The VT Plant Disease Clinic Annual Report 2021

COLLEGE OF AGRICULTURE AND LIFE SCIENCES
SCHOOL OF PLANT AND ENVIRONMENTAL SCIENCES
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The Plant Disease Clinic
2021 Annual Report

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Acknowledgements

The Plant Disease Clinic depends on an 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 plant tissue, maintain records, answer the telephone, keep track of samples, and send out reports. In 2021, Plant Clinic staff worked remotely for part of the year, due to COVID-19. We reopened the lab in May. All diagnoses in the Plant Disease Clinic in Blacksburg were performed by Mary Ann Hansen and Elizabeth Bush, with valuable assistance from Kathryn Liu and Abigail Bushhouse.

Plant Clinic staff consult with many faculty and staff in various disciplines 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:

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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, and as of 2020, Todd developed functionality to allow Extension agents to upload images of plant problems directly to the database. Information on obtaining upload credentials for direct uploading of images to the PClinic database can be obtained from the Clinic at <clinic@vt.edu>.

Abigail Bushhouse painstakingly compiled the annual report. The annual report can be viewed on-line at <https://spes.vt.edu/affiliated/plant-disease-clinic/reports.html>.

Introduction

The annual report for the Plant Disease Clinic located on the Virginia Tech campus in Blacksburg is presented in the following pages. Plant specimens that were submitted to and diagnosed at the Agricultural Research and Extension Centers throughout the Commonwealth are not included in this report. Note that the number of diagnoses performed was higher than the number of samples received because some samples are diagnosed with more than one problem.

For 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 does not routinely identify pathogens to species because species identification can sometimes be a very time-consuming process and often has little bearing on control recommendations. Most pathogens were assumed to be the cause of the disease if they were found microscopically or cultured in high numbers from the plant tissue or identified by molecular techniques, 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, either diagnosed by an immunostrip antibody test or molecular techniques, or they were sent to a private lab for testing at a cost to the grower. 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”.

Soil samples for nematode assays were forwarded to the Nematode Assay Laboratory. 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 to make a control recommendation. Threshold levels have been developed in research trials for many, but not all, crops grown in Virginia.

The phrases "Cause of Problem Undetermined" or “No Pathogens Found” are used for plant samples from which no pathogen could be isolated and for which no obvious environmental or cultural condition could be associated with the problem, despite receipt of an adequate plant sample. Trees have more samples 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 are in the trunk or roots.

Some insect and mite problems are also listed in this report. Arthropod damage is often mistaken for disease, and samples with insect or mite 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 with arthropod damage is performed by Mr. Day. Samples with known arthropod problems should be sent directly to the Insect ID Lab with the appropriate form.

During 2021, we also diagnosed or gave a preliminary diagnosis on plant problems sent to us as digital images. For some digital submissions, no follow-up physical sample was submitted and the preliminary diagnosis could not be confirmed. In those cases, the diagnosis is listed as "Suspect XX". We have discovered that we are able to diagnose many common problems from images, although most root diseases, among other things, still require a physical sample for accurate diagnosis. However, even for samples that must be submitted as a physical sample, we have found that images of the plants in the landscape or field are very helpful to the diagnosis, so we will continue to encourage submission of digital images, along with physical plant samples going forward.

Reports are mailed electronically to the local Extension office from which the sample originated. Upon request, we will simultaneously send electronic reports to one or more individual Extension personnel. Since implementing electronic mailing, we have discontinued faxing or mailing hard copies of reports. Relevant fact sheets for some diseases are available on the Web at http://pubs.ext.vt.edu/category/plant-diseases.html.

DISEASE HIGHLIGHTS 2021

As in 2020, fewer samples (649) were submitted in 2021 compared to the historic sample number trend. From 2015-2019, sample numbers ranged from 1241 to 1695 and trended upward annually. Continued effects from the COVID pandemic negatively impacted the sample numbers in 2021. Additionally, a diagnostic fee was instituted on Oct. 1, 2021. Based on results from other diagnostic labs that have instituted a fee for services, we anticipated an initial decline in sample numbers, but we expect sample numbers to gradually rebound over the next few years. Because of COVID-19 and its impact on staffing and mail services, the Clinic offered reduced diagnostic services at the beginning of 2021. From Jan. through April 2021, commercial growers were required to electronically submit digital images of the plant problem and a completed diagnostic form prior to submission of a physical plant sample. Non-commercial growers and professional landscape clientele were limited to digital submissions until May 1, 2021, when normal operations resumed for the remainder of 2021.

A snapshot of the diseases we diagnosed in 2021 is provided below. Diseases for which an image is available are listed with a figure number.

Laurel Wilt, (Fig. 1a-b) caused by the fungus *Raffaelea lauricola*, which is transmitted by several species of ambrosia beetle, was diagnosed for the first time in Virginia on a sassafras tree growing by the side of the road in Scott County in Southwest Virginia. This disease has caused devastating losses of redbay laurel in states south of Virginia, and poses a serious threat to sassafras, which is a native, understory plant in the Eastern Forest.

Tomato Spotted Wilt Virus, a virus that is transmitted by thrips, was diagnosed on many different plant species in the same greenhouse:

- Dahlia (*Dahlia* sp.) (Fig. 2)
- Gomphrena (*Gomphrena* sp.)
- Pepper (*Capsicum* sp.)
- Tomato (*Solanum lycopersicum*)
- Zinnia (*Zinnia* sp.)

Nematode diseases diagnosed by our lab in 2021 included:

- Coral Bells (*Heuchera* sp.) – Foliar Nematodes (*Aphelenchoides* sp.)
- Hemp (*Cannabis sativa*) – Root Knot Nematodes (*Meloidogyne* sp.) (Fig. 3)

Although not diagnosed by our lab, **Beech Leaf Disease** (Fig. 4a-b), caused by the foliar nematode *Litylenchus crenatae* subsp. *mccannii*, was confirmed on American beech (*Fagus grandifolia*) in Prince William County in August of 2021 by Kantor, et al. (https://pubmed.ncbi.nlm.nih.gov/34668402/). This is the first report of this invasive pathogen in Virginia. This disease was first reported in the United States in Lake County, Ohio, in 2012, and has been spreading in the Northeast and Mid-Atlantic states since then. The nematode causes dark interveinal leaf lesions and a leathery texture to leaves, which eventually wither and die. Young trees may die within three years, but mature trees decline more slowly.

Bacterial diseases were diagnosed on the following crops:

- Chrysanthemum (*Chrysanthemum* sp.) – Bacterial Blight (*Xanthomonas axonopodis*)
- Dusty Miller (*Centaurea cineraria*) – Bacterial Blight (*Pseudomonas cichorii*)
- Edamame (*Glycine max*) – Bacterial Pustule (*Xanthomonas axonopodis*)
- Grape (*Vitis* sp.) – Pierce's Disease (*Xylella fastidiosa)* (Fig. 5)
- Melon (*Cucumis melo*) – Bacterial Fruit Blotch (*Acidovorax avenae*)
- Oak (*Quercus palustris, Q. falcata, Q. velutina, Q. rubra*) – Bacterial Scorch (*Xylella fastidiosa*)
- Salvia (*Salvia* sp.) – Bacterial Leaf Spot (*Pseudomonas cichorii*)
- Sycamore (*Platanus occidentalis*) – Bacterial Scorch (*Xylella fastidiosa*)
- Tomato (*Solanum lycopersicum*) – Bacterial Spot (*Xanthomonas perforans*)
- Wallflower (*Cheiranthus cheiri*) – Bacterial Blight (*Xanthomonas axonopodis*)

Interesting **arthropod problems** that were mistaken for disease and sent to the Plant Disease Clinic included:

- Coneflower (*Echinacea purpurea*) – Coneflower Rosette Mites (Family Eriophyidae) (Fig. 6)
- Garlic (*Allium sativum*) – Dry Bulb Mites (*Aceria* sp.) (Fig. 7)
- Phlox (*Phlox paniculata*) – Thrips (Family Thripidae) (Fig. 8)
- Tomato (*Solanum lycopersicum)* - Tomato Russet Mites (*Aculops lycopersici*, Family Eriophyidae)(Fig. 9)

Some noteworthy **fungal and oomycete diseases** we diagnosed in 2021 include the following:

Herbaceous Ornamentals

- Dusty Miller (*Centaurea cineraria*) – Ramularia Leaf Spot (*Ramularia* sp.)
- Rudbeckia (*Rudbeckia fulgida*) – Downy Mildew (*Plasmopara halstedii*) (Fig. 10a-b)
- Sunflower (*Helianthus* sp.) – Alternaria Leaf and Stem Spot (*Alternaria helianthi*)

Trees and Shrubs

- Eastern Red Cedar (*Juniperus virginiana*) – Phytophthora Root Rot (*Phytophthora cinnamomi*)
- Japanese Plum Yew (*Cephalotaxus harringtonia*) – Phoma Dieback (*Phoma* sp.) (Fig. 11)
- Leucothoe (*Leucothoe* sp.) – Leaf and Flower Gall (*Exobasidium vaccinii*) (Fig. 12)
- Lilac (*Syringa* sp.) – Septoria Leaf Spot (*Septoria* sp.) (Fig. 13)
- Maple (*Acer* sp.) – Canker Rot (*Cerrena unicolor*)
- Pawpaw (*Asimina triloba*) – Anthracnose (*Colletotrichum* sp.) (Fig. 14)
- Pear (*Pyrus communis*) – Coniothyrium Leaf Spot (*Coniothyrium* sp.) (Fig. 15)
- Peach (*Prunus persica*) – Leucostoma Canker (*Leucostoma* sp.) (Fig. 16)

Note: Boxwood Blight (Fig. 17), caused by the fungus *Calonectria pseudonaviculata*, was diagnosed on 15 of 64 (23%) boxwood samples in 2021, compared to 24 of 132 (18%) boxwood samples in 2020.

Turfgrass

- Bermudagrass (*Cynodon dactylon*) – Bipolaris Leaf Spot and Crown Rot (*Bipolaris cynodontis*)
- Bermudagrass (*Cynodon dactylon*) –Take-all Root Rot (*Gaeumannomyces graminis*)

Vegetables and Herbs

- Pumpkin (*Cucurbita pepo*) – Phytophthora Fruit Blight (*Phytophthora capsici*) (Fig. 18)
- Rosemary (*Rosmarinus officinalis*) - Phytophthora Root Rot (*Phytophthora cinnamomi*)
- Tomato (*Solanum lycopersici*) - Ghost Spot (*Botrytis cinerea*) (Fig. 19)

Fig 1a. Dieback of sassafras due to Laurel Wilt. (Photo by Katlin DeWitt, VDOF)

Fig 1b. Vascular staining of sassafras due to Laurel Wilt. (Photo by Katlin DeWitt, VDOF)

Fig 2. Ringspot symptoms of Tomato Spotted Wilt Virus on dahlia.

Fig 3. Wilting of hemp due to Root Knot Nematodes.

Fig 4a. *Litylenchus crenatae* subsp*. mccannii*, the nematode that causes Beech Leaf Disease. (Photo by Devin Bily, VDACS)

Fig 4b. Symptoms of Beech Leaf Disease. (Photo by Devin Bily, VDACS)

Fig 5. Marginal leaf scorch due to Pierce's Disease on grape.

Fig 6. Phyllody, caused by Coneflower Rosette Mites on coneflower.

Fig 7. Symptoms of Dry Bulb Mites on garlic.

Fig 9. Tomato Russet Mites on tomato leaflet.

Fig 8. Thrips damage to *Phlox paniculata*.

Fig 10a. Downy Mildew symptoms on upper leaf surface of Rudbeckia.

Fig 10b. Downy Mildew signs on lower leaf surface of Rudbeckia.

Fig 11. Phoma Dieback on Japanese plum yew.

Fig 12. Leaf and Flower Gall on Leucothoe leaf.

Fig 13. Septoria Leaf Spot on lilac.

Fig 14. Leaf spotting due to Anthracnose on pawpaw.

Fig 15. Coniothyrium Leaf Spot on ornamental pear.

Fig 16a. Leucostoma Canker on peach.

Fig 16b. Perithecial stroma of *Leucostoma* sp., the fungus that causes Lecostoma Canker on peach.

Fig 17. Defoliation on boxwood due to Boxwood Blight.

Fig 18. Phytophthora Blight on pumpkin.

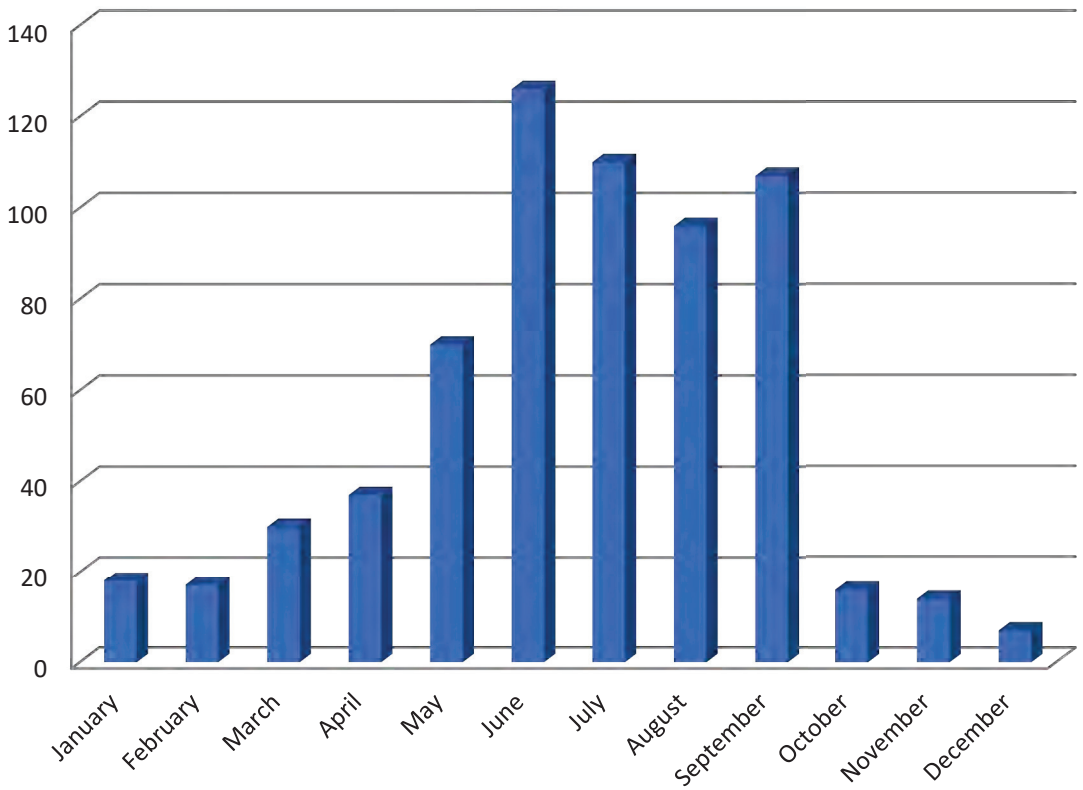
Fig 19. Ghost Spot on tomato.

