The Plant Disease Clinic and Weed Identification Laboratory
2003 Annual Report

Table of Contents

Acknowledgements

The Plant Disease Clinic depends on a industrious staff of both full-time and part-time employees to prepare culture media, isolate pathogens from plant tissue, measure soil pH, extract nematodes from soil and plant tissue, maintain records, answer the telephone, keep track of samples, and send out reports. In 2003, diagnoses in the Plant Disease Clinic in Blacksburg were performed by Mary Ann Hansen, and Nina Hopkins, with valuable assistance from Shannon Hill.

Plant Clinic staff consult with many faculty and staff in various departments in order to make complete, accurate diagnoses and recommendations. We would like to thank the following people for their helpful assistance during the past year:

Plant Pathology, Physiology, and Weed Science
Dr. Anton Baudoin
Mr. Josh Beam
Dr. Kevin Bradley
Dr. Boris Chevone
Dr. Houston Couch
Dr. Jeff Derr
Dr. Jon Eisenback
Dr. Gary Griffin
Dr. Scott Hagood
Mr. Lloyd Hipkins
Dr. Chuan Hong
Dr. Chuck Johnson
Mr. Phil Keating
Mr. Claude Kenley
Dr. George Lacy
Dr. Pat Phipps
Dr. Curt Roane
Mr. Peter Sforza
Dr. Jay Stipes
Dr. Erik Stromberg
Dr. Sue Tolin
Dr. Keith Yoder

Entomology
Mr. Eric Day
Mr. Shahrooz Feizabadi
Dr. Doug Pfeiffer
Dr. Rod Youngman

Horticulture
Dr. Tony Bratsch
Dr. Roger Harris
Dr. Joyce Latimer
Dr. Richard Marini
Dr. Ron Morse
Dr. Alex Niemiera
Dr. Holly Scoggins
Dr. Greg Welbaum
Dr. Jerry Williams
Dr. Tony Wolf

Crop, Soil, and Environmental Sciences
Dr. Mark Alley
Dr. Dan Brann
Dr. David Chalmers
Dr. Steve Donohue
Dr. Erik Ervin
Mr. Steve Heckendorn
Ms. Pat Hipkins

Biology
Dr. Orson Miller
Mr. Tom Wieboldt

Fisheries and Wildlife
Dr. Jim Parkhurst

The Weed Identification Clinic is operated by Dr. Scott Hagood with the assistance of Mr. Josh Beam and Mr. Lloyd Hipkins. Mr. Tom Wieboldt, curator of the Herbarium in the Biology Department, performs many of the plant and weed identifications.

We would also like to thank Mr. Todd Powell of TSP Software for designing and continuing to support the Plant Clinic database ("PClinic"). The database has given us the ability to keep complete records of Plant Clinic samples and to mail reports to Extension Offices electronically. Information on purchasing PClinic can be obtained from the Clinic at <clinic@vt.edu>. We are also especially grateful to Mr. Shahrooz Feizabadi for maintaining our computer system and network.

Andrea Lowe and Shannon Hill painstakingly compiled the annual report. It can be viewed on-line at <http://oak.ppws.vt.edu/~clinic/info.html>.

Introduction

The annual report for the Plant Disease Clinic and the Weed Identification Clinic located on the Virginia Tech campus in Blacksburg is presented in the following pages. Results of the soil assays performed by the Nematode Assay Laboratory are not included, nor are plant specimens which were submitted to and diagnosed at the Agricultural Research and Extension Centers throughout the Commonwealth. Note that the number of diagnoses performed was higher than the number of samples received because some samples have more than one problem.

For those pathogens that could be identified to species or for which only one species is known to occur on the host plant in question, the species name is listed. For those diseases in which one of several species could have been involved, the epithet is listed as "sp." The Plant Disease Clinic did not routinely identify pathogenic organisms to species since species identification can sometimes be a very time-consuming process and often has little bearing on control recommendations. Most pathogens were assumed to be disease incitants if they were cultured in sufficient numbers from the plant tissue, if they were reported in the literature to be pathogens of the particular host plant, and if they were reported to cause the observed symptoms.

Viral problems were, for the most part, diagnosed by the ELISA (Enzyme-Linked Immunosorbent Serological Assay) method by Agdia, Inc. or by Agdia's immunostrip testing system. Host inoculation was also used to identify viruses in some specimens. In some cases, identification of the specific virus was not desired by the client. In those cases, if symptoms indicated a virus infection, the diagnosis is listed simply as "virus".

Nematode diseases were diagnosed by extracting nematodes from soil or plant tissue. Samples must include at least 1 pint of soil for nematode assays. Nematode assays were routinely performed on samples of plant species known to be affected by nematodes, e. g. boxwood. Nematode populations in the sample were compared to damage threshold levels in making a control recommendation. Threshold levels have been developed in research trials for many, but not all, crops grown in VA.

The phrase "Cause of Problem Unknown" is used for specimens for which no pathogen could be isolated and for which no obvious environmental or cultural condition could be associated with the problem. Trees have more specimens in this category and in the category "Insufficient Sample" than any other type of plant. Tree problems are more difficult to diagnose in a clinic setting than problems of annual plants for several reasons. First, tree problems often develop over the course of several years and current symptoms may be related to stressful conditions that occurred in previous years. Also, it is difficult for growers to supply an appropriate plant specimen for diagnosis since the causes of many tree diseases occur in the trunk or roots.

Some insect problems are also listed in this report. Insect damage is often mistaken for disease, and samples with insect damage are sometimes submitted to the Plant Disease Clinic rather than the Insect Identification Lab. We make a preliminary diagnosis of insect damage on these samples and refer them to Mr. Eric Day in the Insect Identification Lab. The final diagnosis on all samples of insect damage is performed by Mr. Day.

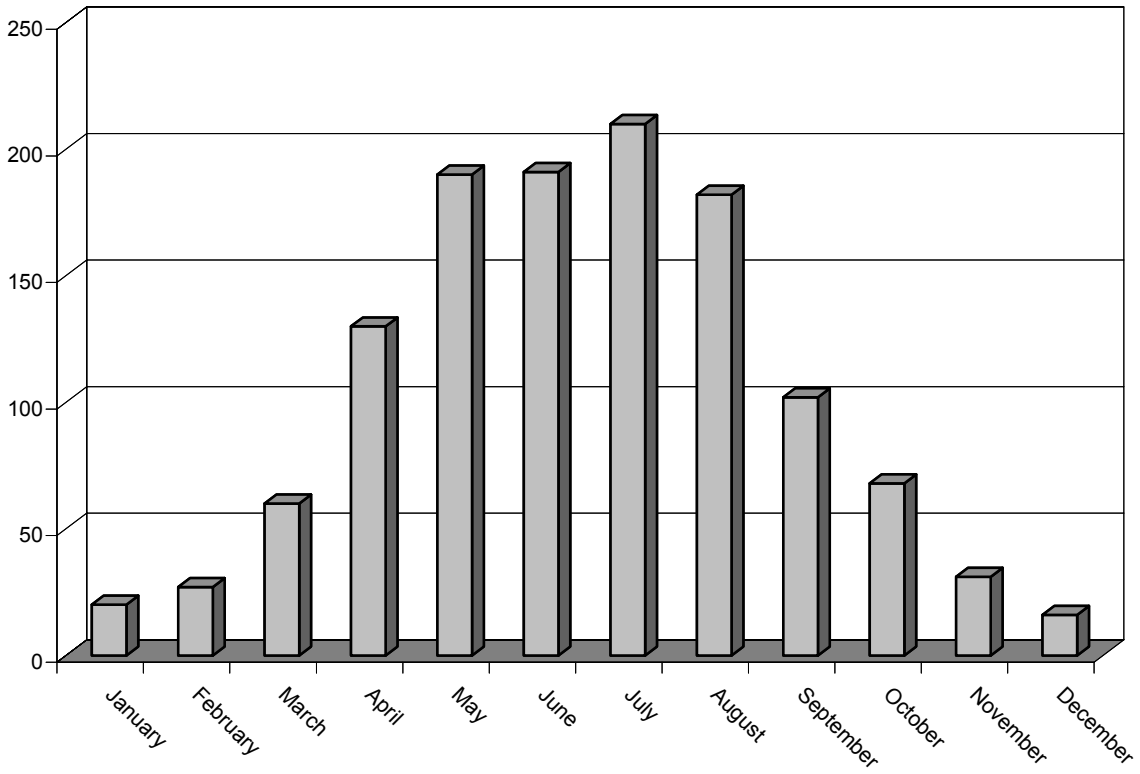
Reports are now mailed electronically to the Extension Office email address. Upon request, we will simultaneously send electronic reports to one or more individual Extension personnel. Since implementing electronic mailing, we have discontinued faxing reports. For the time being, we are continuing to send a copy of the original diagnostic form submitted by the agent back to the Extension office through the Extension Distribution Center if a diagnostic form with carbon copies is submitted with the sample. Any factsheets or additional printed information is attached to this form. The new diagnostic forms available through the Extension Distribution Center do not have carbon copies. For samples submitted with these forms, we send out only the electronic report. Any comments or questions about reports or plant problems can be emailed to us at <clinic@vt.edu>.

