

Plant Disease Clinic Annual Report 2021

The University of Georgia
College of Agricultural and Environmental Sciences
Department of Plant Pathology
Diagnosticians: Ansuya Jogi and Jason Brock
Extension Specialists: Phillip Brannen, Jason Brock, Bhabesh Dutta,
Bob Kemerait, Elizabeth Little, Alfredo Martinez-Espinoza,
Jonathan Oliver and Jean Williams-Woodward

2021 Annual Plant Disease Clinic Report – DDDI and PClinic

The clinics maintain a computerized database of samples and their diagnoses. From January-September 2021, that system was Distance Diagnostics through Digital Imaging. DDDI. In September 2021, DDDI was discontinued, and the clinics switched from DDDI to PClinic. The data in this report is taken from both the DDDI and PClinic systems. There is a portion of unlogged samples that are not represented here (samples responded to directly by email, phone, text and in-person). In both DDDI and PClinic, there are Homeowner and Commercial samples and within those categories, the sample types are Physical only, Physical & Digital and Digital only.

This report represents samples that were logged in DDDI and PClinic and diagnosed by the Plant Pathology diagnosticians (Jason Brock and Ansuya Jogi) and extension specialists (Phillip Brannen, Jason Brock, Bhabesh Dutta, Bob Kemerait, Elizabeth Little, Alfredo Martinez-Espinoza, Jonathan Oliver and Jean Williams-Woodward).

PLANT DISEASE CLINICS ANNUAL SUMMARY

Extension Plant Pathology maintains plant disease clinics at Athens and Tifton to aid county extension faculty in diagnosing and correcting disease related plant problems. Additionally, a laboratory for analysis for nematodes is maintained at Athens. The Plant Disease Clinic at Athens, operated by Ansuya Jogi, is located in Room 2405 Miller Plant Science Building.

Samples analyzed in this clinic include commercial fruit, ornamentals, turf, trees and homeowner samples. The Plant Disease Clinic at Tifton, operated by Jason Brock, is located in Room 116 of the Horticulture Building. Samples analyzed in this clinic include commercial samples of row crops, pecans, and vegetables.

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.

CLINIC SUMMARIES: 2021 PLANT SPECIMEN DIAGNOSES

Crop	Commercial Samples	Homeowner Samples	Total
Field Crops	149	0	149
Fruits and Nuts	300	30	330
Herbaceous Ornamentals	52	24	76
Miscellaneous	1	1	2
Trees	31	68	99
Turf	251	73	324
Vegetables	206	31	237
Woody Ornamentals	138	107	245
Total*	1128	334	1462

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

The largest crop category for Commercial clinic submissions was Fruits and Nuts, followed by Turf. The largest crop category for Homeowner clinic submissions was Woody Ornamentals, followed by Turf.

MONTHLY SAMPLE SUMMARY

Month	Commercial Samples	Homeowner Samples
January	49	1
February	23	13
March	51	37
April	107	32
May	99	46
June	101	58
July	76	28
August	92	34
September	71	30
October	51	28
November	44	15
December	21	10
Total*	785	332

*The total number of samples diagnosed shown here is smaller than the diagnoses shown in the clinic summaries because some samples have more than one problem or diagnosis.

DISTRIBUTION OF 2021 COMMERCIAL SAMPLES DIAGNOSED BY COUNTY

County	Samples		County	Samples		County	Samples
Appling	14		Effingham	4		Murray	2
Atkinson	12		Elbert	1		Muscogee	1
Bacon	31		Emanuel	1		NA	20
Barrow	3		Evans	5		Oconee	8
Bartow	1		Fayette	1		Oglethorpe	1
Ben Hill	2		Floyd	7		Paulding	1
Berrien	21		Forsyth	8		Peach	3
Bibb	11		Franklin	2		Pierce	23
Bleckley	1		Fulton	38		Pike	5
Brantley	4		Glynn	3		Pulaski	2
Bryan	7		Grady	4		Rabun	1
Bulloch	5		Greene	4		Richmond	8
Burke	5		Gwinnett	26		Screven	12
Calhoun	9		Habersham	1		Seminole	1
Candler	1		Hall	2		Spalding	2
Carroll	3		Harris	2		Sumter	7
Chatham	2		Hart	1		Tattnall	26
Cherokee	1		Henry	12		Taylor	2
Clarke	6		Houston	7		Telfair	2
Clinch	6		Irwin	12		Terrell	1
Cobb	36		Jackson	5		Thomas	5
Coffee	2		Jeff Davis	11		Tift	32
Colquitt	43		Jefferson	8		Toombs	5
Columbia	2		Johnson	1		Towns	1
Cook	12		Jones	2		Troup	2
Coweta	4		Lanier	4		Turner	25
Crawford	1		Laurens	10		Union	2
Crisp	6		Lee	1		Walton	1
Dawson	7		Lowndes	30		Ware	4
De Kalb	9		Lumpkin	1		Washington	1
Decatur	1		Macon	2		Wayne	5
Dodge	1		McDuffie	34		Webster	3
Dooly	2		Miller	2		White	5
Dougherty	5		Mitchell	8		Wilcox	7
Douglas	3		Monroe	1		Worth	11
Echols	5		Morgan	3			

DISTRIBUTION OF 2021 HOMEOWNER SAMPLES DIAGNOSED BY COUNTY

County	Samples		County	Samples
Barrow	7		Henry	5
Ben Hill	5		Houston	2
Bibb	11		Jeff Davis	4
Brantley	1		Jefferson	2
Brooks	5		Jenkins	1
Bryan	1		Lanier	2
Burke	1		Laurens	4
Butts	6		Liberty	2
Camden	3		Lincoln	2
Carroll	5		McDuffie	10
Charlton	1		Morgan	10
Chatham	3		Muscogee	18
Cherokee	1		Newton	7
Clarke	14		Oconee	9
Clinch	2		Paulding	1
Cobb	45		Pierce	4
Columbia	1		Rockdale	4
Coweta	4		Screven	1
De Kalb	4		Spalding	6
Dougherty	11		Troup	16
Douglas	3		Turner	1
Effingham	7		Walker	1
Forsyth	4		Walton	1
Fulton	36		Ware	1
Glynn	2		Whitfield	12
Gordon	5		Wilcox	1
Gwinnett	14		Wilkes	1
Hall	1		Worth	1