Monthly Submission Summary

Number of samples received by month

Month	# Samples
January	18
February	17
March	30
April	37
May	70
June	126
July	110
August	96
September	107
October	16
November	14
December	7
Total	**648**

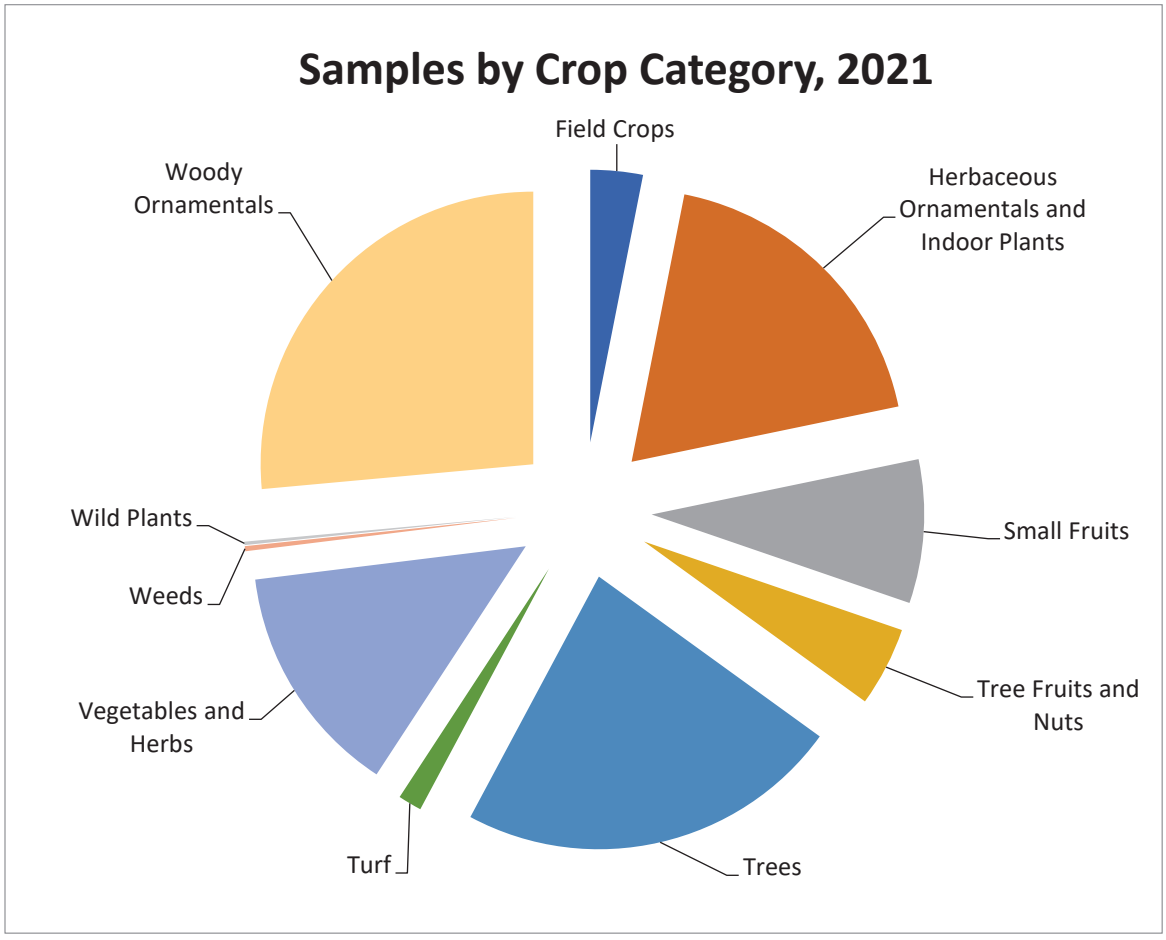
Number of Samples by Month, 2021



Samples by Crop Category

Sample totals by major crop categories, excluding plant identifications

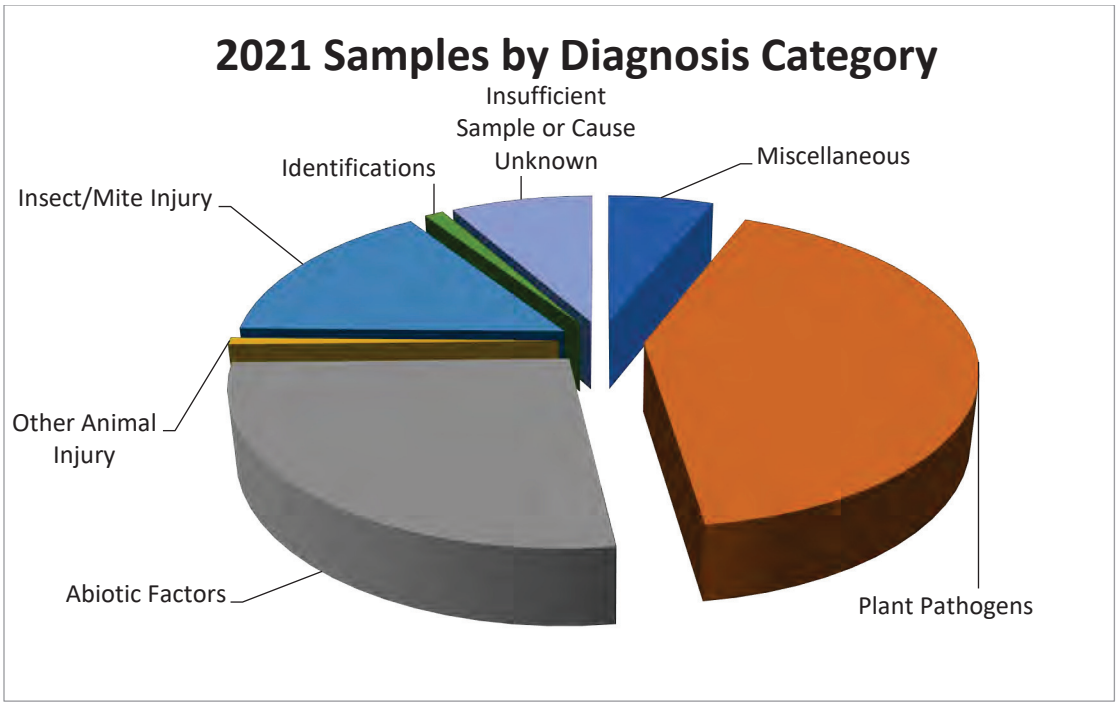
Crop Category	# of Samples	% of Total
Field Crops	20	3.1%
Herbaceous Ornamentals and Indoor Plants	119	18.6%
Small Fruits	54	8.5%
Tree Fruits and Nuts	30	4.7%
Trees	146	22.8%
Turf	9	1.4%
Vegetables and Herbs	88	13.8%
Weeds	2	0.3%
Wild Plants	1	0.2%
Woody Ornamentals	169	26.4%
Total	**639**	