For information on how to submit samples and complete the appropriate forms, please refer to the following web site for an audiovisual web presentation: http://www.ext.vt.edu/vce/staffdev/anrtraining/

Monthly Submission Report
Number of Samples Received by Month
2003

Month	# of Samples
January	20
February	27
March	60
April	130
May	190
June	191
July	210
August	182
September	102
October	68
November	31
December	16
Total	**1227**

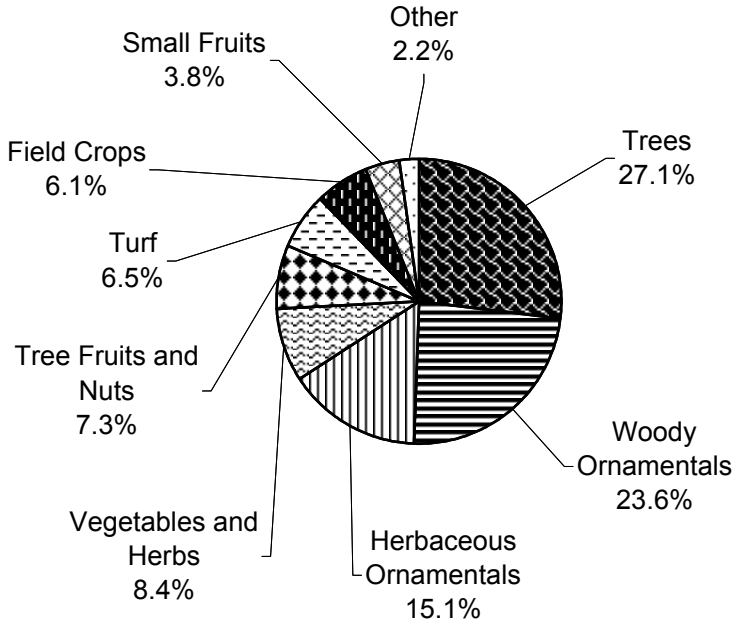
Number of Samples by Month



Crop Category Report
Sample Totals by Major Crop
2003

Crop	# of Samples	% of Total
Trees	333	27.1
Woody Ornamentals	290	23.6
Herbaceous Ornamentals	185	15.1
Vegetables and Herbs	103	8.4
Tree Fruits and Nuts	90	7.3
Turf	80	6.5
Field Crops	75	6.1
Small Fruits	47	3.8
Other	24	2.2
Total	1227	100%

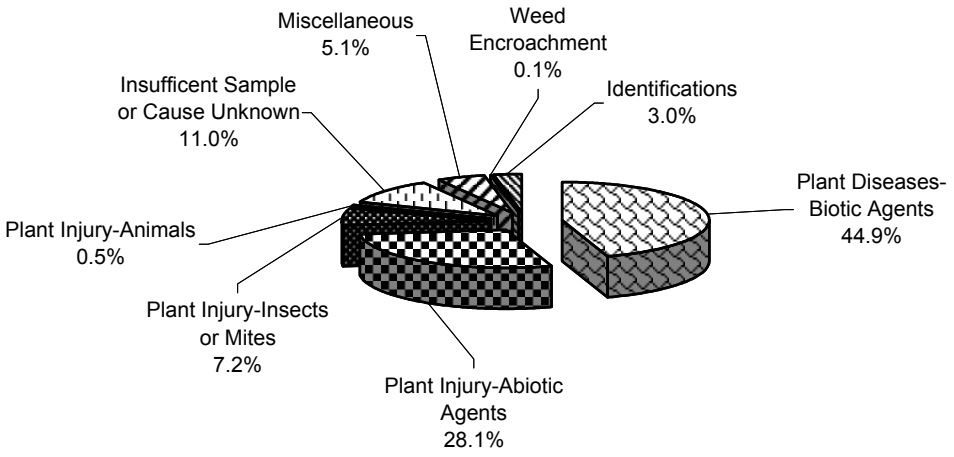
Samples by Crop Category



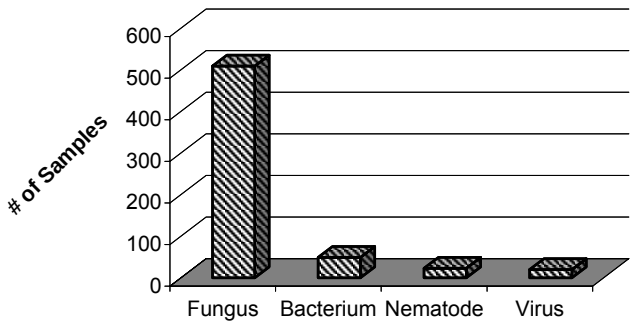
Diagnostic Category Report
Distribution of Diagnoses by Major Diagnostic Category
2003

	# of Diagnoses	% of Total
Plant Diseases-Biotic Agents	**601**	**44.9**
Bacterium (49)		
Fungus (509)		
Nematode (23)		
Virus (20)		
Plant Injury-Abiotic Agents	**376**	**28.1**
Chemical (61)		
Environmental/cultural (307)		
Mechanical (8)		
Plant Injury-Insects or Mites	**97**	**7.2**
Insects Or Mites (97)		
Plant Injury-Animals	**7**	**0.5**
Birds (1)		
Mammals (6)		
Insufficent Sample or Cause Unknown	**148**	**11**
Insufficient Sample Or Information (136)		
Unknown (12)		
Miscellaneous	**62**	**5.1**
Normal Condition (10)		
Other (34)		
Physiological/genetic (18)		
Weed Encroachment	**2**	**0.1**
Weed (2)		
Identifications	**40**	**3**
Algae (1)		
Fungi (15)		
Plant (21)		
Unable To Identify (3)		
Total	**1340**	**100%**

