



# College of Agriculture, Food and Environment

*Plant Pathology*

## **Plant Disease Diagnostic Laboratory Summary**

# **2018**

*by:*

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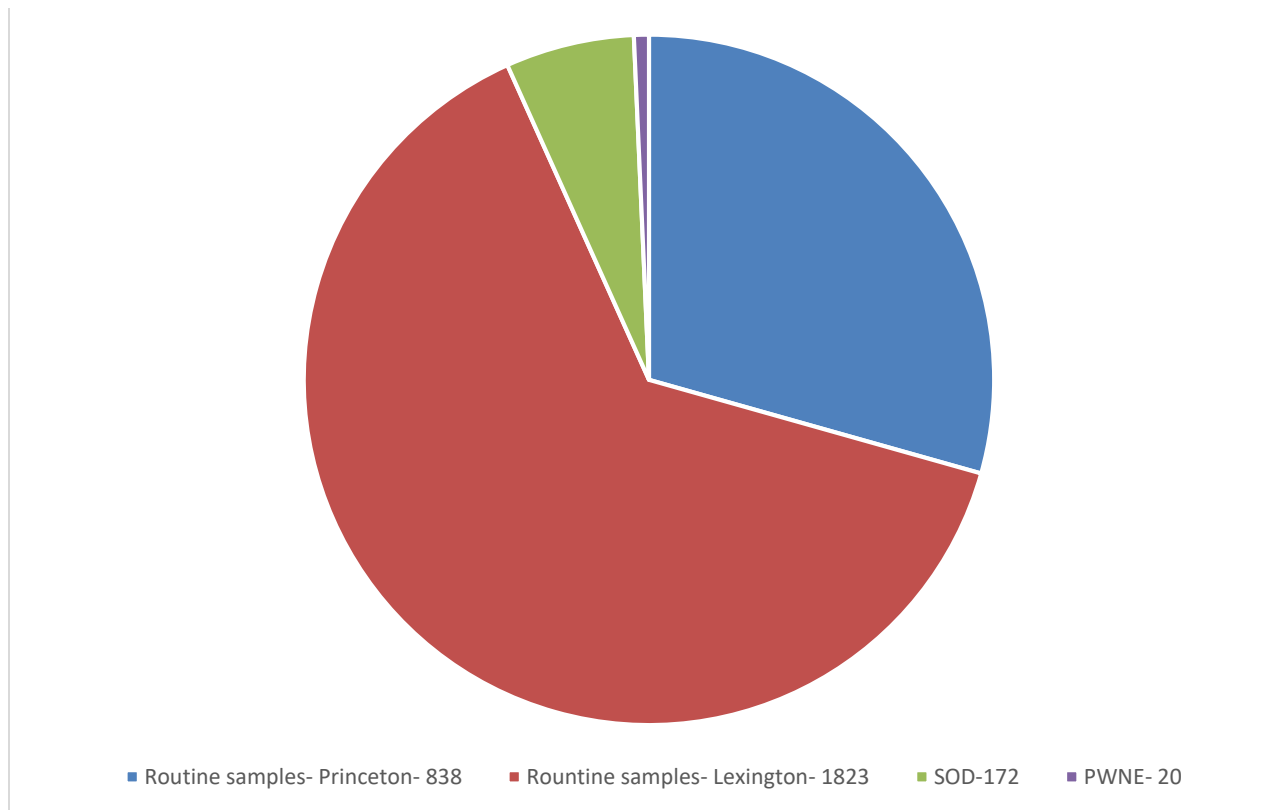
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## INTRODUCTION

The Plant Disease Diagnostic Laboratory (Lexington and Princeton) processed 2853 plant samples. Many plant samples had more than one problem which added an additional 791 diagnoses, bringing the total number of diagnoses to 3644. The Lexington Laboratory diagnosed 2015 specimens, including 1823 routine plant samples, 172 samples from commercial nurseries surveyed for the Sudden Oak Death (SOD) pathogen, and 20 Eastern red cedar (*Juniperus virginiana*) samples from commercial lumber companies for pinewood nematode extraction (PWNE). The Princeton Laboratory diagnosed 838 routine plant specimens. Sample totals are summarized in Figure 1 below.