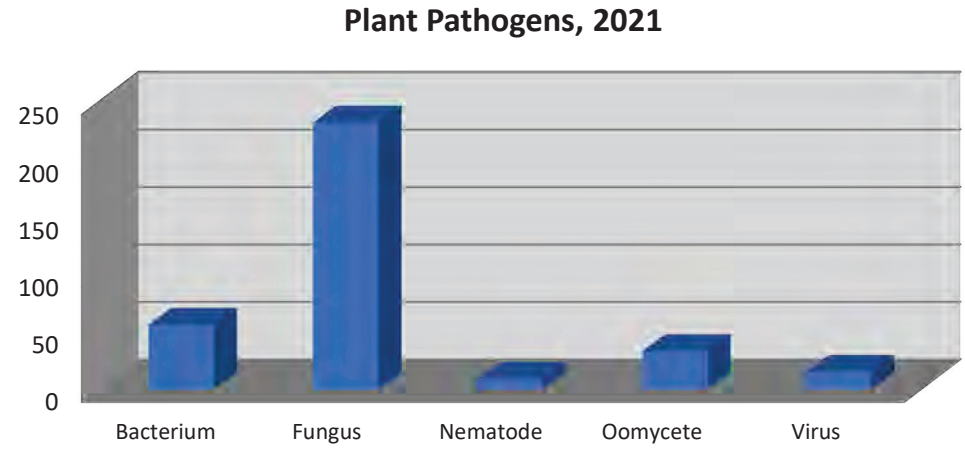


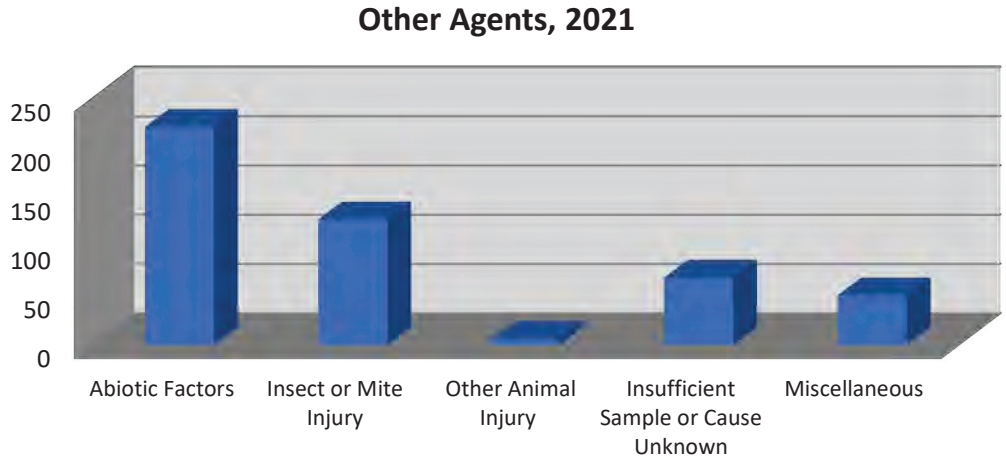
Diagnosis/ID Category Summary

	# of Diagnoses/IDs	% of Total
Plant Pathogens	**345**	**41.8%**
Bacterium	56	
Fungus	232	
Nematode	9	
Oomycete	33	
Virus	15	
Abiotic Factors	**221**	**26.8%**
Chemical	36	
Environmental/Cultural	178	
Mechanical	7	
Insect or Mite Injury	**127**	**15.4%**
Insects or Mites	127	
Other Animal Injury	**6**	**0.7%**
Birds	4	
Mammals	2	
Insufficient Sample or Cause Unknown	**68**	**8.2%**
Insufficient Sample or Information	42	
Require Physical Sample	6	
Cause Unknown	20	
Miscellaneous	**50**	**6.1%**
Algae	1	
Lichen	4	
Normal Condition	8	
Other	26	
Physiological/Genetic	10	
Phytoplasma	1	
Identifications	**9**	**1.1%**
Fungi	3	
Plant	5	
Unable to Identify	1	
Total	**826**	

Other Assistance, 2021	
Type	**# of Inquires**
Digital Submissions (Email)	142
Phone Calls	56


2021 Samples by Diagnosis Category
Insufficient Sample or Cause Unknown
Identifications
Miscellaneous
Insect/Mite Injury
Other Animal Injury
Abiotic Factors
Plant Pathogens


Plant Pathogens, 2021
250
200
150
100
50
0
Bacterium
Fungus
Nematode
Oomycete
Virus


Other Agents, 2021
250
200
150
100
50
0
Abiotic Factors
Insect or Mite Injury
Other Animal Injury
Insufficient Sample or Cause Unknown
Miscellaneous

Geographic Distribution of Samples Received in 2021

County	# of Samples	County	# of Samples
ACCOMACK	3	MADISON	4
ALBEMARLE	25	MECKLENBURG	1
AMELIA	1	MIDDLESEX	1
AMHERST	6	MONTGOMERY	59
APPOMATTOX	1	NELSON	56
ARLINGTON	3	NEW KENT	1
AUGUSTA	12	NEWPORT NEWS CITY	3
BEDFORD	18	NORFOLK CITY	1
BLAND	2	NORTHAMPTON	1
BOTETOURT	6	NORTHUMBERLAND	1
CAMPBELL	2	NOTTOWAY	3
CAROLINE	1	ORANGE	4
CARROLL	15	PAGE	5
CHARLES CITY	2	PATRICK	5
CHARLOTTE	8	PITTSYLVANIA	1
CLARKE	4	PORTSMOUTH CITY	2
CRAIG	8	POWHATAN	11
CULPEPER	2	PRINCE EDWARD	1
CUMBERLAND	3	PRINCE GEORGE	2
DANVILLE CITY	2	PRINCE WILLIAM	10
DICKENSON	1	PULASKI	7
FAIRFAX	4	RAPPAHANNOCK	7
FAUQUIER	7	RICHMOND	1
FLOYD	13	RICHMOND CITY	1
FLUVANNA	18	ROANOKE	13
FRANKLIN	4	ROCKBRIDGE	17
FREDERICK	7	ROCKINGHAM	2
GILES	8	RUSSELL	2
GLOUCESTER	1	SCOTT	5
GOOCHLAND	11	SHENANDOAH	4
GRAYSON	6	SMYTH	1
GREENSVILLE	1	SPOTSYLVANIA	3
HALIFAX	4	STAFFORD	16
HAMPTON CITY	4	SUFFOLK CITY	2
HANOVER	14	SUSSEX	1
HENRICO	27	TAZEWELL	5
HENRY	6	VIRGINIA BEACH	2
ISLE OF WIGHT	25	WASHINGTON	1
JAMES CITY	2	WESTMORELAND	4
KING WILLIAM	1	WILLIAMSBURG CITY	1
LANCASTER	2	WISE	10
LEE	2	WYTHE	1
LOUDOUN	14	YORK	33
LOUISA	16		
LYNCHBURG CITY	15	**Total**	**648**

Diagnosis Appendix

Information about diseases/pests diagnosed by the laboratory

Field Crops		
Alfalfa		
1	Low pH	
1	Summer Black Stem and Leaf Spot	*Cercospora medicaginis*
1	Suspect Cold Injury	
3	**Total for Alfalfa**	
Clover		
1	Sclerotinia Crown and Stem Rot	*Sclerotinia trifoliorum*
1	**Total for Clover**	
Corn		
1	Fusarium Stalk Rot	*Fusarium sp.*
1	Low pH	
1	Potyvirus	
1	Wireworms	
4	**Total for Corn**	
Edamame Soybean		
1	Bacterial Pustule	*Xanthomonas axonopodis*
1	**Total for Edamame Soybean**	
Fescue		
2	Anthracnose	*Colletotrichum graminicola*
2	Environmental Stress	
4	**Total for Fescue**	
Hemp		
1	Fusarium Stem Canker	*Fusarium sp.*
1	Girdling Roots	
1	Hemp Leaf Spot	*Drechslera gigantea*
1	Nutrient Deficiency	
1	Root Knot Nematodes	*Meloidogyne incognita*
5	**Total for Hemp**	

Hops		
2	Downy Mildew	*Pseudoperonospora humuli*
2	**Total for Hops**	
Sorghum		
1	Physiological Leaf Spot	
1	**Total for Sorghum**	
Soybean		
1	Anthracnose	*Colletotrichum sp.*
2	Charcoal Rot	*Macrophomina phaseolina*
1	Insufficient Sample	
1	Low pH	
1	Nutrient Deficiency	
6	**Total for Soybean**	
Sudax		
1	Northern Corn Leaf Blight	*Exserohilum turcicum*
1	**Total for Sudax**	

Herbaceous Ornamentals and Indoor Plants		
Akebia		
1	Insufficient Sample	
1	**Total for Akebia**	
Anemone		
1	No Pathogens Found	
1	**Total for Anemone**	
Aster		
1	Insects	
1	**Total for Aster**	
Astilbe		
1	Freeze Damage	
1	**Total for Astilbe**	
Bells-of-Ireland		
2	Cercospora Leaf Spot	*Cercospora sp.*
2	**Total for Bells-of-Ireland**	
Brunnera		
1	Suspect Chemical Injury	
1	Suspect Cultural Problem	
2	**Total for Brunnera**	
Bullwort		
1	Abiotic Problem	
1	**Total for Bullwort**	
Cactus		
1	Physiological Condition	
1	**Total for Cactus**	