2003 Samples by Diagnostic Category



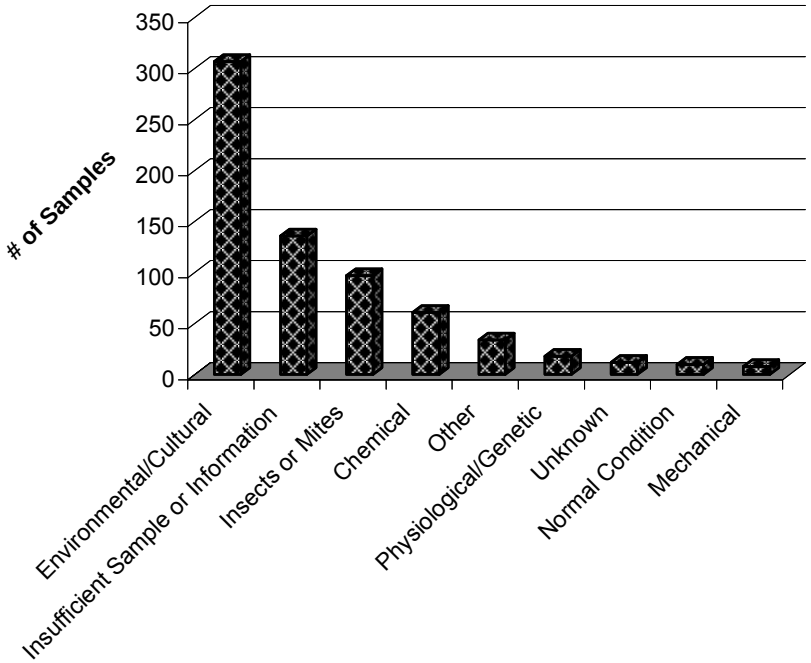
Plant Pathogens, 2003



Other Assistance, 2003

Type	# of Inquiries
E-mail	67
Digital Images	160
Phone Calls	13

Other Agents, 2003



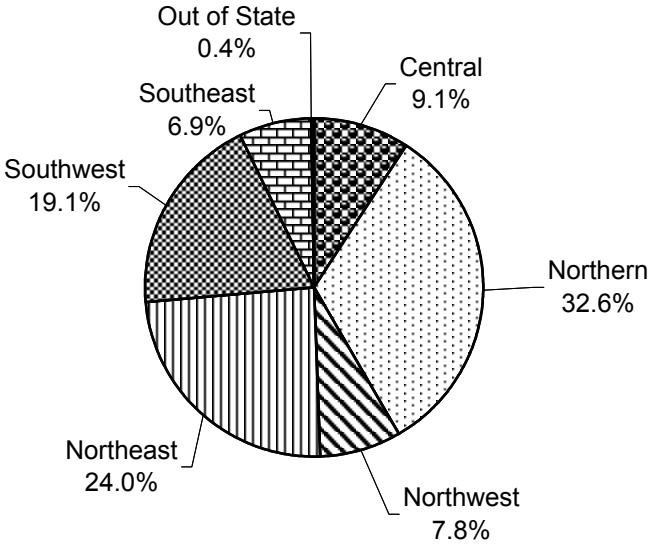
Plant Disease Clinic

Distribution of Samples by County

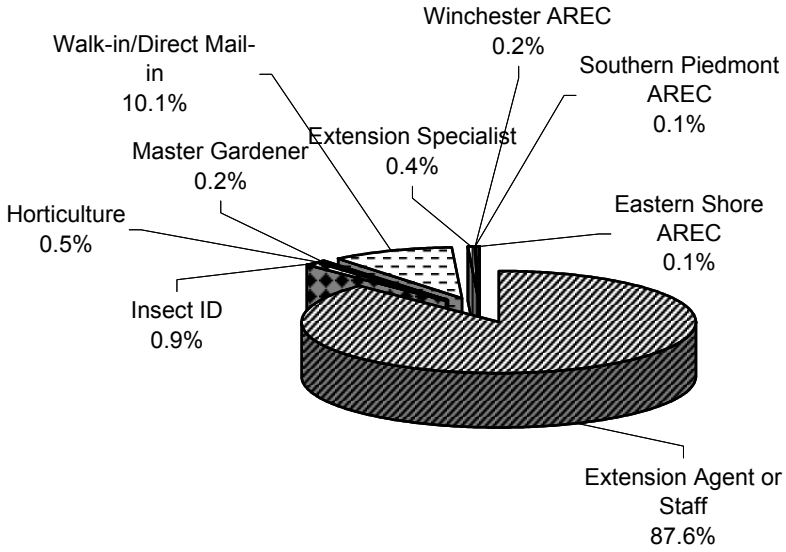
2003

County	# of Samples	County	# of Samples
Accomack	2	Lancaster	7
Albemarle	42	Lee	10
Alexandria (IC)	1	Loudoun	28
Alleghany	3	Louisa	6
Amelia	2	Lunenburg	2
Amherst	3	Lynchburg (IC)	31
Appomattox	2	Madison	6
Arlington	31	Mathews	3
Augusta	14	Mecklenburg	2
Bath	2	Middlesex	18
Bedford	11	Montgomery	88
Bland	5	Nelson	67
Botetourt	5	New Kent	8
Brunswick	4	Newport News (IC)	8
Buckingham	2	Norfolk (IC)	5
Campbell	7	Northampton	3
Caroline	7	Northumberland	18
Carroll	9	Nottoway	2
Charles City	1	Orange	9
Charlotte	1	Page	3
Chesapeake (IC)	19	Patrick	2
Chesterfield	1	Pittsylvania	9
Clarke	12	Portsmouth (IC)	3
Craig	4	Powhatan	12
Culpeper	2	Prince Edward	6
Cumberland	3	Prince George	26
Danville (IC)	11	Prince William	11
Dickenson	6	Pulaski	6
Essex	9	Rappahannock	5
Fairfax	36	Richmond (IC)	2
Fauquier	12	Roanoke	20
Floyd	33	Rockbridge	5
Fluvanna	16	Rockingham	6
Franklin	5	Russell	1
Frederick	6	Scott	9
Giles	7	Shenandoah	10
Gloucester	6	Smyth	2
Goochland	11	Spotsylvania	12
Grayson	5	Stafford	90
Greene	3	Suffolk (IC)	6
Halifax	3	Surry	1
Hampton (IC)	5	Sussex	3
Hanover	27	Tazewell	8
Henrico	19	Virginia Beach (IC)	13
Henry	6	Warren	2
Highland	4	Washington	22
Isle of Wight	4	Westmoreland	22
James City	79	Wise	11
King and Queen	1	Wythe	7
King George	16	York	31
King William	7	Out-of-state	5
		Total	**1227**

2003 Samples by District



Samples by Submitter Type, 2003



Monthly Submission Report
Number of Samples Received by Month
2003

Month	# of Samples
January	3
Febuary	3
March	19
April	26
May	36
June	36
July	30
August	43
September	40
October	30
November	12
December	6
Total	**284**

Sample Totals by Crop
2003

Crop	# of Samples
Corn	3
Wheat/Barley/Oats	6
Soybeans	10
Pasture	44
Turf	86
Aquatic	23
Fallow	18
Flower bed/Garden	22
Alfalfa/Hay	26
Fruits	2
Forest	8
Roadside	3
None Given	33
Total	**284**

Distribution of Samples by County
2003

County	# of Samples	County	# of Samples
Albemarle	12	Lynchburg	17
Amelia	1	Mecklenburg	1
Amherst	2	Montgomery	23
Appomatox	1	Nelson	1
Augusta	5	New Kent	5
Bedford	2	Northumberland	3
Bland	2	Nottoway	1
Botetourt	6	Pittsylvania	9
Brunswick	1	Powhatan	16
Buckingham	1	Prince Edward	2
Campbell	3	Prince George	2
Caroline	1	Prince William	1
Clarke	2	Pulaski	1
Craig	3	Rappahanack	3
Cumberland	1	Richmond	2
Dickenson	14	Roanoke	3
Essex	1	Rockbridge	3
Fairfax	1	Rockingham	3
Fauquier	2	Russell	2
Fluvanna	2	Shendoah	5
Frederick	2	Smyth	2
Goochland	3	Spotsylvania	9
Greene	1	Stafford	1
Halifax	1	Surry	1
Hampton	1	Sussex	4
Hanover	5	Tazewell	4
Henrico	1	Warren	5
Henry	4	Washington	13
Highland	2	Westmoreland	15
James City	6	Williamsburg	1
King + Queen	2	Winchester, VA	1
King George	1	Wise	6
King William	1	Wythe	5
Lancaster	2	York	7
Lee	4	None given	4
Loudoun	1	Out-of-State	1
Lunenburg	2	**Total**	**284**

Summary of Diagnoses by Plant
2003

FIELD CROPS

ALFALFA		
1	Boron Deficiency	
2	Environmental Stress	
2	Leafhoppers	
6	Leptosphaerulina Leaf Spot	Leptosphaerulina briosiana
1	Rhizoctonia Stem and Leaf Blight	Rhizoctonia solani
9	Spring Black Stem and Leaf Spot	Phoma medicaginis
1	Suspect Boron Deficiency	
22	Total for Alfalfa	
BARLEY		
1	Frost Injury	
1	Scab	Fusarium graminearum
1	Spot Form of Net Blotch	Pyrenophora teres
3	Total for Barley	
BLUEGRASS		
1	Brown Patch	Rhizoctonia solani
1	Total for Bluegrass	
CORN		
1	Chemical Injury	
1	Environmental Stress	
1	Insufficient Information	
1	Insufficient Sample	
2	Low pH	
1	Nematodes	
1	Northern Corn Leaf Spot	Cochliobolus carbonum
1	Nutrient Deficiency	
1	Red Root Rot	Pyrenochaeta terrestris
1	Soil Compaction	
1	Southern Corn Leaf Blight	Bipolaris maydis
1	Southern Rust	Puccinia polysora
1	Suspect Genetic Abnormality	
1	Zinc Deficiency	
15	Total for Corn	

FESCUE

1	Environmental Stress	
1	Ergot	Claviceps purpurea
2	Insufficient Sample	
1	Scab	Fusarium sp.

5	Total for Fescue	

MILLET

1	Gray Leaf Spot	Pyricularia grisea

1	Total for Millet	

ORCHARDGRASS

1	Anthracnose	Colletotrichum graminicola
2	Insufficient Sample	
2	Leaf Streak	Cercosporidium graminis
1	Negative for Virus	
1	Powdery Mildew	Erysiphe graminis f. sp. avenae
1	Secondary Basidiomycete	

8	Total for Orchardgrass	

PEANUT

1	Chemical Injury	
1	Thrips	

2	Total for Peanut	

SOYBEAN

1	Anthracnose	Colletotrichum truncatum
1	Cause of Problem Unknown	
1	Environmental Stress	
1	Low pH	
1	Negative for Root Disease	
1	Root Knot Nematodes	Meloidogyne sp.
1	Suspect Chemical Injury	
1	Thrips	

8	Total for Soybean	

SWITCHGRASS

1	Penicillium Seedling Blight	Penicillium sp.
1	Spot Blotch	Bipolaris sorokiniana

2	Total for Switchgrass	

TIMOTHY

1	Drechslera Leaf Streak	Drechslera phlei
1	Thrips	

2	Total for Timothy	

TOBACCO

1	Black Leg	Erwinia carotovora s. atroseptica
1	Suspect Black Leg	Erwinia carotovora

2	Total for Tobacco	

WHEAT

1	Ascochyta Leaf Spot	Ascochyta tritici
1	Chemical Injury	
1	Environmental Stress	
1	Fusarium Seedling Blight	Fusarium moniliforme
2	Insufficient Sample	
3	Negative for Black Chaff	
1	Negative for Root Disease	
2	Powdery Mildew	Erysiphe graminis
2	Powdery Mildew Resistant Reaction	
1	Scab	Fusarium graminearum
1	Sharp Eyespot	Rhizoctonia solani
2	Stagonospora Leaf and Glume Blotch	Stagonospora nodorum
1	Suspect Wheat Streak Mosaic Virus	
3	Tan Spot	Pyrenophora tritici-repentis
1	Wheat Spindle Streak Mosaic Virus	