CROP DIAGNOSES SUMMARIES

The following sections contain summaries of sample diagnoses by crop category. Samples are divided into Commercial and Homeowner. The data in the following tables represents a portion of data logged in DDDI and data logged in PCLinic. In DDDI, there were multiple disciplines – Aquaculture, Crop & Soil Sciences, Entomology, Forestry, Horticulture and Plant Pathology. The following table includes information related to Plant Pathology PCLinic and DDDI samples diagnosed by Plant Pathology Extension Specialists but does not include the DDDI sample information from the other DDDI disciplines. The samples and diagnoses numbers related to the excluded samples have been included in the tables above and summary figures at the beginning of the tables below in parenthesis.

C: Commercial

H: Homeowner

FIELD CROPS

(Total Diagnoses 149: C=149; H=0)

HOST	DISEASE	CAUSAL ORGANISM	C	H
Common Wheat C = 9 H = 0	Powdery mildew	<i>Erysiphe</i> sp./spp.	1	0
	Cultural/environmental problem	Abiotic disorder	2	0
	Freeze; Frost; Cold damage	Abiotic disorder	1	0
	Tan spot	<i>Drechslera</i> sp./spp.	1	0
	Insufficient sample	Identification Analysis	1	0
		Abiotic disorder	1	0
		<i>Drechslera</i> sp./spp.	1	0
	Soil-borne wheat mosaic (SBWMV)	Furovirus Soil-borne Wheat Mosaic Virus	1	0
Corn C = 17 H = 0	Unknown	General	1	0
	Common corn rust	<i>Puccinia sorghi</i>	2	0
	Corn gray leaf spot	<i>Cercospora zea-maydis</i>	1	0
	Genetic disorders	Abiotic disorder	1	0
	Physiological responses	Abiotic disorder	2	0
	Curvularia blight; Leaf spot	<i>Curvularia</i> sp./spp.	1	0
	Southern corn rust	<i>Puccinia polysora</i>	1	0
		<i>Cercospora zea-maydis</i>	1	0
		No Pathogen Found	6	0
Corn (Seed) C = 1 H = 0	Curvularia leaf spot	<i>Curvularia lunata</i>	1	0
		Unknown cause	1	0
Cotton	Unknown	General	1	0

C = 33 H = 0	Cercospora leaf spot	<i>Cercospora</i> sp./spp.	4	0
	Stemphylium leaf spot	<i>Stemphylium</i> sp./spp.	4	0
	Southern root-knot nematode	<i>Meloidogyne incognita</i>	1	0
	Chemical injury	Abiotic disorder	2	0
	Chemical; Environmental injury	Abiotic disorder	1	0
	Lightning damage	Abiotic disorder	1	0
	Nutritional deficiency	Abiotic disorder	1	0
	Environmental stress; Problem	Abiotic disorder	1	0
	Cotton Fusarium wilt	<i>Fusarium oxysporum</i>	1	0
		Abiotic disorder	2	0
		No Pathogen Found	5	0
		<i>Rhizoctonia solani</i>	1	0
		Unknown cause	1	0
		<i>Ramularia gossypii</i>	1	0
		<i>Fusarium equiseti</i>	1	0
	Cotton boll rot; Seedling blight	<i>Colletotrichum indicum</i>	2	0
	Target spot	<i>Corynespora cassiicola</i>	2	0
		Polerovirus Cotton leafroll dwarf virus	1	0
Grain Sorghum C = 1 H = 0	Anthracnose	<i>Colletotrichum graminicola</i>	1	0
Hemp C = 2 H = 0		<i>Fusarium</i> sp./spp.	1	0
		<i>Sclerotium rolfsii</i>	1	0
Oats C = 8 H = 0	Helminthosporium leaf spot	<i>Drechslera</i> sp./spp.	2	0
	Cultural/environmental problem	Abiotic disorder	3	0
	Barley yellow dwarf (BYDV-MAV)	Luteovirus Barley Yellow Dwarf Virus	2	0
	Cereal yellow dwarf (CYDV)	Polerovirus Cereal Yellow Dwarf Virus	1	0
Peanut C = 33 H = 0	Aspergillus crown rot	<i>Aspergillus niger</i>	3	0
	Southern stem rot	<i>Sclerotium rolfsii</i>	1	0
	Lesion nematodes	<i>Pratylenchus</i> sp./spp.	2	0
	Chemical injury	Abiotic disorder	1	0
	Chemical; Environmental injury	Abiotic disorder	2	0
	Nutritional deficiency	Abiotic disorder	1	0
	Calcium deficiency	Abiotic disorder	1	0
	Peanut rust	<i>Puccinia arachidis</i>	1	0
		No Pathogen Found	1	0
		<i>Rhizoctonia solani</i>	4	0
		<i>Sclerotium rolfsii</i>	3	0
		Unknown cause	1	0