**Figure 1: Plant Disease Diagnostic Laboratory – 2018**



<b>Total Samples</b>	<b>2853</b>
<b>+ <u>Additional diagnoses</u></b>	<b><u>791</u></b>
	<b>3644</b>

## NATURE OF WORK

Plant disease diagnosis is an ongoing educational and research activity of the U.K. Department of Plant Pathology. There are two branches of the Plant Disease Diagnostic Laboratory (PDDL), one on the U.K. campus in Lexington, and one at the U.K. Research and Education Center in Princeton.

Diagnosis of plant diseases requires keen observation and investigation into the possible causes of plant problems. Most visual diagnoses involve microscopy to determine which plant parts are affected and to identify the pathogen(s) involved. In addition, many specimens require special tests such as moist chamber incubation, pathogen isolation from plant tissue, enzyme-linked immunosorbent assay (ELISA), nematode extraction, or soil pH and soluble salts tests. The laboratory uses the polymerase-chain-reaction (PCR) technique for identification of certain pathogens.

A database of laboratory records is maintained to provide information used for conducting plant disease surveys, identifying new disease outbreaks, and formulating educational programs. In addition, information from the laboratory provides the basis for timely news of plant disease problems through the Kentucky Pest News newsletter, social media, radio, television, and plant health care workshops. Both laboratories report diagnoses of plant diseases to USDA-APHIS as part of the National Plant Diagnostic Network.

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## EXPLANATORY REMARKS

In 2018 we continued to use the PCLinic database system. This system allows us to record all pathogens, insects and other disorders observed on each plant sample. The main body of this report (Table 9) consists of three columns, the first contains the total number of diagnoses, followed by columns for the diagnosis and causal agent.

Referrals and consultations: Insect problems were generally identified or verified by a specialist in the Entomology Department. Chemical injuries on all commercially grown crops were diagnosed by a weed control specialist or crop specialist. Specialists in other departments at UK also may have provided input on diagnoses of abiotic problems.

**Table 1. SUMMARY OF DIAGNOSES<sup>a</sup> BY CROP CATEGORY AND CAUSAL AGENT TYPE**

<b>Crop Category</b>	<b>Abiotic Problems</b>	<b>Biotic<sup>b</sup> Problems</b>	<b>Chemical Injury</b>	<b>Inadequate Specimen</b>	<b>Insect Injury</b>	<b>Other<sup>c</sup></b>	<b>Total Diagnoses</b>
<b>Agronomic</b>							
Corn	27	31	2	1	3	5	69
Forages	18	41	1	0	11	3	74
Hemp	10	31	1	2	4	3	51
Small grains	0	47	2	2	0	3	54
Soybeans	23	95	25	2	2	7	154
Tobacco	70	190	21	2	1	15	299
<b>Fruit</b>							
Small fruit	24	90	6	6	17	10	153
Tree fruit	21	95	2	3	25	7	153
<b>Herbs</b>	4	20	0	0	2	8	34
<b>Identifications</b>	0	10	0	0	0	1	11
<b>Ornamentals</b>							
Herbaceous/ Houseplants	61	192	2	8	28	28	319
Turfgrass	17	74	0	3	0	2	96
Woody	269	727 <sup>d</sup>	39	15	203	305 <sup>d</sup>	1558
<b>Vegetables</b>	130	321	34	22	39	60	606
<b>Miscellaneous</b>	0	5	0	3	0	5	13
<b>Total</b>	<b>674</b>	<b>1969</b>	<b>135</b>	<b>69</b>	<b>335</b>	<b>462</b>	<b>3644</b>

<sup>a</sup>Counts and totals include all diagnoses entered into the PDDL database.

<sup>b</sup>Refer to Table 2 for further breakdown of this category.

<sup>c</sup>Includes the causal agent categories: No disease and Unknown.

<sup>d</sup>Totals include 172 SOD survey samples (29 fungal disease diagnoses; 143 samples with no disease) and 20 PWNE juniper with no disease.