Chrysanthemum		
1	Bacterial Blight	*Xanthomonas axonopodis*
1	Cultural Problem	
1	Environmental Stress	
1	No Pathogens Found	
1	Suspect Insects	
5	**Total for Chrysanthemum**	

Clematis		
1	Abiotic Problem	
1	Clematis Wilt	*Phoma sp.*
2	**Total for Clematis**	

Coneflower		
1	Coneflower Rosette Mites	
2	Pythium Root Rot	*Pythium sp.*
1	Rhizoctonia Stem Rot	*Rhizoctonia sp.*
4	**Total for Coneflower**	

Coral Bells		
1	Cause of Problem Undetermined	
1	Environmental Stress	
1	Eriophyid Mites	
1	Foliar Nematodes	*Aphelenchoides sp.*
1	Suspect Virus	
5	**Total for Coral Bells**	

Coreopsis		
1	No Pathogens Found	
1	Pythium Root Rot	*Pythium sp.*
2	**Total for Coreopsis**	

Dahlia		
1	Insufficient Sample	
1	Suspect Virus	
2	Thrips	
1	Tomato Spotted Wilt Virus	
5	**Total for Dahlia**	

Daisy		
1	Insects	
1	**Total for Daisy**	
Dusty Miller		
1	Bacterial Blight	*Pseudomonas cichorii*
1	Ramularia Leaf Spot	*Ramularia sp.*
2	**Total for Dusty Miller**	
Fern		
1	No Pathogens Found	
1	**Total for Fern**	
Flamingo Flower		
1	Incomplete Pollination	
1	**Total for Flamingo Flower**	
Foxglove		
1	Fusarium Root Rot	*Fusarium sp.*
1	Suspect Environmental Stress	
2	**Total for Foxglove**	
Goatsbeard		
1	No Pathogens Found	
1	**Total for Goatsbeard**	
Goldenrod		
1	Insufficient Sample	
1	**Total for Goldenrod**	
Gomphrena		
1	Thrips	
1	Tomato Spotted Wilt Virus	
2	**Total for Gomphrena**	
Hellebore		
1	Possible Thrips Injury	
1	Suspect Abiotic Problem	
2	**Total for Hellebore**	

Hollyhock		
1	Rust	*Puccinia malvacearum*
1	**Total for Hollyhock**	
Hosta		
1	Sooty Mold	
1	Suspect Virus	
2	**Total for Hosta**	
Iceland Poppy		
1	Insufficient Sample	
1	**Total for Iceland Poppy**	
Impatiens		
2	No Disease Found	
1	Thrips	
3	**Total for Impatiens**	
Lamb's-ear		
1	Rhizoctonia Root Rot	*Rhizoctonia solani*
1	**Total for Lamb's-ear**	
Larkspur		
1	Abiotic Problem	
1	Botrytis Canker	*Botrytis sp./spp.*
1	Pythium Root Rot	*Pythium sp.*
3	**Total for Larkspur**	
Lavender		
3	Fusarium Root Rot	*Fusarium sp.*
1	Insufficient Sample	
5	Phytophthora Root Rot	*Phytophthora nicotianae*
2	Rhizoctonia Root Rot	*Rhizoctonia sp.*
11	**Total for Lavender**	
Lily-of-the-valley		
1	Anthracnose	*Colletotrichum sp.*
1	**Total for Lily-of-the-valley**	

Liriope		
2	Anthracnose	*Colletotrichum sp.*
1	Fusarium Crown and Leaf Rot	*Fusarium sp.*
1	Fusarium Root Rot	*Fusarium sp.*
1	Thrips	
5	**Total for Liriope**	
Lisianthus		
1	Abiotic Problem	
1	Fusarium Crown and Stem Rot	*Fusarium sp.*
2	Fusarium Root Rot	*Fusarium sp.*
2	Suspect Thrips	
6	**Total for Lisianthus**	
Lobelia		
1	Abiotic Problem	
1	Suspect Chemical Injury	
2	**Total for Lobelia**	
Orchid		
1	Cymbidium Mosaic Virus	
1	No Pathogens Found	
1	Odontoglossum Ringspot Virus	
3	**Total for Orchid**	
Orlaya		
1	Web Blight	*Rhizoctonia solani*
1	**Total for Orlaya**	
Pachysandra		
1	Volutella Blight	*Volutella pachysandrae*
1	**Total for Pachysandra**	
Pansy		
3	Abiotic Problem	
5	Black Root Rot	*Thielaviopsis basicola*
2	Physiological Leaf Spotting	
1	Pythium Root Rot	*Pythium sp.*
11	**Total for Pansy**	

Penstemon		
2	Pythium Root Rot	*Pythium sp.*
2	**Total for Penstemon**	

Peony		
4	Measles	*Graphiopsis chlorocephala*
1	Suspect Tobacco Rattle Virus	
5	**Total for Peony**	

Periwinkle		
1	Phoma Dieback	*Phoma sp.*
1	Phomopsis Dieback	*Phomopsis lirella*
2	**Total for Periwinkle**	

Phlox		
1	Four-lined Plant Bugs	
1	Healthy	
1	Thrips	
3	**Total for Phlox**	

Physostegia		
1	Suspect Chemical Injury	
1	**Total for Physostegia**	

Plumbago		
1	Insufficient Sample	
1	**Total for Plumbago**	

Primrose		
1	Abiotic Problem	
1	**Total for Primrose**	

Purple Lovegrass		
1	Curvularia Leaf Spot	*Curvularia sp.*
1	**Total for Purple Lovegrass**	

Ranunculus		
2	Abiotic Problem	
1	Botrytis Blight	*Botrytis sp.*
1	Pythium Root Rot	*Pythium sp.*
4	**Total for Ranunculus**	
Rudbeckia		
1	Downy Mildew	*Plasmopara halstedii*
1	Rhizoctonia Stem Rot	*Rhizoctonia solani*
1	Septoria Leaf Spot	*Septoria rudbeckiae*
3	**Total for Rudbeckia**	
Salvia		
1	Bacterial Leaf Spot	*Pseudomonas cichorii*
1	**Total for Salvia**	
Sedum		
1	Fusarium Stem Rot	*Fusarium sp.*
1	**Total for Sedum**	
Snapdragon		
1	Insufficient Sample	
1	Thrips	
2	**Total for Snapdragon**	
Solomon's Seal		
1	Soft Rot	*Pectobacterium carotovora*
1	**Total for Solomon's Seal**	
Sunflower		
2	Alternaria Leaf and Stem Spot	*Alternariaster helianthi*
1	Insects	
3	**Total for Sunflower**	
Verbena		
1	Abiotic Problem	
1	**Total for Verbena**	

Veronica		
1	Septoria Leaf Spot	*Septoria veronicae*
1	**Total for Veronica**	
Wallflower		
1	Bacterial Blight	*Xanthomonas axonopodis*
1	**Total for Wallflower**	
Zinnia		
1	Alternaria Blight	*Alternaria zinniae*
1	No Pathogens Found	
1	Tomato Spotted Wilt Virus	
3	**Total for Zinnia**	