	Peanut root-knot nematode	<i>Meloidogyne arenaria</i>	1	0
		<i>Lasiodiplodia theobromae</i>	1	0
	Cylindrocladium black rot	<i>Calonectria ilicicola</i>	2	0
	Tomato spotted wilt (TSWV)	Tospovirus Tomato Spotted Wilt Virus	5	0
	Peanut late leaf spot	<i>Passalora personata</i>	1	0
	Peanut early leaf spot	<i>Passalora arachidicola</i>	2	0
Soybean C = 10 H = 0	Black root rot	<i>Xylaria sp./spp.</i>	1	0
	Australasian soybean rust	<i>Phakopsora pachyrhizi</i>	1	0
	Soybean Phytophthora root and stem rot	<i>Phytophthora sojae</i>	1	0
		<i>Cercospora kikuchii</i>	1	0
		<i>Macrophomina phaseolina</i>	1	0
		No Pathogen Found	1	0
		<i>Rhizoctonia solani</i>	1	0
	Soybean anthracnose	<i>Colletotrichum destructivum</i>	1	0
	Soybean pod and stem blight	<i>Diaporthe phaseolorum</i>	2	0
Sudangrass C = 4 H = 0	Seedling blight	<i>Bipolaris sacchari</i>	1	0
	Cultural/environmental problem	Abiotic disorder	2	0
	Seedling diseases	<i>Rhizoctonia solani</i>	1	0
Tall Fescue C = 1 H = 0	Soil compaction	Abiotic disorder	1	0
Tobacco (Flue-cured) C = 10 H = 0	Black shank	<i>Phytophthora nicotianae</i>	3	0
	Collar rot	<i>Sclerotinia sclerotiorum</i>	1	0
	Cercospora leaf spot	<i>Cercospora sp./spp.</i>	2	0
		No Pathogen Found	2	0
		<i>Rhizoctonia solani</i>	1	0
	Brown spot	<i>Alternaria alternata</i>	1	0

FRUITS AND NUTS

(Total Diagnoses 330: C=300; H=30)

HOST	DISEASE	CAUSAL ORGANISM	C	H
Blackberry C = 22 H = 0	Cane blotch	<i>Cephaleuros</i> sp./spp.	2	0
	Mites	Order Acari	1	0
	Cane and leaf rust	<i>Kuehneola</i> sp./spp.	4	0
		<i>Cephaleuros virescens</i>	3	0
		<i>Leptosphaeria</i> sp./spp.	2	0
		<i>Phomopsis</i> sp./spp.	1	0
		<i>Pseudocercospora</i> sp./spp.	3	0
		<i>Rhizoctonia</i> sp./spp.	1	0
	Root problem	Unknown cause	1	0
	Cane blight; Canker	<i>Paraconiothyrium fuckelii</i>	4	0
Blueberry C = 92 H = 3	Unknown	General	1	1
	Ripe rot	<i>Colletotrichum</i> sp./spp.	1	0
	Chemical injury	Abiotic disorder	2	0
	Chemical; Environmental injury	Abiotic disorder	1	0
	Environmental stress; Problem	Abiotic disorder	0	2
	Drought stress damage	Abiotic disorder	1	0
	Scale insects	Order homoptera	2	0
	Insects	Class insecta	3	0
	Root rot	Unidentified Agent	1	0
		<i>Alternaria</i> sp./spp.	1	0
		<i>Botryosphaeria</i> sp./spp.	2	0
		<i>Cladosporium</i> sp./spp.	4	0
		<i>Colletotrichum gloeosporioides</i>	2	0
		<i>Colletotrichum</i> sp./spp.	1	0
		<i>Exobasidium</i> sp./spp.	1	0
		<i>Fusicoccum</i> sp./spp.	2	0
		<i>Phomopsis</i> sp./spp.	4	0
		<i>Phytophthora cinnamomi</i>	23	0
		<i>Phytophthora</i> sp./spp.	1	0
		<i>Pucciniastrum</i> sp./spp.	6	0
		<i>Rhizoctonia</i> sp./spp.	17	0
		Unknown cause	3	0
	Fruit rot	Unidentified Agent	1	0
		<i>Botrytis cinerea</i>	2	0
	Root problem	Unknown cause	7	0
	Red ring spot (BRRV)	Soymovirus Blueberry Red Ringspot Virus	2	0
	Herbicide injury	Abiotic disorder	1	0

Citrus C = 3 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
		<i>Alternaria</i> sp./spp.	1	0
		<i>Colletotrichum</i> sp./spp.	1	0
		<i>Phytophthora</i> sp./spp.	1	0
Common Apple C = 0 H = 5	Fire blight	<i>Erwinia amylovora</i>	0	2
	Environmental stress; Problem	Abiotic disorder	0	3
Hawthorn C = 0 H = 1	Cedar-quince rust	<i>Gymnosporangium clavipes</i>	0	1
Japanese Persimmon C = 1 H = 0		<i>Xylella fastidiosa</i>	1	0
May Hawthorne C = 0 H = 1	Rust	<i>Gymnosporangium</i> sp./spp.	0	1
Muscadine Grape C = 4 H = 1	Unknown	General	1	0
	Phyllosticta leaf spot	<i>Phyllosticta</i> sp./spp.	1	0
	Wound canker	Abiotic disorder	0	1
	Undetermined injury	Identification Analysis	2	0
Peach C = 3 H = 2	Brown rot	<i>Monilia</i> sp./spp.	0	1
	Chemical injury	Abiotic disorder	0	1
	Sooty mold	Unidentified Fungus	1	0
		<i>Botryosphaeria</i> sp./spp.	1	0
	San jose scale	<i>Diaspidiotus perniciosus</i>	1	0
Pear C = 0 H = 3	Fire blight	<i>Erwinia amylovora</i>	0	2
	Fruit rot	Unidentified Agent	0	1
Pecan C = 8 H = 1	Anthraxnose	<i>Glomerella</i> sp./spp.	1	0
	Pecan leaf scorch mite	<i>Eotetranychus hicoriae</i>	1	0
	Chemical injury	Abiotic disorder	1	0
		<i>Cristulariella</i> sp./spp.	1	0
		No Pathogen Found	3	0
	Pecan; Hickory scab	<i>Fusicladium caryigenum</i>	1	0
	Southern pecan leaf Phylloxera	<i>Phylloxera russellae</i>	0	1
Plum C = 0 H = 2	Plum Curculio	<i>Conotrachelus nenuphar</i>	0	1
	Freeze; Frost; Cold damage	Abiotic disorder	0	1
Pomegranate C = 3 H = 0		<i>Alternaria</i> sp./spp.	1	0
		<i>Botryosphaeria</i> sp./spp.	1	0
		<i>Pestalotia</i> sp./spp.	1	0
		<i>Alternaria</i> sp./spp.	1	0