**Table 2. SUMMARY OF BIOTIC PROBLEMS<sup>a</sup> BY CROP CATEGORY**

<b>Crop Category</b>	<b>Bacterial</b>	<b>Fungal</b>	<b>Nematode</b>	<b>Virus</b>	<b>Other<sup>b</sup></b>
<b>Agronomic</b>					
Corn	0	31	0	0	0
Forages	0	38	1	2	0
Hemp	1	30	0	0	0
Small grains	3	33	0	11	0
Soybeans	0	89	6	0	0
Tobacco	41	137	0	12	0
<b>Fruit</b>					
Small fruit	1	86	0	2	1
Tree fruit	12	81	0	0	2
<b>Herbs</b>					
	1	18	1	0	0
<b>Identifications</b>					
	0	8	0	0	2
<b>Ornamentals</b>					
Herbaceous/ Houseplants	11	177	3	1	0
Turfgrass	0	74	0	0	0
Woody	40	675 <sup>c</sup>	0	4	8
<b>Vegetables</b>					
	39	255	10	17	0
<b>Miscellaneous</b>					
	0	3	2	0	0
<b>Total</b>	<b>149</b>	<b>1735</b>	<b>23</b>	<b>49</b>	<b>13</b>

<sup>a</sup>Counts and totals include all diagnoses entered into the PDDL database.

<sup>b</sup>Includes these categories: Animal (rodent and bird damage), Plant (plant identifications or parasitic plant) and Alga, Lichen and Phytoplasma.

<sup>c</sup>Total includes 29 Sudden Oak Death (SOD) survey samples with problems caused by fungi.

**Table 3. NUMBER OF ROUTINE PLANT SAMPLES AND DIAGNOSES BY CROP**

<b>Crop Category and Crop</b>	<b>No. of Samples</b>	<b>% Total Samples</b>	<b>No. of Diagnoses</b>	<b>% Total Diagnoses</b>
<b>Agronomic</b>				
Corn	49	1.72	69	1.89
Forages	50	1.75	74	2.03
Hemp	43	1.51	51	1.40
Small grains	37	1.30	54	1.48
Soybeans	102	3.58	154	4.23
Tobacco	238	8.34	299	8.21
<b>Fruit</b>				
Small fruit	118	4.14	153	4.20
Tree fruit	109	3.82	153	4.20
<b>Herbs</b>	29	1.02	34	0.93
<b>Identifications</b>	11	0.39	11	0.30
<b>Ornamentals</b>				
Herbaceous and Houseplants	255	8.94	319	8.75
Turfgrass	77	2.70	96	2.63
Woody <sup>a</sup>	1236	43.32	1558	42.76
<b>Vegetables</b>	487	17.07	606	16.63
<b>Miscellaneous</b>	12	0.42	13	0.36
<b>Total</b>	<b>2853</b>	<b>100</b>	<b>3644</b>	<b>100</b>

<sup>a</sup>Includes 172 SOD survey samples and 20 PWNE juniper samples.

**Table 4. SUMMARY OF ROUTINE SAMPLES RECEIVED BY  
GROWER TYPE AND CROP CATEGORY**

Crop Group	Grower Type							
	Commercial		Homeowner		Research		Institution	
	Ext <sup>a</sup>	NE <sup>b</sup>	Ext <sup>a</sup>	NE <sup>b</sup>	Ext <sup>a</sup>	NE <sup>b</sup>	Ext <sup>a</sup>	NE <sup>b</sup>
<b>Agronomic</b>								
Corn	34	9	0	0	6	0	0	0
Forages	43	2	0	0	0	5	0	0
Hemp	21	18	0	0	0	4	0	0
Small grains	25	8	0	0	1	3	0	0
Soybeans	80	9	0	0	1	12	0	0
Tobacco	207	30	0	0	0	1	0	0
<b>Fruit</b>								
Small Fruit	46	2	51	2	15	0	2	0
Tree Fruit	30	4	70	3	1	0	1	0
<b>Herbs</b>	24	2	3	0	0	0	0	0
<b>Identifications</b>	0	0	9	1	0	1	0	0
<b>Ornamental</b>								
Herbaceous/ Houseplants	149	35	48	4	0	1	14	4
Turfgrass	13	16	41	2	0	1	1	3
Woody	113	296	593	15	0	0	27	192
<b>Vegetable</b>	283	15	169	2	5	4	9	0
<b>Miscellaneous</b>	4	1	1	1	0	5	0	0
<b>Total</b>	<b>1072</b>	<b>447</b>	<b>985</b>	<b>30</b>	<b>29</b>	<b>37</b>	<b>54</b>	<b>199</b>
<b>Total Grower Type</b>	<b>1519</b>		<b>1015</b>		<b>66</b>		<b>253</b>	
<b>Total No. of routine samples received = 2853</b>								