23	Total for Wheat	

HERBACEOUS ORNAMENTALS AND INDOOR PLANTS

AFRICAN VIOLET		
1	Crystalline Material	
1	Excess Soluble Salts	
1	Suspect Water Spots	

3	Total for African Violet	
AJUGA		
1	Environmental Stress	

1	Total for Ajuga	
ANEMONE		
1	Foliar Nematodes	Aphelenchoides sp.
1	Pythium Root Rot	Pythium sp.

2	Total for Anemone	
ARTEMISIA		
1	Web Blight	Rhizoctonia solani

1	Total for Artemisia	
BEGONIA		
1	Insufficient Sample	
1	Pythium Root Rot	Pythium sp.
1	Southern Blight	Sclerotium rolfsii
1	Suspect Chemical Injury	

4	Total for Begonia	
BELLFLOWER		
1	Chemical Injury	

1	Total for Bellflower	
BLEEDING HEART		
1	Tobacco Rattle Virus	

1	Total for Bleeding Heart	
CANDY LILY		
1	Heterosporium Leaf Spot	Heterosporium echinulatum

1	Total for Candy Lily	
CANDYTUFT		
1	Downy Mildew	Peronospora parasitica

1	Total for Candytuft	

CERATOSTIGMA

1	Salt Injury	

1	Total for Ceratostigma	

CHRYSANTHEMUM

1	Bacterial Leaf Spot	Pseudomonas cichorii
1	Low pH	
1	Pythium Stem and Root Rot	Pythium sp.
1	Suspect Chemical Injury	

4	Total for Chrysanthemum	

COLEUS

1	Fusarium Stem and Root Rot	Fusarium sp.
1	Mealybugs	

2	Total for Coleus	

COLUMBINE

1	Suspect Chemical Injury	

1	Total for Columbine	

CORAL BELLS

1	Chemical Injury	

1	Total for Coral Bells	

COREOPSIS

1	Bacterial Leaf Blight	Pseudomonas cichorii
1	Cultural Problem	
1	Thrips	

3	Total for Coreopsis	

CORYDALIS

1	Environmental Stress	

1	Total for Corydalis	

DAFFODIL

18	Negative for Stem and Bulb Nematodes	
1	Stem and Bulb Nematodes	Ditylenchus dipsaci

19	Total for Daffodil	

DAISY

1	Cultural Problem	

1	Total for Daisy	

DAYLILY

1	Insects	
2	Leaf Streak	Aureobasidium microstictum
2	Suspect Chemical Injury	

5	Total for Daylily	

DIANTHUS

1	Physiological Problem	
1	Rhizoctonia Stem Rot	Rhizoctonia solani

2	Total for Dianthus	

DRACAENA

1	Cultural Problem	

1	Total for Dracaena	

EUCALYPTUS

1	Insufficient Sample	

1	Total for Eucalyptus	

FALSE INDIGO

1	Insufficient Sample	

1	Total for False Indigo	

FOXGLOVE

2	Environmental Stress	

2	Total for Foxglove	

FUCHSIA

1	Cultural Problem	

1	Total for Fuchsia	

GARDENIA

1	Insects	

1	Total for Gardenia	

GERANIUM

2	Bacterial Leaf Spot	Xanthomonas campestris pv. pelargonii
1	Fertilizer Burn	
2	Low pH	
1	Nutrient Deficiency	

6	Total for Geranium	

GLADIOLUS		
1	Insects	

1	Total for Gladiolus	
GOLDEN MARGUERITE		
1	Pythium Root Rot	Pythium sp.

1	Total for Golden Marguerite	
GOURD		
1	Poor Pollination	

1	Total for Gourd	
HOSTA		
1	Southern Blight	Sclerotium rolfsii
1	Suspect Chemical Injury	
1	Suspect Southern Blight	Sclerotium rolfsii

3	Total for Hosta	
IMPATIENS		
1	Cause of Problem Unknown	
1	Cold Injury	
3	Impatiens Necrotic Spot Virus	
1	Rhizoctonia Root Rot	Rhizoctonia solani
1	Suspect Insect Injury	
1	Thrips	

8	Total for Impatiens	
IRIS		
1	Heterosporium Leaf Spot	Heterosporium iridis
1	Soft Rot	Erwinia carotovora

2	Total for Iris	
JAPANESE FOREST GRASS		
1	Gray Leaf Spot	Pyricularia grisea

1	Total for Japanese Forest Grass	
LARKSPUR		
1	Environmental Stress	

1	Total for Larkspur	
LILY		
1	Botrytis Blight	Botrytis elliptica

1	Total for Lily	

LILY-OF-THE-VALLEY

1	Southern Blight	Sclerotium rolfsii
1	Total for Lily-of-the-valley	

LIRIOPE

1	Frost Injury	
1	Salt Injury	
1	Scorch	
1	Suspect Fusarium Crown Rot	Fusarium sp.
2	Winter Injury	
6	Total for Liriope	

LISIANTHUS

1	Fusarium Root and Stem Rot	Fusarium sp.
1	Suspect Thrips	
2	Total for Lisianthus	

LOOSESTRIFE

1	Insufficient Sample	
1	Southern Blight	Sclerotium rolfsii
2	Total for Loosestrife	

MADAGASCAR PERIWINKLE

1	Nutrient Deficiency	
1	Phytophthora Blight	Phytophthora parasitica
1	Pythium Root Rot	Pythium sp.
3	Total for Madagascar Periwinkle	

MALLOW

1	Rust	Puccinia malvacearum
1	Total for Mallow	

MARIGOLD

1	Suspect Chemical Injury	
1	Total for Marigold	

MEADOWSWEET

1	Suspect Anthracnose	Colletotrichum sp.
1	Total for Meadowsweet	

MEXICAN HEATHER

1	Negative for Disease	
1	Total for Mexican Heather	

ORCHID

1	Anthracnose	Colletotrichum sp.
1	Bacterial Brown Spot	Acidovorax avenae ss. cattleyae
1	Mesophyll Cell Collapse	
1	Virus	

4	Total for Orchid	

OXALIS

1	Environmental Stress	

1	Total for Oxalis	

PACHYSANDRA

1	High pH	
1	Septoria Leaf Spot	Septoria pachysandrae
4	Volutella Blight	Volutella pachysandrae

6	Total for Pachysandra	

PALM

1	Excess Soluble Salts	

1	Total for Palm	

PANSY

1	Black Root Rot	Thielaviopsis basicola
1	Botrytis Blight	Botrytis cinerea
1	Chemical Injury	
1	Cold Injury	
1	Healthy	
1	High pH	
2	Pythium Root Rot	Pythium sp.
1	Suspect Chemical Injury	

9	Total for Pansy	

PENNISETUM

1	Environmental Stress	

1	Total for Pennisetum	

PEONY

1	Botrytis Blight	Botrytis cinerea
3	Cladosporium Stem and Leaf Blotch	Cladosporium paeoniae
1	Suspect Chemical Injury	
1	Suspect Nutrient Imbalance	
1	Suspect Peony Ringspot Virus	

7	Total for Peony	

PETUNIA

1	Nutrient Deficiency	
1	Thrips	

2	Total for Petunia	

PHACELIA

1	Insufficient Sample	

1	Total for Phacelia	

PHLOX

1	Downy Mildew	Peronospora phlogina
2	Powdery Mildew	Erysiphe cichoracearum

3	Total for Phlox	

PHORMIUM

1	Suspect Vole Injury	

1	Total for Phormium	

PITCHER PLANT

1	Negative for Pythium	
1	Suspect Chemical Injury	

2	Total for Pitcher Plant	

PLANT, UNKNOWN

1	Insects	
1	Insufficient Sample	

2	Total for Plant, Unknown	

POINSETTIA

2	Bacterial Leaf Spot	Xanthomonas campestris pv. poinsett.
1	Chemical Injury	
1	Cold Injury	
1	Normal Condition	
1	Nutrient Deficiency	