Satsuma Tangerine C = 6 H = 0		<i>Colletotrichum</i> sp./spp.	1	0
		<i>Mycosphaerella</i> sp./spp.	1	0
		<i>Phytophthora</i> sp./spp.	2	0
	Anthracnose	<i>Colletotrichum</i> sp./spp.	1	0
Strawberry C = 47 H = 0	Anthracnose	<i>Colletotrichum acutatum</i>	1	0
	Anthracnose fruit rot	<i>Colletotrichum</i> sp./spp.	1	0
	Sclerotinia blight	<i>Sclerotinia</i> sp./spp.	1	0
	Leaf blotch	<i>Gnomonia</i> sp./spp.	1	0
	Mites	Order Acari	5	0
	Spider mites	Family Tetranychidae	1	0
	Sunscald	Abiotic disorder	1	0
	Phytophthora root and crown rot	<i>Phytophthora cactorum</i>	5	0
	Strawberry leather rot	<i>Phytophthora cactorum</i>	2	0
	Mite damage	Unidentified Mite	1	0
		Abiotic disorder	1	0
		<i>Botrytis</i> sp./spp.	1	0
		<i>Cercospora</i> sp./spp.	1	0
		<i>Fusarium</i> sp./spp.	1	0
		<i>Gnomonia</i> sp./spp.	3	0
		<i>Pestalotia</i> sp./spp.	3	0
		<i>Phytophthora cactorum</i>	11	0
		<i>Rhizoctonia solani</i>	3	0
		Unknown cause	1	0
		<i>Botrytis cinerea</i>	2	0
	Aphids; Plant lice	Family Aphididae	1	0

HERBACEOUS ORNAMENTALS

(Total Diagnoses 76: C=52; H=24)

HOST	DISEASE	CAUSAL ORGANISM	C	H
Amaryllis C = 0 H = 1	Slime mold	Class Myxogastria; Mycetozoa	0	1
Asiatic Jasmine C = 0 H = 1	Rhizoctonia blight	<i>Rhizoctonia solani</i>	0	1
Begonia C = 1 H = 0		<i>Pythium</i> sp./spp.	1	0
Boston Ivy C = 1 H = 1	Leaf spot	<i>Phyllosticta ampelcida</i>	0	1
	Leaf spot	<i>Phyllosticta</i> sp./spp.	1	0
Ceriman C = 1 H = 0		Potyvirus sp./spp.	1	0
Christmas Cactus C = 1 H = 0	Pythium root and/or crown rot	<i>Pythium</i> sp./spp.	1	0
Crowfoot; Buttercup (Ornamental) C = 1 H = 0		No Pathogen Found	1	0
Daylily C = 0 H = 1	Chemical injury	Abiotic disorder	0	1
Elephant Ear Plant C = 0 H = 1	Root problem	Unknown cause	0	1
English Ivy C = 2 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
		<i>Colletotrichum</i> sp./spp.	1	0
French Marigold C = 1 H = 0		<i>Phytophthora</i> sp./spp.	1	0
	Verticillium dieback	<i>Verticillium</i> sp./spp.	1	0
Hellebore C = 0 H = 3	Downy mildew	<i>Peronospora pulveracea</i>	0	3

Hibiscus C = 0 H = 1	Root problem	Unknown cause	0	1
Hosta C = 0 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
Iris C = 0 H = 1	Southern blight	<i>Sclerotium rolfsii</i>	0	1
Japanese Spurge C = 2 H = 0	Volutella leaf blight; Dieback	<i>Volutella sp./spp.</i>	1	0
	Boxwood blight; Leaf and stem blight	<i>Calonectria pseudonaviculata</i>	1	0
Larkspur C = 0 H = 1	Herbicide drift	Abiotic disorder	0	1
Lavender C = 15 H = 0	Crown and root rot	<i>Phytophthora sp./spp.</i>	1	0
		<i>Pythium sp./spp.</i>	11	0
		<i>Botrytis cinerea</i>	3	0
Lenten Rose C = 1 H = 0	Downy mildew	<i>Peronospora pulveracea</i>	1	0
Lilyturf; Bordergrass C = 0 H = 1	Root rot	Various Fungi	0	1
Madagascar periwinkle; Vinca C = 2 H = 0	Aerial blight	<i>Phytophthora nicotianae</i>	1	0
		<i>Pythium sp./spp.</i>	1	0
Mandevilla C = 1 H = 0		No Pathogen Found	1	0
Marigold C = 1 H = 0	Tomato spotted wilt (TSWV)	Tospovirus Tomato Spotted Wilt Virus	1	0
Mondograss; Dwarf Lily Turf C = 2 H = 0		<i>Phytophthora sp./spp.</i>	1	0
	Anthracnose	<i>Colletotrichum sp./spp.</i>	1	0
Orchids C = 2 H = 0	Odontoglossum ringspot	Odontoglossum Ringspot Virus (ORSV)	1	0
	Cymbidium mosaic (CYMMV)	Potexvirus Cymbidium Mosaic Virus	1	0

Pansy C = 3 H = 0	Cercospora leaf spot	<i>Cercospora violae</i>	1	0
		<i>Phytophthora sp./spp.</i>	1	0
		<i>Botrytis cinerea</i>	1	0
Pentas C = 1 H = 0		<i>Pythium sp./spp.</i>	1	0
Peony C = 0 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
Petunias C = 1 H = 0	Crown and root rot	<i>Phytophthora sp./spp.</i>	1	0
Philodendron C = 0 H = 1	Unidentified virus	Unidentified Virus	0	1
Rosemary C = 1 H = 0		<i>Phytophthora sp./spp.</i>	1	0
Sunflower C = 1 H = 0		No Pathogen Found	1	0

