporium sp.	1 1 1
Heuchera C = 2 H = 0	Root Rot No Disease	Pythium sp. & Phytophthora sp.	1
Hollyhock C = 0 H = 2	Rust	Puccinia malvacearum	2

Host	Disease	Causal Organism	# Samples
Hosta C = 14 H = 0	Anthracnose Virus Virus No Disease	<i>Colletotrichum</i> sp. Tomato spotted wilt Hosta virus X	1 1 6 6
Houseplants, misc. C = 0 H = 1	No Disease		1
Impatiens C = 6 H = 0	Crown Rot Root Rot Nematode Damage No Disease	Rhizoctonia sp. Pythium sp. & Rhizoctonia sp. Meloidogyne sp.	1 1 1 3
Iris C = 2 H = 3	Leaf Spot Virus Virus Virus LSREP	<i>Heterosporium iridis</i> Tobacco ringspot Poty possible	1 1 1 1
lvy C = 1 H = 5	Leaf spot, bacterial Anthracnose Root Rot	Xanthomonas campestris pv. hedera Colletotrichum sp. Phytophthora sp. Macrophoma sp. Pythium sp. Clamp Fungi	1 1 1 1 1
Kalanchoe C = 1 H = 0	No Disease		1
Kale, Ornamental C = 1 H = 0	Wire Stem	Rhizoctonia sp.	1
Liriope C = 7 H = 2	Crown Rot Anthracnose Crown Rot Crown Rot Root Rot No Disease	Fusarium sp. Colletotrichum sp. Fusarium sp. & Rhizoctonia sp. Phytophthora palmivora Pythium sp. & Phytophthora sp.	2 2 1 1 1 2
Miscanthus C = 0 H = 1	No Disease		1

Host	Disease	Causal Organism	# Samples
Mondo Grass C = 2 H = 0	Anthracnose No Disease	Colletotrichum sp.	1 1
Monkey Face C = 0 H = 1	No Disease		1
Orchid C = 4 H = 0	Crown & Root Rot Root Rot Root Rot No Disease	Fusarium sp. Pythium sp. & Rhizoctonia sp. Pythium sp.	1 1 1 1
Osteospermum C = 1 H = 0	Crown Rot	Rhizoctonia sp.	1
Pachysandra C = 0 H = 3	Stem Lesion Leaf Spot Unknown	<i>Rhizoctonia</i> sp. <i>Volutella</i> sp.	1 1 1
Panicum C = 1 H = 0	Leaf Rust	<i>Puccinia</i> sp.	1
Pansy C = 5 H = 1	Crown & Stem Rot Black Root Rot No Disease	Botrytis sp. Thielaviopsis sp.	1 2 3
Penta C = 2 H = 0	Root Rot No Disease	Phytophthora sp.	1 1
Petunia C = 1 H = 3	Blight Root Rot	Botrytis sp. Pythium sp. & Rhizoctonia sp. Rhizoctonia sp. Pythium sp.	1 1 1 1
Phlox C = 1 H = 0	No Disease		1
Poinsettia C = 3 H = 0	Stem Rot No Disease	Phytophthora sp.	1 2

Host	Disease	Causal Organism	# Samples
Sansevieria C = 1 H = 0	Crown Rot	<i>Fusarium</i> sp.	1
Sarracenia C = 2 H = 0	No Disease	Penicillium sp.	1 1
Scaveola C = 1 H = 0	Root Rot	Pythium sp. & Phytophthora sp.	1
Schefflera C = 0 H = 1	Bacterial or viral	possible	1
Snapdragon C = 1 H = 1	Rust Root Rot	<i>Puccinia</i> sp. <i>Pythium</i> sp.	1 1
Streptocarpus C = 2 H = 0	No Disease		2
Tulip C = 0 H = 3	LSREP	<i>Botrytis</i> sp. <i>Penicillium</i> sp. Cold Damage	1 1 1
Thrift C = 0 H = 1	Web Blight	Rhizoctonia sp.	1
Verbena C = 1 H = 0	No Disease		1
Vinca C = 2 H = 1	Black Root Rot Root & Stem Rot No Disease	Thielaviopsis sp.	1 1 1
Zinnia C = 0 H = 3	Stem Rot Root Rot Virus	<i>Alternaria</i> sp. <i>Pythium</i> sp. Tomato spotted wilt	1 1 1