Small Fruits		
Blackberry		
1	Cane Blight	*Paraconiothyrium fuckellii*
1	Mites	
1	Poor Pollination	
3	**Total for Blackberry**	
Blueberry		
1	Abiotic Problem	
1	Botryosphaeria Stem Canker	*Botryosphaeria sp.*
1	No Pathogens Found	
2	Suspect Cultural Problem	
1	Suspect Hail Injury	
6	**Total for Blueberry**	
Grape		
1	Black Rot	*Guignardia bidwellii*
1	Botryosphaeria Canker	*Botryosphaeria sp.*
1	Grape Root Borer	*Vitacea polistiformes*
29	Pierce's Disease	*Xylella fastidiosa*
1	Sour Rot	
1	Suspect Cultural Problem	
1	Suspect Nutrient Deficiency	
35	**Total for Grape**	
Raspberry		
1	Insufficient Sample	
2	No Pathogens Found	
1	Suspect Nutrient Deficiency	
4	**Total for Raspberry**	

Strawberry		
2	Abiotic Problem	
1	Anthracnose	*Collectotrichum sp.*
1	Charcoal Rot	*Macrophomina phaseolina*
1	Dendrophoma Leaf Blight	*Dendrophoma obscurans*
1	Gray Mold	*Botrytis cinerea*
1	Insects	
1	Low pH	
1	Mites	
1	No Pathogens Found	
1	Phomopsis Leaf Blight	*Phomopsis obscurans*
1	Rhizoctonia Root Rot	*Rhizoctonia solani*
1	Suspect Chemical Injury	
1	Suspect Cultural Problem	
1	Thrips	
1	Web Blight	*Rhizoctonia solani*
16	**Total for Strawberry**	

Tree Fruits and Nuts		
Apple		
1	Abiotic Problem	
1	Black Rot	*Diplodia seriata*
1	Burrknot	
4	Cedar-Apple Rust	*Gymnosporangium juniperi-virginianae*
1	Cultural Problem	
2	Fly Speck	*Schizothyrium pomi*
3	Frogeye Leaf Spot	*Diplodia seriata*
1	Insects	
1	Marssonina Blotch	*Marssonina coronaria*
1	Mechanical Injury	
3	Scab	*Venturia inaequalis*
1	Sooty Blotch	*Gloeodes pomigena*
2	Woolly Apple Aphids	
22	**Total for Apple**	
Asian Pear		
1	Sooty Mold	
1	**Total for Asian Pear**	
Cherry		
1	Borers	
1	Insufficient Sample	
1	Suspect Borers	
3	**Total for Cherry**	
Chestnut		
1	Abiotic Problem	
1	Low pH	
2	**Total for Chestnut**	
Nectarine		
1	Abiotic Problem	
1	**Total for Nectarine**	
Pawpaw		
1	Anthracnose	*Colletotrichum sp.*
1	Nitrogen Deficiency	
2	**Total for Pawpaw**	

Peach		
1	Leucostoma Canker	*Leucostoma sp./spp.*
1	Physiological Leaf Spot	
2	**Total for Peach**	

Pear		
1	Cedar-Quince Rust	*Gymnosporangium clavipes*
1	Coniothyrium Leaf Spot	*Coniothyrium sp.*
1	Cultural Problem	
1	Insects	
1	Insufficient Sample	
1	Mites	
6	**Total for Pear**	

Pecan		
1	Gnomonia Leaf Spot	*Gnomonia dispora*
1	Pops	
1	Scales	
1	Sooty Mold	
4	**Total for Pecan**	

Plum		
1	Aphids	
1	Cause of Problem Undetermined	
1	Leaf blight and spot; Shothole	*Blumeriella jaapii*
3	**Total for Plum**	

Trees		
Arborvitae		
1	Cause of Problem Undetermined	
1	Chemical Injury	
2	Insufficient Sample	
5	Mites	
1	Pestalotiopsis Needle Blight	*Pestalotiopsis sp.*
1	Root or Soil Problem	
2	Seasonal Needle Drop	
1	Suspect Abiotic Problem	
1	Suspect Chemical Injury	
1	Suspect Root Problem	
16	**Total for Arborvitae**	
Autumn Olive		
1	Gummosis	
1	**Total for Autumn Olive**	
Beech		
1	Beech Bark Disease	*Nectria sp.*
1	Environmental Stress	
2	**Total for Beech**	
Black Gum		
1	Anthracnose	*Colletotrichum acutatum*
1	Felt Fungus	*Septobasidium fumigatum*
1	Wood Decay	
3	**Total for Black Gum**	
Buckeye		
1	Suspect Abiotic Problem	
1	**Total for Buckeye**	

Cherry		
1	Botryosphaeria Canker	*Botryosphaeria dothidea*
1	Environmental Stress	
1	Girdling Roots	
1	Insects	
1	Lichens	
1	Suspect Leucostoma Canker	*Leucostoma sp.*
6	**Total for Cherry**	

Chestnut		
1	Insects	
1	**Total for Chestnut**	

Crabapple		
1	Chemical Residue	
1	**Total for Crabapple**	

Cryptomeria		
1	Mites	
1	Pestalotiopsis Tip Blight	*Pestalotiopsis sp.*
2	**Total for Cryptomeria**	

Cypress		
1	Environmental Stress	
1	Seiridium Canker	*Seiridium sp.*
2	**Total for Cypress**	

Dogwood		
1	Abiotic Problem	
1	Powdery Mildew	*Oidium sp.*
1	Root Problem	
1	Septoria Leaf Spot	*Septoria sp.*
1	Spot Anthracnose	*Elsinoe corni*
1	Suspect Chemical Injury	
1	Suspect Cultural Problem	
1	Wood Decay	
8	**Total for Dogwood**	

Eastern Red Cedar		
1	Cause of Problem Unknown	
1	Cedar-Quince Rust	*Gymnosporangium clavipes*
1	Insects	
1	Mites	
1	No Pathogens Found	
1	Phytophthora Root Rot	*Phytophthora cinnamomi*
1	Suspect Abiotic Problem	
7	**Total for Eastern Red Cedar**	

Elm		
1	Black Spot	*Stegophora ulmea*
1	Mites	
1	Suspect Abiotic Problem	
1	Suspect Elm Yellows	*Candidatus Phytoplasma ulmi*
4	**Total for Elm**	

Falsecypress		
2	Mites	
1	Normal Needle Senescence	
3	**Total for Falsecypress**	

Fir		
2	Abiotic Problem	
2	J-rooted	
1	Mechanical Injury	
1	Phomopsis Canker	*Phomopsis sp.*
1	Phytophthora Root Rot	*Phytophthora cinnamomi*
1	Root or Soil Problem	
2	Weevils	
10	**Total for Fir**	

Fringe Tree		
1	Botryosphaeria Dieback	*Botryosphaeria sp.*
1	Lichens	
1	Suspect Hail Injury	
1	Suspect Wood Decay	
4	**Total for Fringe Tree**	

Ginkgo		
1	Suspect Abiotic Problem	
1	**Total for Ginkgo**	
Hawthorn		
1	Cedar-Quince Rust	*Gymnosporangium clavipes*
1	**Total for Hawthorn**	
Hemlock		
1	No Pathogens Found	
1	**Total for Hemlock**	
Honeylocust		
1	Insects	
1	**Total for Honeylocust**	
Live Oak		
1	Unable to Diagnose	
1	**Total for Live Oak**	
London Planetree		
1	Environmental Stress	
1	**Total for London Planetree**	
Magnolia		
1	Bacterial Wetwood	
1	Deep Planting	
1	Insects	
2	Sapsucker Injury	
1	Seasonal Leaf Drop	
1	Suspect Cold Injury	
1	Suspect Wood Decay	
8	**Total for Magnolia**	

Maple		
1	Abiotic Problem	
1	Botryosphaeria Dieback	*Botryosphaeria sp.*
1	Canker Rot	*Cerrena unicolor*
1	Freeze Damage	
2	Frost injury	
2	Girdling Roots	
2	Insufficient Sample	
1	Leafhoppers	
1	Lightning Injury	
2	No Pathogens Found	
1	Powdery Mildew	*Oidium sp.*
2	Purple-eye Leaf Spot	*Phyllosticta minima*
1	Sapsucker Injury	
2	Scales	
1	Suspect Cultural Problem	
1	White Rot	*Irpex lacteus*
1	Wood Decay	
23	**Total for Maple**	