MISCELLANEOUS

(Total Diagnoses 2: C=1; H=1)

HOST	DISEASE	CAUSAL ORGANISM	C	H
Kudzu C = 1 H = 0		No Pathogen Found	1	0
Mushroom C = 0 H = 1	Unknown	General	0	1

TREES

(Total Diagnoses 99: C=31; H=68)

HOST	DISEASE	CAUSAL ORGANISM	C	H
Arborvitae C = 2 H = 1	Root rot	Various fungi	0	1
		No Pathogen Found	1	0
	Root rot	<i>Phytophthora</i> sp./spp.	1	0
Arizona Cypress C = 0 H = 1	Root problem	Unknown cause	0	1
Cedar C = 0 H = 1	Cedar-quince rust	<i>Gymnosporangium clavipes</i>	0	1
Cherry C = 0 H = 3	Unknown	General	0	1
	Cultural/environmental problem	Abiotic disorder	0	1
	Wound canker	Abiotic disorder	0	1
Cherry laurel C = 0 H = 1	Wound canker	Abiotic disorder	0	1
Deodar Cedar C = 0 H = 1	Root problem	Unknown cause	0	1
Dogwood C = 1 H = 5	Environmental stress; Problem	Abiotic disorder	0	2
	Unknown abiotic disorder	Abiotic disorder	0	1
	Wound canker	Abiotic disorder	0	1
	Dogwood powdery mildew	<i>Erysiphe pulchra</i>	0	1
		Unidentified Agent	1	0
Dwarf Alberta Spruce C = 0 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
Eastern Red Cedar C = 0 H = 1	Unknown abiotic disorder	Abiotic disorder	0	1
Hackberry C = 0 H = 1	Hackberry woolly aphid	<i>Shivaphis celti</i>	0	1
Hickory C = 0 H = 1	Insect gall	Insect Gall	0	1
Japanese Cedar C = 1 H = 0		<i>Passalora</i> sp./spp.	1	0

Japanese Maple C = 1 H = 4	Environmental stress; Problem	Abiotic disorder	0	3
	Unknown abiotic disorder	Abiotic disorder	0	1
		<i>Phytophthora</i> sp./spp.	1	0
Leyland Cypress C = 0 H = 5	Cultural/environmental problem	Abiotic disorder	0	1
	Environmental stress; Problem	Abiotic disorder	0	2
	Passalora leaf spot	<i>Passalora</i> sp./spp.	0	1
	Root problem	Unknown cause	0	1
Loblolly Pine C = 1 H = 0		No Pathogen Found	1	0
Longleaf Pine C = 2 H = 0	Lophodermium leaf spot; Needle cast	<i>Lophodermium</i> sp./spp.	2	0
Magnolia C = 0 H = 4	Unknown	General	0	1
	Algal leaf spot	<i>Cephaleuros</i> sp./spp.	0	3
Maple C = 0 H = 1	Root problem	Unknown cause	0	1
Mexican Fan Palm C = 0 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
Oak C = 1 H = 2	Unknown	General	0	1
	Wood decay fungus	<i>Unidentified Fungus</i>	0	1
	Leaf spot	<i>Tubakia</i> sp./spp.	1	0
Pear C = 0 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
Pine C = 0 H = 2	Aster rust; Pine needle rust	<i>Coleosporium asterum</i>	0	1
	Root problem	Unknown cause	0	1
Post Oak C = 1 H = 0	Wood rot fungus	<i>Ganoderma</i> sp./spp.	1	0
Prunus C = 2 H = 0		<i>Fusicoccum</i> sp./spp.	1	0
	Root rot	<i>Phytophthora</i> sp./spp.	1	0
Red Maple C = 0 H = 2	Wound canker	Abiotic disorder	0	1
	Wood decay fungus	Unidentified Fungus	0	1
River Birch C = 0	Herbicide drift	Abiotic disorder	0	1

H = 1				
Trident Maple		<i>Fusarium sp./spp.</i>	1	0
C = 1				
H = 0				
Unknown; No Site Specified				
	Wood rot fungus; Lion's mane	<i>Hericium erineus</i>	0	1
C = 0				
H = 1				
Willow	Mites	<i>Order Acari</i>	1	0
C = 1				
H = 0				
Yoshino Cherry	Wound canker	Abiotic disorder	0	1
C = 0				
H = 1				

TURF

(Total Diagnoses 324: C=251; H=73)

HOST	DISEASE	CAUSAL ORGANISM	C	H
Bentgrass C = 5 H = 0	Cultural/environmental problem	Abiotic disorder	2	0
	Pythium root and/or crown rot	<i>Pythium</i> sp./spp.	3	0
Bermudagrass C = 20 H = 4	Melting out (Turfgrass)	<i>Drechslera</i> sp./spp.	2	0
	Unknown	General	0	1
	Take-all	<i>Gaeumannomyces</i> sp./spp.	1	0
	Nematodes; General plant	Order Tylenchida	1	0
	Cultural/environmental problem	Abiotic disorder	6	0
	Nutritional deficiency	Abiotic disorder	1	0
	Environmental stress; Problem	Abiotic disorder	0	3
	Leaf spot	<i>Bipolaris</i> sp./spp.	3	0
	Insects	Class insecta	1	0
	Root rot	Various Fungi	2	0
		<i>Rhizoctonia</i> sp./spp.	1	0
	Large patch	<i>Rhizoctonia solani</i>	1	0
	Dollar spot	<i>Clariireedia homoeocarpa</i>	1	0
Bermudagrass C = 15 H = 7	Unknown	General	0	1
	Nematodes; General plant	Order Tylenchida	2	0
	Cultural/environmental problem	Abiotic disorder	2	0
	Dense thatch layer	Abiotic disorder	1	0
	Environmental stress; Problem	Abiotic disorder	1	3
	Plant parasitic nematodes	Unspecified Genera	0	1
	Leaf spot	<i>Bipolaris</i> sp./spp.	1	0
	Root rot	Various Fungi	4	1
		No Pathogen Found	1	0
		<i>Rhizoctonia</i> sp./spp.	1	0
	Localized dry spot	Abiotic disorder	2	0
Large patch	<i>Rhizoctonia solani</i>	0	1	
Centipedegrass C = 53 H = 16	Fairy ring	Various fungi	1	0
	Take-all	<i>Gaeumannomyces</i> sp./spp.	3	0
	Algae	General	0	1
	Cultural/environmental problem	Abiotic disorder	21	3
	Environmental stress; Problem	Abiotic disorder	0	12
	Root rot	Various Fungi	7	0
	Nematode damage	Unidentified Nematode	1	0
	No pathogen found	Identification Analysis	1	0
	Anaerobic soil	Abiotic disorder	1	0
Large patch	<i>Rhizoctonia solani</i>	17	0	