TREES (Total # Diagnoses: C = 80; H= 84)

Diagnostic responsibilities:

Athens Clinic – All Samples (Commercial & Homeowner)

Host	Disease	Causal Organism	# Samples
Birch C = 1 H = 0	LSREP		1
Cedar, Deodara C = 1 H = 0	LSREP		1
Cherry C = 0 H = 2	LSREP Unknown		1 1
Conifer C = 0 H = 1	LSREP		1
Cordyline C = 1 H = 0	No Disease		1
Crape Myrtle C = 1 H = 3	Sooty Mold No Disease LSREP		1 1 2
Cryptomeria C = 15 H = 16	Twig Blight Bot Canker Secondary Organisms No Disease LSREP	Cercosporidium sp. Fusicoccum sp. Colletotrichum sp. Alternaria sp.	1 1 1 4 16 7
Cypress, Leyland C = 11 H = 8	Canker Root Rot Root Rot Needle Blight Bot Canker No Disease LSREP	Seiridium or Bot (possible) Pythium sp. Cercosporidium sp. Sphaeropsis sp.	5 1 1 2 1 8 1

Host	Disease	Causal Organism	# Samples
Cupressus C = 1 H = 0	No Disease		1
Dogwood C = 0 H = 2	No Disease LSREP		1 1
Ehretia C = 1 H = 0	No Disease		1
Fagus C = 0 H = 1	Heart/Root Rot &/or Slime Flux		1
Ficus C = 1 H = 0	Leaf spot	<i>Corynespora</i> sp.	1
Hardwoods, Misc. C = 0 H = 2		Algae Bacteria	1 1
Hemlock C = 0 H = 1	No Disease		1
Magnolia C = 9 H = 5	Algal Leaf Spot Powdery Mildew Root & Stem Rot No Disease LSREP LSREP Unknown	<i>Cephaleuros</i> sp. <i>Fusarium</i> sp. Transplant Shock	2 2 1 5 1 2 1
Maple C = 14 H = 15	Tar Spot Leaf Spot Anthracnose Leaf Spot Bot Canker Root Rot No Disease LSREP Unknown	Rhytisma sp. bacterial Gloeosporium sp. Cristulariella sp. Sphaeropsis sp. Phytophthora sp. Coenocytic hyphae	2 1 1 1 1 1 1 17 3 1

Host	Disease	Causal Organism	# Samples
Metasequoia C = 1 H = 0	Charcoal rot	Macrophomina phaseoli	1
	No Disease		1
Oak C = 7 H = 13	Canker Canker Leaf Spot Wetwood No Disease LSREP LSREP Sample Sent Forward	Endothiella sp. Nectria sp. Phyllosticta sp. bacterial Cordyceps spp. Lightning damage To Entomology	1 1 1 1 7 1 6 1
Palm C = 2 H = 1	LSREP No Disease	<i>Pythium</i> sp. Transplant Shock	1 1 1
Pear C = 0 H = 2	No Disease LSREP		1 1
Pine C = 5 H = 3	Crown Rot Root Rot Root Rot No Disease LSREP	<i>Pythium</i> sp. <i>Phytophthora</i> sp. <i>Pythium</i> sp. & <i>Rhizoctonia</i> sp. Algae Bacteria Air Pollution	1 1 1 1 3 1
Poplar C = 0 H = 2	LSREP Unable to Diagnose		1 1
Prunus C = 1 H = 0	No Disease		1
Redbud C = 0 H = 1	No Disease		1

Host	Disease	Causal Organism	# Samples
Spruce C = 0 H = 2	LSREP	Calonectria sp.	1 1
Thuja C = 5 H = 1	Bot Canker Root Rot Needle Blight No Disease LSREP	Botryosphaeria sp. Cercosporidium sp.	1 1 1 2 1
Unknown C = 1 H = 2	No Disease Unable to Diagnose		2 1
Vitex C = 1 H = 0	Root & Crown Rot	Phytophthora sp. & Rhizoctonia sp.	1
Yew C = 0 H = 1	LSREP		1