<sup>a</sup>Ext = Extension samples submitted via County Extension Agents or Extension Specialists.

<sup>b</sup>NE = Non-extension samples submitted directly by the grower or other non-extension clients.



**Table 5. NUMBER OF ROUTINE SAMPLES REFERRED TO OTHER DEPARTMENTS, UK LABORATORY FACILITIES OR OUTSIDE AGENCIES FOR DIAGNOSIS OR CONSULTATION**

<b>Department, Facility or Outside Agency</b>	<b>Total</b>
Agdia, Inc.	6
Entomology Department	80
Forestry Department	1
Horticulture Department	61
Plant & Soil Sciences Department	216
Purdue University	4
<b>Total no. of sample referrals</b>	<b>368</b>
<b>Total no. of plant specimens received</b>	<b>2853</b>
<b>% of specimens referred outside Diagnostic Lab for diagnosis</b>	<b>12.9</b>

**Table 6. SPECIAL LABORATORY TESTS<sup>a</sup> PERFORMED BY PLANT DISEASE DIAGNOSTIC LABORATORY**

<b>Test</b>	<b>No. of Tests</b>
Culture	72
Incubation/Lab test	538
Microscope	2112
Molecular (PCR)	15
Nematode extraction	21 <sup>b</sup>
Serological (ELISA)	458 <sup>c</sup>
Soil tests	299
Visual examination	1712
<b>Total</b>	<b>5227</b>

<sup>a</sup>Many samples require more than one test and all tests performed in 2018 are recorded above.

<sup>b</sup>Includes 20 PWNE samples.

<sup>c</sup>Includes 172 samples for the SOD survey.

**Table 7. NO. OF ROUTINE PLANT SAMPLES RECEIVED BY COUNTY AND CROP CATEGORY (KY AND OUT-OF-STATE SOURCES)**

COUNTY	TOTAL	AGRONOMIC <sup>a</sup>	TOBACCO	FRUIT	ORNAMENTAL	VEGETABLE	OTHER
ADAIR	9	2	0	1	2	4	0
ALLEN	30	4	2	0	11	11	2
ANDERSON	13	2	0	0	10	1	0
BALLARD	8	1	0	1	3	3	0
BARREN	64	6	6	4	33	12	3
BATH	7	7	0	0	0	0	0
BELL	2	0	0	1	0	1	0
BOONE	97	0	0	3	85	7	2
BOURBON	23	9	3	0	7	4	0
BOYD	16	0	0	0	15	1	0
BOYLE	11	5	1	2	3	0	0
BRACKEN	11	0	3	0	5	3	0
BREATHITT	4	0	0	1	1	2	0
BRECKINRIDGE	43	6	12	9	9	7	0
BULLITT	7	0	0	0	6	1	0
BUTLER	17	5	0	4	6	2	0
CALDWELL							
(+UKREC)	28	10	1	7	6	3	1
CALLOWAY	44	2	17	0	22	3	0
CAMPBELL	19	0	0	0	19	0	0
CARLISLE	12	1	0	0	11	0	0
CARROLL	6	0	0	0	4	2	0
CARTER	13	0	3	0	6	4	0
CASEY	26	0	0	6	11	8	1
CHRISTIAN	107	13	21	4	42	27	0
CLARK	22	5	3	1	7	6	0
CLAY	17	0	1	0	7	9	0
CLINTON	12	5	1	1	2	3	0
CRITTENDEN	19	3	0	5	7	4	0
CUMBERLAND	12	0	0	6	6	0	0
DAVISS	90	8	9	4	49	18	2
EDMONSON	6	0	0	1	2	3	0
ELLIOTT	4	0	0	1	0	3	0
ESTILL	4	0	0	0	2	2	0
FAYETTE							
(+LEX.							
CAMPUS)	551	36	13	25	449	17	11
FLEMING	39	8	5	5	16	5	0
FLOYD	1	0	0	0	0	1	0
FRANKLIN	34	7	0	0	20	7	0
FULTON	11	2	0	0	6	3	0
GALLATIN	11	3	2	0	2	4	0
GARRARD	5	1	2	0	2	0	0
GRANT	11	0	0	2	8	1	0
GRAVES	78	9	13	10	37	7	2
GRAYSON	9	2	2	0	3	2	0
GREEN	6	1	2	0	3	0	0
GREENUP	12	0	0	1	6	5	0
HANCOCK	8	0	2	3	1	2	0
HARDIN	12	4	1	1	6	0	0
HARLAN	0	0	0	0	0	0	0
HARRISON	19	2	8	0	6	3	0
HART	27	1	3	4	11	7	1
HENDERSON	31	7	0	0	18	6	0