	Non-pathogenic; Saprophyte	Secondary Agents; Saprophytes; Unspecif.	1	0
Fescues C = 0 H = 4	Environmental stress; Problem	Abiotic disorder	0	4
Ryegrass C = 1 H = 0	Cultural/environmental problem	Abiotic disorder	1	0
St. Augustinegrass C = 29 H = 8	Fairy ring	Various fungi	1	0
	Take-all	<i>Gaeumannomyces sp./spp.</i>	10	0
	Cultural/environmental problem	Abiotic disorder	6	1
	Nutrient imbalance	Abiotic disorder	1	0
	Dense thatch layer	Abiotic disorder	1	0
	Environmental stress; Problem	Abiotic disorder	0	6
	Insects	Class insecta	1	0
		<i>Rhizoctonia sp./spp.</i>	1	0
	Gray leaf spot	<i>Pyricularia grisea</i>	3	0
	Large patch	<i>Rhizoctonia solani</i>	5	1
Tall Fescue C = 8 H = 0	Cultural/environmental problem	Abiotic disorder	2	0
	Environmental stress; Problem	Abiotic disorder	1	0
	Anthracnose; Colletotrichum leaf spot	<i>Colletotrichum sp./spp.</i>	1	0
	Root rot	Various fungi	1	0
		<i>Pythium sp./spp.</i>	1	0
		<i>Rhizoctonia sp./spp.</i>	1	0
Turfgrass C = 0 H = 1	Leaf spot	Various fungi	1	0
	Environmental stress; Problem	Abiotic disorder	0	1
Zoysia Grass C = 74 H = 13	Melting out (Turfgrass)	<i>Drechslera sp./spp.</i>	1	0
	Fairy ring	Various fungi	1	1
	Take-all	<i>Gaeumannomyces sp./spp.</i>	10	1
	Rust	<i>Uromyces sp./spp.</i>	5	0
	Cultural/environmental problem	Abiotic disorder	16	3
	Dense thatch layer	Abiotic disorder	1	0
	Soil compaction	Abiotic disorder	1	0
	Environmental stress; Problem	Abiotic disorder	2	8
	Leaf spot	<i>Bipolaris sp./spp.</i>	1	0
	Root decline of warm season grasses	<i>Gaeumannomyces graminis</i>	2	0
	Leaf rust; Rust	<i>Puccinia sp./spp.</i>	2	0
	Root rot	Various fungi	8	0
		<i>Rhizoctonia sp./spp.</i>	1	0
	Large patch	<i>Rhizoctonia solani</i>	21	0
Dollar spot	<i>Clariireedia monteithiana</i>	1	0	

	Dollar spot	<i>Clariireedia spp</i>	1	0
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VEGETABLES

(Total Diagnoses 237: C=206; H=31)

HOST	DISEASE	CAUSAL ORGANISM	C	H
Broccoli C = 1 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
		<i>Xanthomonas raphni</i>	1	0
Cabbage C = 5 H = 0	Black rot	<i>Xanthomonas campestris</i>	1	0
	Chemical; Environmental injury	Abiotic disorder	1	0
		<i>Alternaria sp./spp.</i>	1	0
Cantalope; Cantaloupe C = 6 H = 0	Anthracnose	<i>Colletotrichum orbiculare</i>	1	0
	Alternaria leaf spot	<i>Alternaria sp./spp.</i>	1	0
		<i>Didymella bryoniae</i>	1	0
		No Pathogen Found	1	0
Cauliflower C = 2 H = 0	Black rot	<i>Xanthomonas campestris</i>	1	0
	Bacterial leaf spot	<i>Xanthomonas raphni</i>	1	0
Cotton C = 1 H = 0	Stemphylium leaf spot	<i>Stemphylium sp./spp.</i>	1	0
Cucumber C = 2 H = 2	Downy mildew	<i>Peronospora sp./spp.</i>	0	1
	Downy mildew	<i>Pseudoperonospora sp./spp.</i>	1	0
	Cucurbit downy mildew	<i>Pseudoperonospora cubensis</i>	1	1
Eggplant C = 1 H = 0	Bacterial spot	<i>Xanthomonas raphini</i>	1	0
Kale C = 1 H = 0		No Pathogen Found	1	0
Lettuce C = 1 H = 0		<i>Pythium sp./spp.</i>	1	0
Okra C = 0 H = 3	Environmental stress; Problem	Abiotic disorder	0	1
	Leaf spot	Unknown cause	0	2
Onion C = 8 H = 0	Onion purple (Brown) blotch	<i>Alternaria porri</i>	1	0
	Onion smudge	<i>Colletotrichum circinans</i>	1	0
	Bacterial soft rot	<i>Erwinia sp./spp.</i>	1	0
		<i>Botrytis sp./spp.</i>	1	0
		No Pathogen Found	1	0