WOODY ORNAMENTALS (Total # Diagnoses: C = 148; H = 91)

Diagnostic Responsibilities:

Athens Clinic - All Samples (Commercial & Homeowner)

Host	Disease	Causal Organism	# Samples
Althea C = 1 H = 0	No Disease		1
Arborvitae C = 5 H = 1	Root Rot No Disease	Phytophthora sp.	1 5
Aucuba C = 3 H = 1	Anthracnose No Disease LSREP		1 1 2
Azalea C = 15 H = 5	Dieback Root rot Root Decline Powdery Mildew Root Rot Root Rot Anthracnose Root Rot Leaf Spot No Disease LSREP	Botryosphaeria sp. Pythium sp. & Phytophthora sp. Unknown Fungi Microsphaera azaleae Pythium sp. Phytophthora sp. Colletotrichum sp. Gloeosporium sp. Pythium sp. & Rhizoctonia sp. Basidiomycete Cylindrocladium sp.	1 3 1 1 2 1 1 1 1 1 1 1 4 2
Barberry C = 1 H = 0	TDTD		1
Bougainvillea C = 0 H = 1	No Disease		1

Host	Disease	Causal Organism	# Samples
Boxwood C = 8 H = 8	Volutella Blight Root Rot Boxwood Decline Root Rot Root Rot No disease Unknown	Volutella buxi Pythium sp. Phytophthora sp. Pythium sp. & Phytophthora sp.	4 2 1 1 2 5 1
Camellia C = 18 H = 10	Bot Canker Leaf Spot Root Rot Anthracnose Leaf Spot Dieback Leaf Gall No Disease LSREP Unknown	Botryosphaeria sp. Pythium sp. & Rhizoctonia sp. Gloeosporium sp. Phyllosticta sp. Leptosphaeria sp. Exobasidium	1 1 1 1 1 1 1 17 3 1
Chamaecyparis C = 0 H = 2	Twig Blight No Disease	Phomopsis sp.	1 1
Chionanthus C = 0 H= 1	Slime Flux/ Wetwood		1
Cleyera C = 1 H = 1	No Disease		2
Daphne C = 0 H = 1	No Disease		1
Duranta C = 0 H = 1	Slime Mold		1
Elaeagnus C = 2 H = 0	Trunk Rot No Disease	Phytophthora cactorum	1 1
Euonymus C = 1 H = 1	Slime Mold No Disease		1 1

Host	Disease	Causal Organism	# Samples
Fatsia C = 0 H = 1	Sooty Mold		1
Fig, creeping C = 1 H = 0	Root Rot	Phytophthora sp. & Fusarium sp.	1
Forsythia C = 0 H = 1	Nematode Damage (Root knot)	<i>Meloidogyne</i> sp.	1
Fothergilla C = 1 H = 0	Leaf Spot	<i>Cercospora</i> sp.	1
Gardenia C = 0 H = 3	No Disease LSREP		1 2
Hibiscus C = 2 H = 0	No Disease Insufficient Sample		1 1
Holly C = 19 H = 11	Root Rot Black Root Rot Root Rot Leaf Spot Canker Canker Bot Canker Aerial Blight Algal Leaf Spot No Disease LSREP Unknown	Thielaviopsis sp. Rhizoctonia sp. Pythium sp. Colletotrichum sp. Phomopsis sp. Leptosphaeria sp. Rhizoctonia sp. Pestalotia sp. Fusarium sp.	1 2 2 1 1 1 1 1 1 1 1 1 1 1 4 1
Hydrangea C = 15 H = 4	Leaf Spot Root Rot Root Rot Root Rot Stem Rot No Disease	Cercospora sp. Pythium sp. Pythium sp. & Rhizoctonia sp. Phytophthora sp. & Rhizoctonia sp. Fusarium sp.	1 2 1 1 1 13