6	Total for Poinsettia	

PRIMROSE

2	Physiological Response	

2	Total for Primrose	

PRIVET

2	Winter Injury	

2	Total for Privet	

RANUNCULUS

1	Bacterial Blight	Pseudomonas syringae pv. maculicola
1	Total for Ranunculus	

ROSE CAMPION

1	Fusarium Crown Rot	Fusarium avenaceum
1	Total for Rose Campion	

RUDBECKIA

1	Adequate, Sample and Information	
1	Insufficient Sample	
2	Total for Rudbeckia	

RUSSIAN SAGE

1	Physiological Problem	
1	Total for Russian Sage	

SALVIA

1	Bacterial Leaf Spot	Pseudomonas cichorii
1	Chemical Injury	
2	Pythium Root Rot	Pythium debaryanum
4	Total for Salvia	

SCABIOSA

1	Powdery Mildew	Erisyphe polygoni
1	Total for Scabiosa	

SCAEVOLA

1	Botrytis Blight	Botrytis cinerea
1	Nutrient Deficiency	
2	Total for Scaevola	

SEDGE

1	Chemical Injury	
1	Total for Sedge	

SEDUM

1	Bacterial Stem Rot	Erwinia chrysanthemi
1	Cladosporium Blight	Cladosporium sp.
2	Total for Sedum	

SOLOMON'S SEAL		
1	Fusarium on Roots	Fusarium oxysporum
1	Total for Solomon's Seal	
SPATHIPHYLLUM		
2	Cultural Problem	
2	Total for Spathiphyllum	
SPIDER PLANT		
1	Cultural Problem	
1	Total for Spider Plant	
SPIDERWORT		
1	Cause of Problem Unknown	
1	Total for Spiderwort	
STOKESIA		
2	Physiological Problem	
2	Total for Stokesia	
SUNFLOWER		
1	Rhizoctonia Stem Canker	Rhizoctonia sp.
1	Total for Sunflower	
VERBENA		
1	Bacterial Blight	Pseudomonas cichorii
1	Cause of Problem Unknown	
1	Chemical Injury	
1	Impatiens Necrotic Spot Virus	
1	Pythium Root Rot	Pythium sp.
1	Suspect Fertilizer Burn	
6	Total for Verbena	
YARROW		
1	Insufficient Sample	
1	Total for Yarrow	

SMALL FRUITS

BLACKBERRY		
2	Cane Blight	Leptosphaeria coniothyrium
1	Cane and Leaf Rust	Kuehneola uredinis
1	Gray Mold	Botrytis cinerea
1	Mites	
1	Orange Rust	Gymnoconia peckiana
1	Psyllids	
7	Total for Blackberry	
BLUEBERRY		
1	Cause of Problem Unknown	
1	Phytophthora Root Rot	Phytophthora cinnamomi
2	Total for Blueberry	
FIG		
1	Insufficient Sample	
1	Scales	
2	Total for Fig	
GRAPE		
1	Anthracnose	Elsinoe ampelina
1	Bitter Rot	Greeneria uvicola
3	Black Rot	Guignardia bidwellii
2	Botryosphaeria Dieback	Botryosphaeria sp.
1	Botrytis Bunch Rot	Botrytis cinerea
2	Cause of Problem Unknown	
2	Chemical Injury	
1	Cold Injury	
1	Crown Gall	Agrobacterium vitis
1	Cultural Problem	
1	Eriophyid Mites	
1	Nonspecific Fruit Rot	
1	Petri Disease	Phaeoacremonium sp.
2	Phomopsis Cane and Leaf Blight	Phomopsis viticola
1	Phylloxera Galls	
2	Powdery Mildew	Uncinula necator
1	Zonate Leaf Spot	Cristulariella moricola
24	Total for Grape	
RASPBERRY		
1	Cane Blight	Coniothyrium fuckellii
1	Cane Botrytis	Botrytis cinerea
1	Cause of Problem Unknown	
1	Pythium Root Rot	Pythium sp.
4	Total for Raspberry	

STRAWBERRY

1	Angular Leaf Spot	Xanthomonas fragariae
2	Anthracnose	Colletotrichum acutatum
1	Cultural Problem	
3	Dendrophoma Leaf Blight	Dendrophoma obscurans
1	Environmental Stress	
2	Frost Injury	
1	Leaf Scorch	Marssonia fragariae
1	Negative for Anthracnose	
1	Phytophthora Crown Rot	Phytophthora cactorum
1	Rhizoctonia Leaf Blight	Rhizoctonia solani
1	Suspect Frost Injury	
1	Suspect Nutrient Deficiency	

16	Total for Strawberry	

WINEBERRY

1	Negative for Disease	

1	Total for Wineberry	

TREES

ARBORVITAE

1	Cultural Problem	
1	Environmental Stress	
1	Mites	
1	Normal Senescence	
1	Pestalotiopsis Twig Blight	Pestalotiopsis funerea
5	Total for Arborvitae	

ASH

1	Anthracnose	Discula sp.
2	Chemical Injury	
1	Insufficient Sample	
4	Total for Ash	

BALDCYPRESS

1	Suspect Chemical Injury	
1	Total for Baldcypress	

BIRCH

1	Anthracnose	Discula betulina
1	Mites	
1	Septoria Leaf Spot	Septoria betulicola
3	Total for Birch	

BLACK GUM

1	Eriophyid Mites	
1	Total for Black Gum	

BLACK LOCUST

1	Environmental Stress	
1	Total for Black Locust	

BUCKEYE

1	Environmental Stress	
1	Total for Buckeye	

CEDAR

1	Cedar-Quince Rust	Gymnosporangium clavipes
3	Environmental Stress	
1	Negative for Disease	
1	Suspect Frost Injury	
1	Webworms	

7	Total for Cedar	

CHERRY

1	Mechanical Injury	

1	Total for Cherry	

CRYPTOMERIA

1	Insufficient Sample	

1	Total for Cryptomeria	

CYPRESS

1	Algae	
2	Botryosphaeria Dieback	Botryosphaeria sp.
1	Cause of Problem Unknown	
1	Cytospora Canker	Cytospora sp.
4	Environmental Stress	
8	Insufficient Sample	
1	Macrophoma Canker	Macrophoma sp.
1	Male Cones	
1	Normal Bark Formation	
2	Pestalotiopsis Tip Blight	Pestalotiopsis funerea
2	Phomopsis Tip Blight	Phomopsis sp.
1	Scales	
4	Seiridium Canker	Seiridium unicorne
5	Suspect Seiridium Canker	Seiridium sp.
1	Winter Injury	

35	Total for Cypress	

DOGWOOD

1	Botrytis Blight	Botrytis cinerea
1	Chemical Injury	
9	Discula Anthracnose	Discula destructiva
3	Environmental Stress	
1	Frost Injury	
1	Insufficient Information	
6	Insufficient Sample	
1	Nutrient Deficiency	
1	Physiological Problem	
5	Powdery Mildew	Oidium sp.
4	Scorch	
7	Septoria Leaf Spot	Septoria cornicola
6	Spot Anthracnose	Elsinoe corni

1	Suspect Mechanical Injury	

47	Total for Dogwood	

DOUGLASFIR

1	Gray Mold	Botrytis cinerea
1	Pythium Root Rot	Pythium sp.

2	Total for Douglasfir	

ELM

4	Black Spot	Gloeosporium ulmeum
2	Dutch Elm Disease	Ophiostoma ulmi
1	Eriophyid Mites	
1	Negative for Dutch Elm Disease	
1	Negative for Root Disease	

9	Total for Elm	

FALSECYPRESS

1	Botrytis Blight	Botrytis cinerea
1	Environmental Stress	
1	Web Blight	Rhizoctonia solani

3	Total for Falsecypress	

FIR

2	Chemical Injury	
3	Cultural Problem	
1	Deep Planting	
1	Environmental Stress	
1	Girdling Roots	
2	Insufficient Sample	
6	Phytophthora Root Rot	Phytophthora sp.

16	Total for Fir	

GOLDEN-RAIN-TREE

1	Suspect Bacterial Scorch	Xylella fastidiosa

1	Total for Golden-rain-tree	

HAWTHORN

1	Cedar-Quince Rust	Gymnosporangium clavipes

1	Total for Hawthorn	

HEMLOCK

2	Environmental Stress	
1	Eriophyid Mites	

3	Total for Hemlock	

HICKORY

1	Leaf Stem Gall Insects	

1	Total for Hickory	

IRONWOOD

1	Cultural Problem	
1	Environmental Stress	

2	Total for Ironwood	

JUNIPER

1	Cytospora Blight	Cytospora sp.
1	Kabatina Tip Blight	Kabatina juniperi
1	Mites	

3	Total for Juniper	

KATSURA TREE

1	Negative for Disease	

1	Total for Katsuratree	

LINDEN

1	Cultural Problem	
1	Environmental Stress	

2	Total for Linden	

LONDON PLANETREE

1	Anthracnose	Gnomonia platani
1	Bird's Nest Fungus	Cyathus sp.

2	Total for London Planetree	

MAGNOLIA

1	Alternaria Leaf Spot	Alternaria sp.
1	Chemical Injury	
2	Environmental Stress	
1	Insufficient Sample	
1	Mites	
1	Normal Condition	
5	Winter Injury	

12	Total for Magnolia	

MAPLE

9	Anthracnose	Discula sp.
1	Botryosphaeria Canker	Botryosphaeria dothidea
2	Environmental Stress	
1	Eriophyid Mites	
2	Frost Injury	