		<i>Stemphylium sp./spp.</i>	1	0
		Unknown cause	1	0
		Abiotic disorder	1	0
Pepper C = 8 H = 0	Unknown abiotic disorder	Abiotic disorder	1	0
		<i>Alternaria sp./spp.</i>	1	0
		<i>Phytophthora sp./spp.</i>	2	0
		<i>Xanthomonas sp./spp.</i>	1	0
		<i>Xanthomonas raphni</i>	2	0
	Bacterial spot	<i>Xanthomonas sp./spp.</i>	1	0
Potato C = 2 H = 0	Unknown abiotic disorder	Abiotic disorder	1	0
		Unknown cause	1	0
Southern peas; Cowpeas Blackeye Peas C = 2 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
		<i>Rhizoctonia sp./spp.</i>	1	0
		<i>Xanthomonas sp./spp.</i>	1	0
Squash C = 3 H = 1	Chemical injury	Abiotic disorder	0	1
		No Pathogen Found	1	0
		No Virus Found	1	0
		Unidentified Virus	1	0
Sweet Basil C = 1 H = 0		No Pathogen Found	1	0
Sweet Corn C = 1 H = 0		No Pathogen Found	1	0
Sweetpotato C = 1 H = 0		<i>Albugo ipomoeae-panduratae</i>	1	0
Tomato C = 11 H = 0	Unknown	General	1	0
	Insufficient sample	Identification Analysis	1	0
		<i>Fusarium sp./spp.</i>	1	0
		No Pathogen Found	3	0
		Unknown cause	2	0
	Southern blight	<i>Sclerotium rolfsii</i>	1	0
	Root rot	<i>Phytophthora sp./spp.</i>	1	0
	Bacterial spot	<i>Xanthomonas sp./spp.</i>	1	0
Tomato C = 12 H = 15	Unknown	General	0	1
	Chemical injury	Abiotic disorder	2	0
	Environmental stress; Problem	Abiotic disorder	0	1
	Unknown abiotic disorder	Abiotic disorder	0	3
	Bacterial wilt	<i>Ralstonia solanacearum</i>	1	0

	Early blight; Leaf spot	<i>Alternaria solani</i>	0	2
	Bacterial pathogens	General	0	6
		<i>Fusarium sp./spp.</i>	2	0
		No Pathogen Found	2	0
		<i>Pseudomonas sp./spp.</i>	1	0
		<i>Sclerotium rolfsii</i>	1	0
		<i>Xanthomonas sp./spp.</i>	1	0
	Tomato spotted wilt (TSWV)	Tospovirus Tomato Spotted Wilt Virus	2	1
		Begomovirus Tomato Yellow Leaf Curl Virus	0	1
Turnip C = 1 H = 0		<i>Alternaria sp./spp.</i>	1	0
Watermelon C = 105 H = 2	Anthracnose	<i>Colletotrichum orbiculare</i>	2	0
	Gummy stem blight	<i>Didymella sp./spp.</i>	2	0
	Bacterial fruit blotch	<i>Acidovorax sp./spp.</i>	3	0
	Downy mildew	<i>Pseudoperonospora sp./spp.</i>	3	0
	Powdery mildew	<i>Sphaerotheca sp./spp.</i>	3	0
	Unknown	General	0	1
	Fruit rot	<i>Sclerotium rolfsii</i>	1	0
	Chemical; Environmental injury	Abiotic disorder	1	0
	Sunscald	Abiotic disorder	1	0
	Environmental stress; Problem	Abiotic disorder	1	0
	Physiological responses	Abiotic disorder	1	0
	Unknown abiotic disorder	Abiotic disorder	0	1
	Watermelon Fusarium wilt	<i>Fusarium oxysporum</i>	8	0
	Pythium damping off	<i>Pythium sp./spp.</i>	1	0
	Insufficient sample	Identification Analysis	2	0
		Abiotic disorder	2	0
		<i>Didymella bryoniae</i>	5	0
		<i>Fusarium sp./spp.</i>	15	0
		No Pathogen Found	26	0
		<i>Phytophthora capsici</i>	1	0
		<i>Pythium sp./spp.</i>	4	0
		<i>Rhizoctonia sp./spp.</i>	2	0
		Unknown cause	3	0
	Bacterial fruit blotch	<i>Acidovorax avenae</i>	12	0
	Anthracnose	<i>Colletotrichum sp./spp.</i>	1	0
		Abiotic disorder	1	0
	Gummy stem blight	<i>Stagonosporopsis citrulli</i>	4	0
Zucchini Squash C = 1	Powdery mildew	<i>Sphaerotheca sp./spp.</i>	1	0

H = 0				
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WOODY ORNAMENTALS

(Total Diagnoses 245: C=138; H=107)

HOST	DISEASE	CAUSAL ORGANISM	C	H
Abelia C = 1 H = 0		No Pathogen Found	1	0
Arborvitae C = 2 H = 0		No Pathogen Found	1	0
		<i>Phyllosticta</i> sp./spp.	1	0
Arrowwood C = 1 H = 0		No Pathogen Found	1	0
Asiatic Jasmine C = 1 H = 0		Unidentified Agent	1	0
Azalea; Rhododendron C = 2 H = 9	Unknown	General	0	1
	Root weevils	Family Curculionidae	1	0
	Azalea lace bug	<i>Stephanitis pyrioides</i>	1	0
	Cultural/environmental problem	Abiotic disorder	0	1
	Environmental stress; Problem	Abiotic disorder	0	4
	Leaf and flower gall	<i>Exobasidium</i> sp./spp.	0	1
	Insect damage	Unidentified Insect	0	1
	Root rot	<i>Phytophthora</i> sp./spp.	0	1
Barberry C = 1 H = 0		No Pathogen Found	1	0
Boxwood C = 29 H = 19	Environmental stress; Problem	Abiotic disorder	0	11
	Root problems	Abiotic disorder	0	2
		<i>Colletotrichum</i> sp./spp.	2	0
		No Pathogen Found	5	2
	Boxwood blight; Leaf and stem blight	<i>Calonectria pseudonaviculata</i>	10	4
	Boxwood Macrophoma leaf spot	<i>Dothiorella candollei</i>	5	0
	Stem canker	<i>Colletotrichum theobromicola</i>	1	0
	Boxwood Volutella blight; Canker	<i>Pseudonectria buxi</i>	6	0
Camellia C = 0 H = 4	Algal leaf spot	<i>Cephaleuros virescens</i>	0	1
	Cultural/environmental problem	Abiotic disorder	0	1
	Environmental stress; Problem	Abiotic disorder	0	2
Cherry laurel C = 0 H = 1	Environmental stress; Problem	Abiotic disorder	0	1