Host	Disease	Causal Organism	# Samples
Illicium C = 4 H = 0	Leaf Spot Leaf Spot Bot Canker No Disease	Cercospora sp. Gloeosporium sp. Sphaeropsis sp.	1 1 1 1
Jasmine C = 2 H = 4	Leaf Spot, Bacterial Southern Blight Root Rot Root Rot LSREP	(Possible) Sclerotium rolfsii Pythium sp. Rhizoctonia sp. Rhizoctonia sp. (Possible)	1 1 1 1 1 1
Juniper C = 6 H = 6	Aerial Blight Root Rot Twig Blight Canker (Possible) No Disease LSREP Unknown	Rhizoctonia sp. Verticillium sp. Pythium sp. & Phytophthora sp. Pestalotia sp.	1 1 1 1 5 1 1
Kolkwitzia C = 1 H = 0	Root Rot	<i>Pythium</i> sp.	1
Hypericum C = 2 H = 0	Black Root Rot Root Rot	<i>Thielaviopsis</i> sp. Pythium sp. & <i>Rhizoctonia</i> sp.	1 1
Lantana C = 1 H = 1	Nematode Damage No Disease	<i>Meloidogyne</i> sp.	1 1
Laurel, Cherry C = 0 H = 2	Black Root rot Shot Hole	Thielaviopsis basicola Scolytus rugulosus	1 1
Lavandula C = 1 H = 0	Root Rot	Pythium sp. & Rhizoctonia sp.	1
Leucothoe C = 1 H = 2	Root Rot Powdery Mildew LSREP	Pythium sp. Erysiphe vaccinii	1 1 1

Host	Disease	Causal Organism	# Samples
Ligustrum C = 4 H = 3	Leaf spot Wood rotting fungi Sooty Mold No Disease LSREP	<i>Cercospora</i> sp. <i>Armillaria</i> sp.	1 1 1 3 1
Loropetalum C = 1 H = 0	TDTD		1
Mahonia C =1 H = 0	Root Rot	<i>Pythium</i> sp.	1
Nandina C = 3 H = 0	Stem & Root Rot Root Rot Leaf Spot	<i>Rhizoctonia</i> sp. <i>Pythium</i> sp. <i>Cercospora</i> sp.	1 1 1
Physocarpus C = 1 H = 0	No Disease		1
Pieris C = 2 H = 0	Black Root Rot Root Rot	<i>Thielaviopsis basicola Pythium</i> sp. & <i>Rhizoctonia</i> sp.	1 1
Pittosporum C = 1 H = 0		Coenocytic hyphae	1
Rhaphiolepis C = 3 H = 3	Leaf Spot Leaf Spot Root Rot No Disease TDTD	Entomosporium sp. Cercospora sp. Pythium sp. & Phytophthora sp.	2 1 1 1 1
Rhododendron C = 2 H = 2	Root Rot No Disease		1 3

Host	Disease	Causal Organism	# Samples
Rose C = 12 H = 9	Root Rot Black Spot Leaf Spot Wilt Root Rot Downy Mildew No Disease LSREP Unknown	Armillaria (possible) Marssonina rosea Cercospora sp. Verticillium dahliae Rhizoctonia sp. Phytophthora sp. Peronospora sparsa Alternaria sp.	1 2 1 2 1 1 1 1 7 3 1
Spirea C = 0 H = 1	TDTD		1
Tea Olive C = 1 H = 0	No Disease		1
Unknown C = 0 H = 2	No Disease LSREP	Transplant shock	1 1
Viburnum C = 6 H = 3	Root Rot No Disease LSREP	Pythium sp. & Phytophthora sp.	1 7 1

TURF & FORAGE GRASSES (Total # Diagnoses: C = 400; H = 195)

Diagnostic Responsibilities:

Athens Clinic – all samples (Commercial & Homeowner)

Host	Disease	Causal Organism	# Samples
Bentgrass C = 80 H = 0	Anthracnose (basal rot) ETRI ETRI Summer Patch Nematode Damage Sulfides/Anaerobic Conditions No Disease	Colletotrichum sp. Magnaporthe poae or GGG Magnaporthe sp. Pythium sp. Rhizoctonia sp. Algae GGG Suspect or recommend check	23 2 3 1 21 8 3 1 8 5 5
Bermuda C = 88 H = 23	Brown Patch Large Patch Rust ETRI Take-all Dollar Spot SDS Bermuda Decline Rust Saprophyte No Disease Insufficient Sample TDTD	Rhizoctonia sp. Rhizoctonia sp. Puccinia sp. GGG Sclerotinia homeocarpa (possible) Puccinia cynodontis Helminthosporium sp. Pythium sp. Rhizoctonia sp. Bipolaris sp. Colletotrichum sp. Curvularia sp. Cladosporium sp. Sclerotinia homeocarpa	3 4 2 7 24 1 1 3 1 4 12 16 9 3 4 1 1 1 9 3 4 1 1 9 1 4
Bluegrass C = 0 H = 1	ETRI		1