Oak		
2	Anthracnose	*Apiognomonia sp.*
5	Bacterial Scorch	*Xylella fastidiosa*
1	Bacterial Wetwood	
1	Felt Fungus	*Septobasidium sp.*
1	Insect Galls	
2	Insufficient Sample	
1	No Pathogens Found	
1	Oak Leaf Blister	*Taphrina caerulescens*
2	Oak Leaf Button Galls	
1	Squirrel Twig Pruning	
1	Suspect Bacterial Wetwood	
1	Suspect Chemical Injury	
2	Suspect Environmental Stress	
1	Suspect Hypoxylon Canker	*Hypoxylon sp.*
1	Suspect Sapwood Rot	
1	Suspect Wood Decay	
1	Tubakia Leaf Spot	*Tubakia dryina*
1	Wood Decay	
26	**Total for Oak**	

Ornamental Cherry		
1	Cherry Leaf Spot	*Blumeriella jaapii*
1	Insufficient Sample	
1	Suspect Insects	
3	**Total for Ornamental Cherry**	

Ornamental Pear		
2	Cedar-Quince Rust	*Gymnosporangium clavipes*
1	Pear Leaf Blister Mites	*Eriphyes pyri*
3	**Total for Ornamental Pear**	

Pine		
1	Cultural Problem	
1	Insufficient Sample	
2	Scales	
2	Suspect Environmental Stress	
1	Suspect Procerum Root Disease	*Leptographium procerum*
7	**Total for Pine**	

Prunus		
1	Physiological Shothole	
1	**Total for Prunus**	

Redbud		
1	Abiotic Problem	
1	Cause of Problem Undetermined	
1	Environmental Stress	
1	No Pathogens Found	
4	**Total for Redbud**	

Sassafras		
1	Abiotic Problem	
1	Laurel Wilt	*Raffaelea lauricola*
2	**Total for Sassafras**	

Spruce		
1	Beetles	
3	Cytospora Canker	*Cytospora kunzei*
1	Lichens	
2	Mites	
1	No Pathogens Found	
1	Rhizosphaera Needle Cast	*Rhizosphaera kalkhoffii*
2	Suspect Cytospora Canker	*Cytospora sp.*
1	Suspect Mechanical Injury	
12	**Total for Spruce**	
Sycamore		
2	Bacterial Scorch	*Xylella fastidiosa*
1	Environmental Stress	
3	**Total for Sycamore**	
Tree, Unknown		
1	Insufficient Sample	
1	**Total for Tree, Unknown**	
Tulip Tree		
1	Sooty Mold	
1	**Total for Tulip Tree**	
Willow		
1	Suspect Botryosphaeria Canker	*Botryosphaeria dothidea*
1	**Total for Willow**	

Turf		
Bermudagrass		
1	Bipolaris Leaf Spot and Crown Rot	*Bipolaris cynodontis*
1	Take-All Root Rot	*Gaeumannomyces graminis*
2	**Total for Bermudagrass**	
Fescue		
1	Brown Patch	*Rhizoctonia solani*
1	Suspect Environmental Stress	
2	**Total for Fescue**	
St. Augustinegrass		
1	Take-All	*Gaeumannomyces graminis var. graminis*
1	**Total for St. Augustinegrass**	
Turfgrass		
2	Brown Patch	*Rhizoctonia solani*
1	Cultural Problem	
1	Red Thread	*Laetisaria fuciformis*
4	**Total for Turfgrass**	

Unknown		
Unknown Outdoor Plant		
1	Insufficient Sample	
1	**Total for Unknown Outdoor Plant**	

Vegetables and Herbs		
Basil		
2	Impatiens Necrotic Spot Virus	
2	**Total for Basil**	

Bean		
1	Alternaria Leaf and Pod Spot	*Alternaria alternata*
1	Anthracnose	*Colletotrichum lindemuthianum*
1	Beetles	
1	Chemical Injury	
1	Environmental Stress	
1	Fusarium Root Rot	*Fusarium solani*
1	Leafhoppers	
1	Pythium Root Rot	*Pythium sp.*
1	Suspect Alternaria Leaf and Pod Spot	*Alternaria sp.*
9	**Total for Bean**	

Cabbage		
1	Physiological Problem	
1	Wirestem	*Rhizoctonia solani*
2	**Total for Cabbage**	

Collards		
1	Suspect Abiotic Problem	
1	**Total for Collards**	

Cucumber		
1	Anthracnose	*Colletotrichum sp.*
1	Downy Mildew	*Pseudoperonospora cubensis*
1	Fusarium Foot Rot	*Fusarium solani*
1	Fusarium Root and Stem Rot	*Fusarium oxysporum*
1	Suspect Chemical Injury	
5	**Total for Cucumber**	

Eggplant		
1	Thrips	
1	**Total for Eggplant**	

Garlic		
1	Bulb Mites	
1	Dry Bulb Mite	*Aceria sp.*
1	Insects	
3	**Total for Garlic**	

Lettuce		
1	Insufficient Sample	
1	No Pathogens Found	
1	Physiological Leaf Spot	
1	Pythium Root Rot	*Pythium sp./spp.*
4	**Total for Lettuce**	

Melon		
1	Bacterial Fruit Blotch	*Acidovorax avenae*
1	**Total for Melon**	

Onion		
1	Fusarium Basal Plate Rot	*Fusarium sp.*
1	Insects	
1	Low Soluble Salts	
1	Nutrient Deficiency	
1	Thrips	
5	**Total for Onion**	

Parsley		
1	Insects	
1	**Total for Parsley**	

Pepper		
3	Bacterial Spot	*Xanthomonas campestris pv. vesicatoria*
1	Bacterial Spot	*Xanthomonas perforans*
1	Bacterial Spot	*Xanthomonas sp.*
1	Flower and Flower Bud Drop	
1	Insects	
2	Thrips	
1	Tomato Spotted Wilt Virus	
10	**Total for Pepper**	
Potato		
2	Environmental Stress	
1	No Pathogens Found	
1	Potato Leafhoppers	
4	**Total for Potato**	
Pumpkin		
1	Cucumber Beetles	
1	Phytophthora Fruit Rot	*Phytophthora capsici*
1	Suspect Chemical Injury	
3	**Total for Pumpkin**	
Radish		
1	Insects	
1	Soft Rot	*Pectobacterium carotovora*
2	**Total for Radish**	
Rhubarb		
1	Unspecified Pathology	*Didymella sp.*
1	**Total for Rhubarb**	
Rosemary		
1	Adventitious Roots	
1	Insufficient Sample	
1	Mites	
1	Phytophthora Root Rot	*Phytophthora nicotianae*
1	Pythium Root Rot	*Pythium sp.*
5	**Total for Rosemary**	

Sage		
1	Pythium Root Rot	*Pythium sp.*
1	**Total for Sage**	
Spinach		
1	Abiotic Problem	
1	**Total for Spinach**	
Sweet Corn		
1	Suspect Nutrient Deficiency	
1	**Total for Sweet Corn**	
Tomato		
2	Abiotic Problem	
1	Bacterial Spot	*Xanthomonas perforans*
4	Chemical Injury	
2	Early Blight	*Alternaria solani*
1	Environmental Stress	
1	Fusarium Crown and Root Rot	*Fusarium sp.*
1	Ghost Spot	*Botrytis cinerea*
1	High pH	
1	Insects	
4	Insufficient Sample	
2	Low pH	
1	Magnesium Deficiency	
1	Nematodes	
2	No Pathogens Found	
1	Phoma Rot	*Phoma destructiva*
1	Russet Mites	
1	Septoria Leaf Spot	*Septoria lycopersici*
2	Suspect Chemical Injury	
1	Suspect Cold Injury	
1	Suspect Mite Damage	
1	Suspect Nutrient Deficiency	
1	Suspect Physiological Problem	
1	Suspect Virus Disease	
1	Tomato Spotted Wilt Virus	
35	**Total for Tomato**	