3	Insects	
12	Insufficient Sample	
2	Leafhoppers	
1	Lichens	
1	Mycosphaerella Leaf Spot	Mycosphaerella sp.
1	Negative for Disease	
1	Negative for Verticillium Wilt	
1	Nutrient Deficiency	
1	Phoma Leaf Spot	Phoma sp
1	Phomopsis Dieback	Phomopsis sp.
3	Purple-eye Leaf Spot	Phyllosticta minima
1	Scales	
1	Scorch	
1	Sooty Mold	
1	Suspect Salt Injury	
1	Suspect Wood Decay	
1	Tar Spot	Rhytisma acerinum
1	Wood Decay	
10	Zonate Leaf Spot	Cristulariella pyramidalis

59	Total for Maple	

MIMOSA

1	Suspect Mimosa Wilt	Fusarium oxysporum f. sp. pernicos

1	Total for Mimosa	

OAK

3	Anthracnose	Apiognomonia sp.
2	Bacterial Wetwood	
1	Botryosphaeria Dieback	Botryosphaeria sp.
2	Chemical Injury	
1	Eastern Gall Rust	Cronartium quercuum
1	Environmental Stress	
1	Gall Insect	
1	Insufficient Sample	
1	Iron Chlorosis	
1	Low pH	
2	Negative for Oak Wilt	
1	Normal Leaf Retention	
1	Oak Leaf Blister	Taphrina caerulescens
7	Oak Leaf Button Galls	
1	Saprophytic Fungus	
2	Scales	
1	Sooty Mold	
1	Suspect Bacterial Scorch	
1	Suspect Chemical Injury	
2	Suspect Environmental Stress	
1	Suspect Hail Injury	
6	Tubakia Leaf Spot	Tubakia dryina

40	Total for Oak	

ORNAMENTAL CHERRY		
2	Insufficient Sample	
1	Scales	
1	Suspect Chemical Injury	
1	White Rot	Irpex lacteus

5	Total for Ornamental Cherry	
ORNAMENTAL PEAR		
1	Chemical Injury	
1	Cultural Problem	
2	Fire Blight	Erwinia amylovora
1	Insufficient Sample	

5	Total for Ornamental Pear	
PINE		
3	Cultural Problem	
3	Diplodia Tip Blight	Diplodia pinea
1	Dothistroma Needle Blight	Dothistroma pini
1	Environmental Stress	
1	Insects	
7	Insufficient Sample	
1	Mite Question	
1	Negative for Pinewood Nematodes	
1	Phytophthora Root Rot	Phytophthora cinnamomi
1	Procerum Root Disease	Leptographium procerum
1	Sooty Mold	
1	Suspect Drought	
1	Web Blight	Rhizoctonia solani
1	Webworms	

24	Total for Pine	
POPLAR		
1	Botryosphaeria Dieback	Botryosphaeria sp.
1	Fusarium Canker	Fusarium solani

2	Total for Poplar	
PRUNUS		
2	Black Knot	Dibotryon morbosum

2	Total for Prunus	

REDBUD

2	Botrytis Blight	Botrytis cinerea
1	Chemical Injury	
1	Insufficient Sample	
1	Mites	
1	Negative for Disease	

6	Total for Redbud	

SERVICEBERRY

1	Aphids	
1	Botryosphaeria Canker	Botryosphaeria dothidea
1	Cedar-Quince Rust	Gymnosporangium clavipes
1	Suspect Chemical Injury	

4	Total for Serviceberry	

SPRUCE

1	Cultural Problem	
10	Environmental Stress	
2	Insufficient Sample	
6	Mites	
1	Negative for Disease	
1	Nutrient Deficiency	
3	Rhizosphaera Needle Blight	Rhizosphaera kalkhoffii
1	Seasonal Needle Drop	

25	Total for Spruce	

SWEET GUM

1	Botryosphaeria Canker	Botryosphaeria dothidea

1	Total for Sweet Gum	

SYCAMORE

2	Anthracnose	Gnomonia platani

2	Total for Sycamore	

TREES, MISCELLANEOUS

1	Chemical Injury	

1	Total for Trees, Miscellaneous	

TULIP TREE

1	Chemical Injury	
1	Sooty Mold	
1	Tarspot	Ectostroma liriodendri

3	Total for Tulip Tree	

WILLOW

1	Adventitious Roots	
1	Anthracnose	Gloeosporium sp.
2	Crown Gall	Agrobacterium tumefaciens
1	Cytospora Canker	Cytospora sp.
1	Suspect Cytospora Canker	Cytospora sp.

6	Total for Willow	

YELLOWWOOD

1	Suspect Chemical Injury	

1	Total for Yellowwood	

TREE FRUITS AND NUTS

APPLE

1	Bitter Rot	Glomerella cingulata
1	Black Rot	Physalospora obtusa
1	Burrknot	
4	Cedar-Apple Rust	Gymnosporangium juniperi-virginianae
2	Environmental Stress	
3	Fire Blight	Erwinia amylovora
1	Fly Speck	Microthyriella rubi
2	Frogeye Leaf Spot	Physalospora obtusa
1	Insects	
1	Insufficient Sample	
1	Mites	
1	Poor Drainage	
1	Russetting	
2	Scales	
1	Suspect Fire Blight	Erwinia amylovora
1	Suspect Hail Injury	

24	Total for Apple	

APRICOT

1	Insufficient Sample	

1	Total for Apricot	

CHERRY

2	Black Knot	Dibotryon morbosum
2	Brown Rot	Monilinia fructicola
2	Cherry Leaf Spot	Coccomyces hiemalis
3	Environmental Stress	
1	Insects	
3	Insufficient Sample	
1	Phoma Canker	Phoma sp.
1	Phyllosticta Leaf Spot	Phyllosticta sp.
1	Powdery Mildew	Oidium sp.

16	Total for Cherry	

CHESTNUT

1	Gall Insects	

1	Total for Chestnut	

CRABAPPLE		
1	Burrknot	
1	Cedar-Quince Rust	Gymnosporangium clavipes
1	Fire Blight	Erwinia amylovora
5	Scab	Venturia inaequalis
1	Virus	

9	Total for Crabapple	
MULBERRY		
1	False Mildew	Cercosporella arachnoidea
1	Insufficient Sample	
1	Suspect Squirrel Damage	
1	Twig Blight	

4	Total for Mulberry	
NECTARINE		
1	Curculios	
1	Insufficient Sample	
1	Peach Leaf Curl	Taphrina deformans

3	Total for Nectarine	
PEACH		
1	Borers	
5	Brown Rot	Monilinia fructicola
1	Environmental Stress	
2	Gummosis	Botryosphaeria sp.
1	Insufficient Sample	
2	Physiological Problem	
1	Poor Drainage	
1	Scab	Cladosporium carpophilum

14	Total for Peach	
PEAR		
1	Alternate Year Bearing	
1	Bitter Rot	Colletotrichum gloeosporioides
1	Blister Mites	
1	Coniothyrium Leaf Spot	Coniothyrium sp.
1	Cultural Problem	
1	Entomosporium Fruit Spot	Entomosporium mespili
1	Entomosporium Leaf Spot	Entomosporium mespili
9	Fire Blight	Erwinia amylovora
1	Negative for Disease	
1	Physiological Problem	
1	Scorch	

19	Total for Pear	

PECAN		
1	Environmental Stress	
1	Scab	Cladosporium caryigenum

2	Total for Pecan	
PERSIMMON		
1	Phomopsis Dieback	Phomopsis sp.

1	Total for Persimmon	
PLUM		
1	Brown Rot	Monilinia fructicola
1	Girdling Roots	
1	Sooty Mold	
1	Suspect Frost Injury	

4	Total for Plum	
WALNUT		
1	Anthracnose	Gnomonia leptostyla
1	Bacterial Blight	Xanthomonas juglandis

2	Total for Walnut	

TURF

BENTGRASS

1	Algae	
2	Anthracnose	Colletotrichum graminicola
1	Lance Nematodes	Hoplolaimus sp.
1	Lectophilic Fairy Ring	
1	Low pH	
6	Total for Bentgrass	

BERMUDAGRASS

1	Bermudagrass Decline	Gaeumannomyces graminis
1	Bipolaris Leaf Spot and Crown Rot	Bipolaris cynodontis
1	Leaf Blotch	Bipolaris cynodontis
3	Total for Bermudagrass	

BLUEGRASS

2	Anthracnose	Colletotrichum graminicola
1	Black Layer	
4	Brown Patch	Rhizoctonia solani
1	Dollar Spot	Sclerotinia homeocarpa
3	Environmental Stress	
1	Excess Thatch	
1	Helminthosporium Leaf Spot	Bipolaris sorokiniana
1	Lance Nematodes	Hoplolaimus sp.
1	Ring Nematodes	Criconemella sp.
1	Rust	Puccinia graminis
16	Total for Bluegrass	