Host	Disease	Causal Organism	# Samples
Centipede C = 66 H = 57	Take-all Fairy Ring Large Patch	GGG (possible) <i>Rhizoctonia</i> sp.	42 10 5
	ETRI Root Rot Gray Leaf Spot Anthracnose Fairy Ring	Rhizoctonia sp. Pyricularia sp. Colletotrichum sp. Curvularia sp. Colletotrichum sp. Rhizoctonia sp. Bipolaris sp.	2 2 1 1 7 4 17 2
	No Disease LSREP Insufficient Sample TDTD	<i>Pythium</i> sp. Clamp Fungi	2 4 1 21 1 1 1
Fescue C = 8 H = 4	Brown Patch ETRI Nematode Damage No Disease	<i>Rhizoctonia</i> sp. <i>Rhizoctonia</i> sp. <i>Pythium</i> sp. <i>Colletotrichum</i> sp.	1 1 2 3 1 2
Grass C = 1 H = 16	Unable to Diagnose Rust Take-all Anthracnose Large Patch No Disease TDTD	Puccinia sp. GGG Gloeosporium sp. Rhizoctonia sp. Rhizoctonia sp. Curvularia sp.	1 1 8 1 1 1 3 1 1 1
Greens C = 28 H = 0	Summer Patch ETRI Nematode Damage	Rhizoctonia sp. Pythium sp. Magnaporthe poae Colletotrichum sp.	2 3 3 12 3 4 1

Host	Disease	Causal Organism	# Samples
Lawn C = 0 H = 7	Earth Stars Take-all No Disease LSREP	Gasteromycetes <i>GGG Drechslera</i> sp. Clamp Fungi	1 2 1 1 1 1
Paspalum, Seashore C = 16 H = 0	Anthracnose	<i>Rhizoctonia</i> sp. GGG <i>Curvularia</i> sp. <i>Bipolaris</i> sp.	1 7 4 1 3
Ryegrass C = 2 H = 0		<i>Pythium</i> sp.	2
St. Augustine C = 50 H = 49	Take-all Slime Mold Root Rot Large Patch ETRI-mycelium Anthracnose Fairy Ring No Disease Unable to Determine Insufficient Sample	GGG Pythium sp. Rhizoctonia sp. Rhizoctonia sp. Colletotrichum sp. Curvularia sp. Bipolaris sp. Pythium sp. Rhizoctonia sp. Drechslera sp. Fungal mass	61 1 1 4 1 2 2 5 3 4 7 1 1 3 1 2
Sod C = 1 H = 0		Basidiomycete	1

Host	Disease	Causal Organism	# Samples
Turf C = 3 H = 9	Large Patch Take-all Nematode Damage	<i>Rhizoctonia</i> sp. GGG <i>Curvularia</i> sp. <i>Pythium</i> sp. (Suspect)	3 4 1 1 1
	No Disease		3
Unknown C = 0 H = 2	Take-all	GGG <i>Curvularia</i> sp.	1 1
Zoysia C = 57 H = 27	Large Patch Rust Take-all ETRI Root Rot Fairy Ring	Rhizoctonia sp. Puccinia zoysia GGG Pythium sp. Rhizoctonia sp. Bipolaris sp. Curvularia sp. Colletotrichum sp. Rhizoctonia solani Pythium sp. Clamp Fungi Stress Fungi	5 2 12 3 2 5 11 6 8 3 1 2 1 1
	No Disease Unknown Insufficient Sample TDTD		1 17 1 1 3

MISCELLANEOUS

(Total Diagnoses: C = 7; H = 8)