COUNTY	TOTAL	AGRONOMIC <sup>a</sup>	TOBACCO	FRUIT	ORNAMENTAL	VEGETABLE	OTHER
HENRY	16	2	8	2	3	1	0
HICKMAN	9	2	3	1	1	2	0
HOPKINS	38	4	0	5	27	1	1
JACKSON	17	4	1	4	8	0	0
JEFFERSON	134	0	0	4	124	6	0
JESSAMINE	50	1	2	6	31	10	0
JOHNSON	0	0	0	0	0	0	0
KENTON	24	0	0	0	16	8	0
KNOTT	3	0	0	0	3	0	0
KNOX	4	0	0	0	1	3	0
LARUE	6	1	2	1	1	1	0
LAUREL	14	1	0	2	5	6	0
LAWRENCE	1	0	0	0	1	0	0
LEE	2	0	0	0	1	1	0
LESLIE	1	0	0	0	0	1	0
LETCHER	9	1	0	2	4	2	0
LEWIS	25	4	3	3	5	10	0
LINCOLN	30	2	4	3	9	10	2
LIVINGSTON	3	1	0	0	2	0	0
LOGAN	36	25	5	1	4	1	0
LYON	10	2	2	2	4	0	0
McCRACKEN	23	2	0	1	16	4	0
McCREARY	1	0	0	1	0	0	0
McLEAN	12	3	2	1	3	3	0
MADISON	28	1	0	0	13	14	0
MAGOFFIN	4	0	0	2	1	1	0
MARION	17	4	1	1	4	7	0
MARSHALL	37	4	0	7	18	8	0
MARTIN	0	0	0	0	0	0	0
MASON	28	1	1	0	10	15	1
MEADE	18	0	0	6	9	3	0
MENIFEE	10	0	0	1	0	9	0
MERCER	13	0	0	1	9	3	0
METCALFE	12	1	5	2	3	1	0
MONROE	6	1	4	0	1	0	0
MONTGOMERY	25	1	4	1	17	2	0
MORGAN	6	0	0	1	1	4	0
MUHLENBERG	23	1	4	10	6	2	0
NELSON	23	1	1	1	19	1	0
NICHOLAS	1	0	1	0	0	0	0
OHIO	5	1	0	1	0	3	0
OLDHAM	13	1	0	0	9	3	0
OWEN	3	0	1	1	1	0	0
OWSLEY	1	0	0	0	0	1	0
PENDELTON	4	1	1	0	0	2	0
PERRY	5	0	0	0	3	2	0
PIKE	7	0	0	1	3	3	0
POWELL	1	0	0	0	1	0	0
PULASKI	32	1	1	3	11	6	10
ROBERTSON	1	0	1	0	0	0	0
ROCKCASTLE	2	1	0	0	1	0	0
ROWAN	7	0	0	4	3	0	0
RUSSELL	12	0	0	8	3	1	0
SCOTT	38	1	5	3	25	4	0
SHELBY	36	2	0	0	25	6	3
SIMPSON	19	3	2	0	11	3	0
SPENCER	2	1	0	0	1	0	0
TAYLOR	102	1	2	8	51	33	7