Chinese Fringe-flower C = 0 H = 1	Root problem	Unknown cause	0	1
Common Boxwood C = 6 H = 0		No Pathogen Found	1	0
	Boxwood blight; Leaf and stem blight	<i>Calonectria pseudonaviculata</i>	4	0
	Boxwood Volutella blight; Canker	<i>Pseudonectria buxi</i>	1	0
Crape Myrtle C = 0 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
Dogwood C = 0 H = 1	Wound canker	Abiotic disorder	0	1
Edging Boxwood C = 1 H = 0		<i>Colletotrichum sp./spp.</i>	1	0
Forsythia; Golden Bells C = 1 H = 0	Root rot	<i>Phytophthora sp./spp.</i>	1	0
Gardenia C = 0 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
Glossy Abelia C = 1 H = 0		No Pathogen Found	1	0
Hibiscus C = 1 H = 0	Black root rot	<i>Berkeleyomyces basicola</i>	1	0
Holly C = 7 H = 5	Crown and root rot	<i>Phytophthora sp./spp.</i>	1	0
	Herbicide drift	Abiotic disorder	0	1
	Cultural/environmental problem	Abiotic disorder	0	2
	Environmental stress; Problem	Abiotic disorder	0	1
	Scale insects	Order homoptera	1	0
	Root rot	Various fungi	0	1
		No Pathogen Found	4	0
		<i>Rhizoctonia sp./spp.</i>	1	0
Hydrangea C = 12 H = 4	Cercospora leaf spot	<i>Cercospora sp./spp.</i>	0	1
	Broad mite	<i>Polyphagotarsonemus latus</i>	1	0
	Cultural/environmental problem	Abiotic disorder	0	1
	Environmental stress; Problem	Abiotic disorder	0	1
	Unknown abiotic disorder	Abiotic disorder	0	1
		Abiotic disorder	1	0

		<i>Cercospora</i> sp./spp.	2	0
		No Pathogen Found	3	0
		<i>Phytophthora</i> sp./spp.	1	0
		<i>Pseudomonas</i> sp./spp.	2	0
		<i>Pythium</i> sp./spp.	1	0
		<i>Xanthomonas</i> sp./spp.	1	0
Japanese Andromeda		No Pathogen Found	1	0
C = 2				
H = 0		<i>Thrips</i> sp./spp.	1	0
Japanese Cleyera	Insufficient sample	Identification Analysis	1	0
C = 1				
H = 0				
Japanese Maple	Chemical injury	Abiotic disorder	0	1
C = 0	Environmental stress; Problem	Abiotic disorder	0	3
H = 4				
Jasmine		<i>Phytophthora</i> sp./spp.	1	0
C = 1				
H = 0				
Juniper	Environmental stress; Problem	Abiotic disorder	0	2
C = 0	Root problems	Abiotic disorder	0	1
H = 3				
Korean Boxwood	Boxwood blight; Leaf and stem blight	<i>Calonectria pseudonaviculata</i>	2	0
C = 3	Boxwood Volutella blight; Canker	<i>Pseudonectria buxi</i>	1	0
H = 0				
Ligustrum; Privet	Crown and root rot	<i>Phytophthora</i> sp./spp.	1	0
C = 2	Herbicide drift	Abiotic disorder	0	1
H = 5	Unknown abiotic disorder	Abiotic disorder	0	2
		No Pathogen Found	1	0
	Root problem	Unknown cause	0	2
Multiple hosts	Roseslug	<i>Endelomyia aethiops</i>	1	0
C = 2		No Pathogen Found	1	0
H = 0				
Oakleaf Hydrangea	Armillaria root rot; Butt rot	<i>Armillaria</i> sp./spp.	0	1
C = 0				
H = 1				
Peony	Environmental stress; Problem	Abiotic disorder	0	1
C = 0				
H = 1				
Photinia	Entomosporium leaf spot	<i>Entomosporium</i> sp./spp.	0	1
C = 0				
H = 1				

Pittosporum C = 0 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
Plum-yew C = 0 H = 2	Environmental stress; Problem	Abiotic disorder	0	2
Pondberry C = 1 H = 0	Root rot	<i>Phytophthora sp./spp.</i>	1	0
Rose C = 4 H = 1	Crown gall	<i>Agrobacterium tumefaciens</i>	1	0
		No Pathogen Found	1	0
		<i>Phytophthora sp./spp.</i>	1	0
	Rose rosette disease (RRV)	Emaravirus Rose Rosette Virus	1	0
	Black spot (Rose)	<i>Diplocarpon rosae</i>	0	1
Spirea C = 0 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
Sweet Olive; Tea Olive C = 1 H = 0		No Pathogen Found	1	0
Viburnum C = 0 H = 1	Environmental stress; Problem	Abiotic disorder	0	1
Watermelon C = 1 H = 0	Bacterial fruit blotch	<i>Acidovorax citrulli</i>	1	0