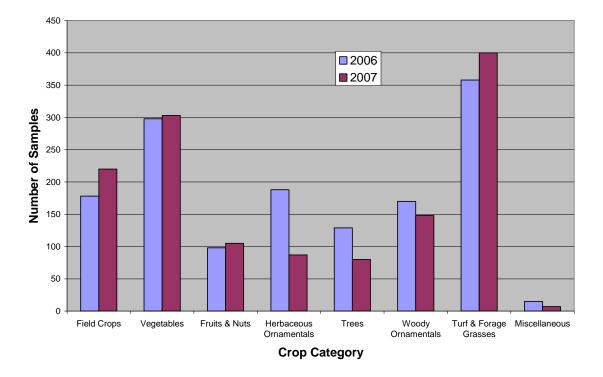
Host	Disease	Causal Organism	# Samples
Fungal ID C = 1 H = 2	Conk Mushroom Id of fungi on soil surface	Wood Rot Fungi <i>Fuligo septica</i> <i>Chromelosporium</i> sp.	1 1 1
Misc. Unknown C = 6 H = 4	Various cuttings Unknown Wood Leaf Spot No Disease Unknown TDTD	LSREP Cold/Drought Stress Insect galls <i>Stemonitis</i> sp. <i>Cercospora</i> sp.	1 1 4 1 1 1
Plant ID C = 0 H = 2	Plant ID Plant ID	Zoysia sp. Sida rhombifolia	1 1

Lastly, I decided to compare sample numbers for the last two years that I have been employed as the diagnostician (2006-07). I made several comparisons (shown below):

- 2006 vs. 2007 numbers by crop category for commercial samples
- o 2006 vs. 2007 numbers by crop category for homeowner samples
- o 2007 numbers of Commercial vs. Homeowner samples.

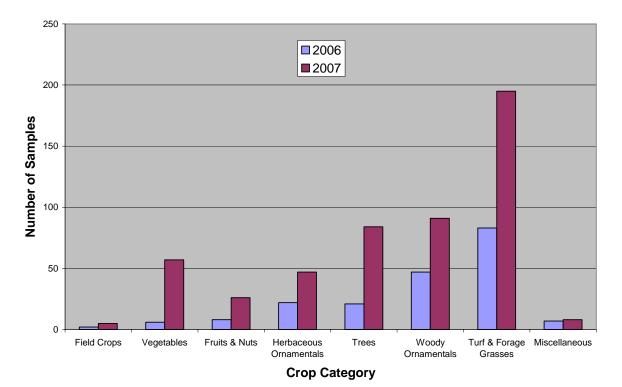
It is interesting to see which sample categories have increased or decreased over the last two years. For instance, commercial herbaceous ornamental samples decreased by half from 2006 to 2007. Could this be a factor of the severe drought? On the other hand, turfgrass sample submission has increased over the last year.

In addition, homeowner sample numbers have really 'bounced' back from 2006 (when the diagnostic clinic was closed for over half the year) in almost every crop category.

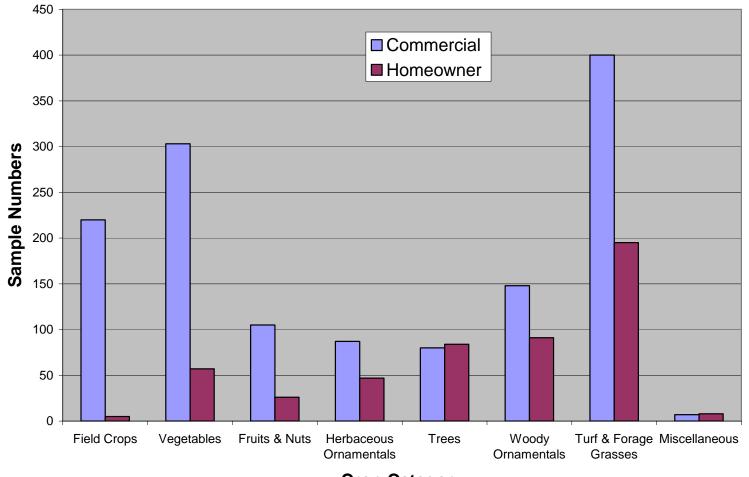


2006 vs. 2007 Commerical Sample Totals





Commercial vs. Homeowner Sample Numbers



Crop Category