Vegetables, Miscellaneous	
4	Chemical Injury
1	Cultural Problem
1	Environmental Stress
1	Low pH
1	No Pathogens Found
1	Nutrient Deficiency
9	**Total for Vegetables, Miscellaneous**

Weeds		
Milkweed		
1	Mites	
1	Suspect Chemical Injury	
2	**Total for Milkweed**	

Wild Plants		
Alder		
1	Sooty Mold	*Scorias spongiosa*
1	**Total for Alder**	

Woody Ornamentals		
Aucuba		
2	Suspect Cultural Problem	
2	**Total for Aucuba**	

Azalea		
1	Cause of Problem Undetermined	
1	Lichens	
1	Phomopsis Dieback	*Phomopsis sp.*
1	Phytophthora Root Rot	*Phytophthora cinnamomi*
1	Suspect Chemical Injury	
1	Suspect Ovulinia Petal Blight	*Ovulinia azaleae*
6	**Total for Azalea**	

Boxwood		
2	Abiotic Problem	
15	Boxwood Blight	*Calonectria pseudonaviculata*
1	Cause of Problem Undetermined	
1	Cold Injury	
6	English Boxwood Decline	*Paecilomyces buxi*
5	Environmental Stress	
7	Insufficient Sample	
5	Leafminers	
6	Macrophoma Leaf Spot	*Macrophoma candollei*
18	Mites	
1	Nematodes	
1	No Pathogens Found	
1	Psyllids	
4	Root Problem	
1	Suspect Abiotic Problem	
1	Suspect Boxwood Blight	*Calonectria pseudonaviculata*
1	Suspect Chemical Injury	
4	Suspect Root Problem	
7	Volutella Blight	*Volutella buxi*
1	Wood Decay	
88	**Total for Boxwood**	

Burning Bush	
1	Insufficient Sample
1	Scales
2	**Total for Burning Bush**

Butterfly Bush		
1	Cold Injury	
1	Downy Mildew	*Peronospora sp.*
1	Mites	
3	**Total for Butterfly Bush**	

Camellia		
1	Algal Leaf Spot	*Cephaleuros virescens*
1	Anthracnose	*Colletotrichum gloeosporioides*
1	Eriophyid Mites	
1	Normal Condition	
1	Oedema	
1	Scales	
1	Suspect Fungal Leaf Spot	
7	**Total for Camellia**	

Cherrylaurel		
1	Black Vine Weevils	
1	Borers	
1	Botryosphaeria Dieback	*Botryosphaeria dothidea*
2	Phytophthora Root Rot	*Phytophthora cinnamomi*
1	Scales	
1	Suspect Cultural Problem	
7	**Total for Cherrylaurel**	

Cotoneaster		
1	Insufficient Sample	
1	Web Blight	*Rhizoctonia solani*
2	**Total for Cotoneaster**	

Crape Myrtle		
1	Cercospora Leaf Spot	*Cercospora sp.*
1	Insects	
1	Suspect Abiotic Problem	
1	Suspect Frost Injury	
4	**Total for Crape Myrtle**	

Dogwood		
1	Cause of Problem Undetermined	
1	**Total for Dogwood**	

Euonymus		
1	Chemical Injury	
1	Powdery Mildew	*Oidium sp.*
2	**Total for Euonymus**	

Filbert		
1	Suspect Eastern Filbert Blight	*Anisogramma coryli*
1	**Total for Filbert**	
Fothergilla		
1	Abiotic Problem	
1	**Total for Fothergilla**	
Gardenia		
1	Insects	
1	Suspect Frost Injury	
2	**Total for Gardenia**	
Hibiscus		
1	Pythium Root Rot	*Pythium sp.*
2	Suspect Cultural Problem	
3	**Total for Hibiscus**	
Holly		
6	Black Root Rot	*Thielaviopsis basicola*
1	Cause of Problem Undetermined	
1	Chemical Injury	
1	Environmental Stress	
1	Insects	
1	Insufficient Sample	
1	No Pathogens Found	
1	Phyllosticta Leaf Spot	*Phyllosticta sp.*
1	Sapsucker Injury	
1	Scales	
1	Sooty Mold	
3	Suspect Black Root Rot	*Thielaviopsis basicola*
1	Suspect Botryosphaeria Canker	*Botryosphaeria sp.*
1	Suspect Botryosphaeria Dieback	*Botryosphaeria sp.*
1	Suspect Chemical Injury	
1	Suspect Cultural Problem	
1	Wood Decay	
24	**Total for Holly**	

Honeysuckle		
1	Aphids	
1	**Total for Honeysuckle**	

Hydrangea		
1	Environmental Stress	
1	Insufficient Sample	
1	No Pathogens Found	
1	Suspect Chemical Injury	
4	**Total for Hydrangea**	

Japanese Plum Yew		
1	Phoma Dieback	*Phoma sp.*
1	**Total for Japanese Plum Yew**	

Juniper		
1	Insufficient Sample	
1	Kabatina Tip Blight	*Kabatina juniperi*
2	Mites	
1	Normal Condition	
4	Suspect Cultural Problem	
1	Suspect Environmental Stress	
1	Suspect Vole Injury	
11	**Total for Juniper**	

Leucothoe		
1	Leaf and Flower Gall	*Exobasidium vaccinii*
1	**Total for Leucothoe**	

Lilac		
1	Fungal Leaf Spot-Unidentified Pathogen	
2	Insufficient Sample	
1	No Pathogens Found	
2	Septoria Leaf Spot	*Septoria sp.*
6	**Total for Lilac**	

Mountain Laurel		
1	Insects	
2	Phytophthora Root Rot	*Phytophthora cinnamomi*
1	Potbound	
1	Suspect Cultural Problem	
5	**Total for Mountain Laurel**	
Nandina		
1	Abiotic Problem	
1	Suspect Chemical Injury	
1	Suspect Cultural Problem	
3	**Total for Nandina**	
Osmanthus		
1	Suspect Botryosphaeria Dieback	*Botryosphaeria sp.*
1	**Total for Osmanthus**	
Pieris		
1	Lacebugs	
1	**Total for Pieris**	
Plants, Miscellaneous		
1	Suspect Chemical Injury	
1	**Total for Plants, Miscellaneous**	
Rhododendron		
1	Suspect Chemical Injury	
1	Suspect Phytophthora Root Rot	*Phytophthora sp.*
2	**Total for Rhododendron**	
Rose		
1	Abiotic Problem	
2	Suspect Chemical Injury	
3	**Total for Rose**	
Snowball Bush		
1	Aphids	
1	**Total for Snowball Bush**	

Spirea		
1	Powdery Mildew	*Oidium sp.*
1	**Total for Spirea**	

Sweetspire		
1	Abiotic Problem	
1	Anthracnose	*Colletotrichum sp.*
1	Scales	
3	**Total for Sweetspire**	

Viburnum		
1	Aphids	
1	Insects	
1	Pestalotia	*Pestalotia sp.*
1	Suspect Chemical Injury	
1	Suspect Cultural Problem	
1	Suspect Environmental Stress	
6	**Total for Viburnum**	

Yew		
1	Abiotic Problem	
1	Insects	
1	Suspect Chemical Injury	
1	Web Blight	*Rhizoctonia solani*
4	**Total for Yew**	

Identification Appendix

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1. Higher Plants

Family: Asclepiadaceae	
Asclepias syriaca	Common Milkweed
Family: Brassicaceae	
Raphanus raphanistrum	Wild Radish

2. Fungi

Family: Gasteromycetes	
Lycoperdon sp.	Puffball
Family: Pezizaceae	
Chromelosporium sp.	Chromelosporium

3. Other

Unable to Identify (2)