FESCUE

1	Algae	
1	Ascochyta Blight	Ascochyta hordei
15	Brown Patch	Rhizoctonia solani
1	Bulbous Oatgrass	Arrhenatherum elatius var. bulbosa
1	Fairy Ring	
5	Helminthosporium Blight	Drechslera dictyoides
4	Insufficient Sample	
2	Negative for Disease	
1	Red Thread	Laetisaria fuciformis
1	Rust	Puccinia graminis
1	Slime Mold	
1	Stripe Smut	Ustilago striiformis
1	Suspect Dog Damage	
1	Suspect Environmental Stress	
1	Suspect Nutrient Deficiency	
1	White Patch	Melanotus philipsii
38	Total for Fescue	

RYEGRASS

1	Cultural Problem	
1	Insufficient Sample	
1	Mechanical Injury	

3	Total for Ryegrass	

SMOOTH CRABGRASS

1	Brown Patch	Rhizoctonia solani

1	Total for Smooth Crabgrass	

ST. AUGUSTINEGRASS

1	Gray Leaf Spot	Pyricularia grisea

1	Total for St. Augustinegrass	

TURFGRASS

1	Algae	
5	Brown Patch	Rhizoctonia solani
1	Cicadas	
2	Cultural Problem	
1	Excess Thatch	
1	Gray Leaf Spot	Pyricularia grisea
1	Helminthosporium Leaf Spot	Bipolaris sorokiniana
2	Insufficient Sample	
1	Melting Out	Drechslera poae
1	Red Thread	Laetisaria fuciformis
3	Rust	Puccinia graminis
1	Slime Mold	

20	Total for Turfgrass	

ZOYSIA

1	Rust	Puccinia zoysiae
1	Suspect Zoysia Patch	Rhizoctonia solani
1	Zoysia Patch	Rhizoctonia solani

3	Total for Zoysia	

VEGETABLES AND HERBS

BASIL		
1	Fusarium Wilt	Fusarium oxysporum
1	Total for Basil	
BEAN		
1	Chemical Injury	
1	Fusarium Root Rot	Fusarium solani
3	Rhizoctonia Root Rot	Rhizoctonia solani
1	Rhizoctonia Stem and Root Rot	Rhizoctonia solani
1	Root Knot Nematodes	Meloidogyne sp.
1	Suspect Bacterial Blight	Pseudomonas syringae
8	Total for Bean	
BEET		
1	Root Knot Nematodes	Meloidogyne sp.
1	Total for Beet	
BROCCOLI		
1	High pH	
1	Total for Broccoli	
CABBAGE		
1	Environmental Stress	
1	Pythium Root Rot	Pythium sp.
2	Total for Cabbage	
CANTALOUPE		
1	Anthracnose	Colletotrichum orbiculare
1	Chemical Injury	
1	Insufficient Sample	
3	Total for Cantaloupe	
COLLARDS		
1	Downy Mildew	Peronospora parasitica
1	Nutrient Deficiency	
2	Total for Collards	

CUCUMBER		
1	Angular Leaf Spot	Pseudomonas lachrymans
1	Anthracnose	Colletotrichum lagenarium
1	Chemical Injury	
1	Downy Mildew	Pseudoperonospora cubensis
3	Insufficient Sample	
1	Pythium Root Rot	Pythium sp.

8	Total for Cucumber	
EGGPLANT		
1	Environmental Stress	

1	Total for Eggplant	
LAVENDER		
1	Low pH	

1	Total for Lavender	
LETTUCE		
1	Suspect Nutrient Deficiency	

1	Total for Lettuce	
OKRA		
1	Root Knot Nematodes	Meloidogyne sp.

1	Total for Okra	
OREGANO		
1	Low pH	
1	Plant Bugs	

2	Total for Oregano	
PEPPER		
1	Excess Soluble Salts	
1	Fusarium Stem Rot	Fusarium solani
1	Nutrient Deficiency	

4	Total for Pepper	

POTATO		
1	Blackleg	Erwinia carotovora
1	Chemical Injury	
1	Flea Beetles	
1	Insects	
1	Insufficient Sample	
1	Low pH	
1	Penicillium Rot	Penicillium sp.
1	Powdery Mildew	Oidium sp.

8	Total for Potato	
PUMPKIN		
1	Plectosporium Blight	Plectosporium tabacinum
2	Pythium Root Rot	Pythium sp.
1	Root Knot Nematodes	Meloidogyne sp.

4	Total for Pumpkin	
ROSEMARY		
1	Botrytis Blight	Botrytis cinerea
1	Cultural Problem	
1	Environmental Stress	

3	Total for Rosemary	
SAGE		
1	Rhizoctonia Blight	Rhizoctonia sp.

1	Total for Sage	
SHALLOT		
1	Black Mold	Aspergillus niger

1	Total for Shallot	
SQUASH		
1	Chemical Injury	
1	Rhizoctonia Root Rot	Rhizoctonia solani

2	Total for Squash	
SWEET CORN		
1	Bacterial Top Rot	Erwinia chrysanthemi

1	Total for Sweet Corn	
THYME		
1	Environmental Stress	

1	Total for Thyme	

TOMATO

1	Abiotic Problem	
3	Air Pollution	
1	Anaerobic Soil Conditions	
1	Anthracnose	Colletotrichum coccodes
1	Bacterial Speck	Pseudomonas syringae pv. tomato
1	Bacterial Spot	Xanthomonas vesicatoria
1	Bacterial Wilt	Ralstonia solanacearum
3	Chemical Injury	
1	Cold Injury	
1	Cultural Problem	
1	Early Blight	Alternaria solani
5	Environmental Stress	
1	High pH	
4	Insufficient Sample	
1	Negative for Virus	
5	Nutrient Deficiency	
1	Pith Necrosis	Pseudomonas corrugata
1	Southern Blight	Sclerotium rolfsii
3	Suspect Chemical Injury	
2	Suspect Environmental Stress	
1	Timber Rot	Sclerotinia sclerotiorum
4	Tomato Spotted Wilt Virus	
43	Total for Tomato	

WATERMELON

1	Fungus Gnats
2	Insufficient Sample
1	Suspect Chemical Injury
4	Total for Watermelon

ZUCCHINI

1	Insects
1	Suspect Air Pollution
2	Total for Zucchini

WEEDS

DEAD NETTLE

1	Bacterial Blight	Pseudomonas cichorii

1	Total for Dead Nettle	

KUDZU

1	Cause of Problem Unknown	

1	Total for Kudzu	

QUACKGRASS

1	Ergot	Claviceps purpurea

1	Total for Quackgrass	

WEED

1	Italian Ryegrass	Lolium multiflorum

1	Total for Weed	

WOODY ORNAMENTALS

ARBORVITAE		
1	Macrophoma Dieback	Macrophoma sp.

1	Total for Arborvitae	
AUCUBA		
1	Frost Injury	
1	Phomopsis Dieback	Phomopsis sp.

2	Total for Aucuba	
AZALEA		
1	Botrytis Blight	Botrytis cinerea
1	Cultural Problem	
1	Deep Planting	
2	Environmental Stress	
1	High pH	
1	Insufficient Information	
7	Insufficient Sample	
1	Lacebugs	
2	Leaf and Flower Gall	Exobasidium vaccinii
1	Low pH	
1	Nutrient Imbalance	
2	Phomopsis Dieback	Phomopsis sp.
1	Suspect Chemical Injury	

22	Total for Azalea	
BARBERRY		
1	Insects	

1	Total for Barberry	
BLUEBEARD		
1	Insufficient Sample	
1	Pythium Root Rot	Pythium sp.

2	Total for Bluebeard	
BOSTON IVY		
1	Suspect Chemical Injury	

1	Total for Boston Ivy	
BOXWOOD		
12	Cultural Problem	
15	English Boxwood Decline	Paecilomyces buxi
3	Environmental Stress	
3	Frost Injury	
1	Insufficient Information	

11	Insufficient Sample	
1	Lesion Nematodes	Pratylenchus sp.
2	Low pH	
2	Mites	
2	Negative for Root Rot Fungi	
1	Physiological Problem	
4	Phytophthora Root Rot	Phytophthora sp.
2	Ring Nematodes	Criconemella sp.
9	Spiral Nematodes	Rotylenchus buxophilus
1	Suspect Nutrient Deficiency	
3	Volutella Blight	Volutella buxi
72	Total for Boxwood	

BURNING BUSH

1	Anthracnose	Gloeosporium gloeosporiodes
1	Total for Burning Bush	

BUTTERFLY BUSH

1	Insufficient Sample	
2	Mites	
1	Negative for Root Disease	
1	Phythophthora Root Rot	Phythophthora sp.
5	Total for Butterfly Bush	

CAMELLIA

2	Cultural Problem	
2	Frost Injury	
1	Oedema	
5	Total for Camellia	

CANDYTUFT

1	Nutrient Deficiency	
1	Total for Candytuft	

CHERRYLAUREL

2	Black Vine Weevils	
2	Borers	
1	Cultural Problem	
1	Girdling Roots	
1	Insufficient Sample	
1	Mycosphaerella Leaf Spot	Mycosphaerella sp.
1	Negative for Root Pathogens	
9	Total for Cherrylaurel	

COTONEASTER		
1	Lacebugs	

1	Total for Cotoneaster	
CRAPE MYRTLE		
1	Insufficient Sample	
1	Squirrel Twig Pruning	

2	Total for Crape Myrtle	
ENGLISH IVY		
2	Anthracnose	Colletotrichum trichellum

2	Total for English Ivy	
EUONYMUS		
1	Cultural Problem	
1	Excess Soil Moisture	
1	Insufficient Sample	
1	Negative for Disease	
1	Salt Injury	

5	Total for Euonymus	
FORSYTHIA		
1	Insufficient Sample	
1	Suspect Frost Injury	

2	Total for Forsythia	
HIBISCUS		
1	Bird's Nest Fungus	Cyathus sp.
1	Physiological Problem	
1	Suspect Chemical Injury	

3	Total for Hibiscus	
HOLLY		
1	Anthracnose	Gloeosporium sp.
10	Black Root Rot	Thielaviopsis basicola
1	Botryosphaeria Dieback	Botryosphaeria sp.
1	Cercospora Leaf Spot	Cercospora sp.
2	Cultural Problem	
3	Environmental Stress	
1	Girdling Roots	
5	Insufficient Sample	
1	Negative for Root Disease	
1	Nutrient Toxicity	
2	Phytophthora Root Rot	Phytophthora cinnamomi
1	Poor Drainage	
1	Rootbound	

1	Spine Spot	
1	Suspect Black Root Rot	Thielaviopsis basicola
1	Suspect Chemical Injury	
2	Suspect Environmental Stress	
3	Winter Injury	

38	Total for Holly	

HYDRANGEA

1	Cercospora Leaf Spot	Cercospora hydrangeae
1	Insufficient Sample	
1	Winter Injury	

3	Total for Hydrangea	

HYPERICUM

2	Bacterial Leaf Spot	Burkholderia andropogonis
1	Botrytis Blight	Botrytis cinerea

3	Total for Hypericum	

INDIAN HAWTHORN

2	Entomosporium Leaf Spot	Entomosporium mespili

2	Total for Indian Hawthorn	

INKBERRY

1	Black Root Rot	Thielaviopsis basicola
1	Gray Mold	Botrytis cinerea
2	Phytophthora Root Rot	Phytophthora sp.
1	Salt Injury	

5	Total for Inkberry	

JUNIPER

4	Cultural Problem	
2	Environmental Stress	
1	High pH	
1	Insufficient Information	
4	Insufficient Sample	
1	Low pH	
1	Negative for Disease	
2	Negative for Root Disease	
3	Phomopsis Tip Blight	Phomopsis juniperovora
3	Phytophthora Root Rot	Phytophthora sp.
1	Pythium Root Rot	Pythium sp.
1	Rootbound	
1	Salt Injury	
1	Suspect Mechanical Injury	
1	Vole Injury	
1	Winter Injury	
1	Wood Decay	

29	Total for Juniper	

LAUREL

1	Phytophthora Root Rot	Phytophthora cinnamomi

1	Total for Laurel	

LEUCOTHOE

1	Powdery Mildew	Microsphaera sp.

1	Total for Leucothoe	

LILAC

2	Insufficient Sample	
1	Powdery Mildew	Microsphaera pencillata
1	Suspect Hail Injury	

4	Total for Lilac	

MAHONIA

1	Spine Spot	
1	Winter Injury	

2	Total for Mahonia	

MOCK ORANGE

1	Negative for Disease	

1	Total for Mock Orange	

MOUNTAIN LAUREL

2	Cercospora Leaf Spot	Cercospora kalmiae
1	Environmental Stress	

3	Total for Mountain Laurel	

NANDINA

2	Environmental Stress	
1	Insufficient Sample	

3	Total for Nandina	

OSMANTHUS

1	Cultural Problem	

1	Total for Osmanthus	

PHOTINIA

1	Cultural Problem	
6	Entomosporium Leaf Spot	Entomosporium mespili
7	Total for Photinia	

PIERIS

1	Lacebugs	
1	Phomopsis Dieback	Phomopsis sp.
1	Sooty Mold	
3	Total for Pieris	

PLANTS, MISCELLANEOUS

1	Artillery Fungus	Sphaerobolus stellatus
1	Chemical Injury	
1	Environmental Stress	
1	Insects	
1	Negative for Disease	
5	Total for Plants, Miscellaneous	

PRIVET

1	Environmental Stress	
1	Winter Injury	
2	Total for Privet	

PYRACANTHA

1	Phytophthora Root Rot	Phytophthora sp.
1	Salt Injury	
2	Total for Pyracantha	

RED CEDAR

1	Mites	
1	Pestalotia Blight	Pestalotia funerea
2	Total for Red Cedar	

RHODODENDRON

1	Borers	
10	Botryosphaeria Dieback	Botryosphaeria sp.
1	Cultural Problem	
3	Insufficient Sample	
1	Lacebugs	
1	Negative for Root Disease	
1	Nutrient Toxicity	
1	Scorch	
1	Tissue Proliferation	
2	Winter Injury	

22	Total for Rhododendron	

ROSE

1	Air Pollution	
1	Botrytis Blight	Botrytis cinerea
1	Common Canker	Coniothyrium fuckelii
4	Rose Rosette	
1	Suspect Hail Injury	
4	Suspect Rose Rosette	

12	Total for Rose	

SHRUB, UNKNOWN

1	Insufficient Sample	

1	Total for Shrub, Unknown	

SKIMMIA

1	Insufficient Sample	

1	Total for Skimmia	

SMOKE TREE

1	Verticillium Wilt	Verticillium dahliae

1	Total for Smoke Tree	

SPIREA

1	Mycosphaerella Leaf Spot	Mycosphaerella sp.

1	Total for Spirea	

SWEETSHRUB

1	Suspect Chemical Injury	

1	Total for Sweetshrub	

SWEETSPIRE		
1	Suspect Chemical Injury	

1	Total for Sweetspire	
VIBURNUM		
1	Borers	
1	Botryosphaeria Dieback	Botryosphaeria dothidea
1	Cultural Problem	
1	Frost Injury	
2	Insufficient Sample	
1	Powdery Mildew	Microsphaera sp.
1	Pythium Root Rot	Pythium sp.
2	Winter Injury	

10	Total for Viburnum	
WAX MYRTLE		
1	Mycosphaerella Leaf Spot	Mycosphaerella sp.

1	Total for Wax Myrtle	
WEIGELA		
1	Insufficient Sample	

1	Total for Weigela	
WINTERGREEN		
1	Cercospora Leaf Spot	Cercospora sp.

1	Total for Wintergreen	
YEW		
2	Environmental Stress	
1	Negative for Root Disease	
1	Suspect Winter Injury	

4	Total for Yew	

MISCELLANEOUS

MULCH

1 Sour Mulch

---

1 Total for Mulch

MOSS

1 Environmental Stress

---

1 Total for Moss

Summary of Plant Identifications
2003

Higher Plants (21)

Family: Bryophytes	Moss
Family: Capperaceae	
Could not determine sp.	Member of Capperaceae
Family: Elaeagnaceae	
Elaeagnus pungens	Thorny Elaeagnus
Family: Ericaceae	
Rhododendron pericylmenoides	Pinxterbloom Azalea
Vaccinium angustifolium	Late Low Blueberry
Family: Fabaceae	
Sophora japonica	Japanese Pagodatree
Family: Lamiaceae	
Glechoma hederacea	Ground Ivy
Family: Pinaceae	
Pinus thunbergiana	Japananese Black Pine
Family: Poaceae	
Dactylis glomerata	Orchardgrass
Family: Potamogetonaceae	
Potamogeton foliosus	Pondweed
Family: Passifloraceae	
Passiflora lutea	Yellow Passionflower
Family: Rosaceae	
Agrimonia parsiflora	Small-flowered Agrimony
Amelanchier arboreta	Serviceberry
Fragaria virginiana	Wild Strawberry
Pyrus pyrifolia (2)	Asian Pear
Pyrus sp.	Ornamental Pear
Family: Salicaceae	
Salix discolor	Pussywillow
Family: Santalaceae	
Pyrularia pubera	Buffalonut
Family: Scrophulariaceae	
Veronica officinalis	Common Speedwell

Family: Violaceae	
Viola papilionacea	Wild Violet
Fungi (15)	
Amanita pantherina	Amanita
Boletus sp.	Bolete
Bondarzewia berkeleyi	Bondarzewia
Cantharellus laeteritius	Golden Chantarelle
Cyathus sp.	Bird's Nest Fungus
Fuligo septica	Slime mold
Ganoderma applanatum	Artist's Conk
Mutinus caninus	Stinkhorn
Mycenastrum corium	Mycenastrum
Scleroderma geaster	Dead Man's Hand
Scleroderma sp.	Earthball
Sphaerobolus stellatus	Artillery Fungus
Trametes versicolor	Turkey Tail
Unidentified Fungus (2)	Decay Fungus
ALL OTHERS (4)	
Algae (1)	
Insufficient Sample (2)	
Nonliving Substance (1)	