COUNTY	TOTAL	AGRONOMIC	TOBACCO	FRUIT	ORNAMENTAL	VEGETABLE	OTHER
TODD	41	10	18	1	2	10	0
TRIGG	37	1	4	2	9	21	0
TRIMBLE	5	1	1	0	1	1	1
UNION	3	1	0	1	0	1	0
WARREN	14	2	1	2	9	0	0
WASHINGTON	6	0	1	0	5	0	0
WAYNE	7	2	0	0	2	3	0
WEBSTER	11	3	0	2	3	3	0
WHITLEY	16	0	0	4	4	8	0
WOLFE	6	0	2	1	1	2	0
WOODFORD	25	2	5	0	11	5	2
<i>OUT-OF-STATE</i>	5	0	3	0	0	2	0
<b>TOTALS</b>	<b>2853</b>	<b>282</b>	<b>237</b>	<b>227</b>	<b>1568</b>	<b>487</b>	<b>52</b>

<sup>a</sup>Agronomic crops include corn, soybeans, forages, small grains, and hemp.

**Table 8. NUMBER OF PRIMARY DIAGNOSES AND CONSULTATIONS MADE BY UK EXTENSION SPECIALISTS AND RESEARCHERS**

Specialists/Researchers	Department	Consultations
Bailey, WA	Plant & Soil Sciences	33
Becker, DW	Horticulture	3
Berberich, SG	Horticulture	1
Bessin, RT	Entomology	38
Bradley, CA	Plant Pathology	14
Crocker, E	Forestry	1
Dunwell, WC	Horticulture	17
Dutton, SR	Horticulture	8
Fountain, WM	Horticulture	2
Gauthier, NW	Plant Pathology	17
Gonzalez, Yaziri	Entomology	1
Green, JD	Plant & Soil Sciences	36
Grove, JH	Plant & Soil Sciences	1
Knott, CA	Plant & Soil Sciences	5
Lee, CD	Plant & Soil Sciences	6
Legleiter, T	Plant & Soil Sciences	83
Neves, D	Plant Pathology	1
Pearce, RC	Plant & Soil Sciences	37
Pfeufer, EE	Plant Pathology	42
Ritchey, EL	Plant & Soil Sciences	6
Rudolph, R	Horticulture	19
Smith, SR	Plant & Soil Sciences	6
Snyder, J	Horticulture	1
Strang, JG	Horticulture	10
Teutsch, CD	Plant & Soil Sciences	3
Townsend, LH	Entomology	37
Villaneuva, R	Entomology	4
Vincelli, P	Plant Pathology	5
Wise, KA	Plant Pathology	18

**Table 9. DIAGNOSIS OF INDIVIDUAL SAMPLES BY CROP AND DISEASE/DISORDER**

<b>CORN</b>		
<b>Corn</b>		
1	Anthracnose stalk rot	<i>Colletotrichum graminicola</i>
1	Brown stink bug	<i>Euschistus servus</i>
1	Chemical injury suspected	<i>Chemical</i>
6	Corn gray leaf spot	<i>Cercospora zea-maydis</i>
1	Cultural/environmental problem	<i>Abiotic disorder</i>
2	Diplodia ear rot	<i>Stenocarpella (Diplodia) maydis</i>
2	Diplodia leaf streak	<i>Stenocarpella (Diplodia) macrospora</i>
1	Diplodia stalk rot	<i>Stenocarpella (Diplodia) maydis</i>
1	Fusarium stalk rot	<i>Fusarium subglutinans</i>
1	Herbicide injury suspected	<i>Chemical</i>
2	Insect damage	<i>Unidentified Insect</i>
1	Insufficient sample; INAD	<i>Undetermined</i>
1	Low pH	<i>Nutritional Disorder</i>
4	Magnesium deficiency	<i>Nutritional disorder</i>
1	Nitrogen deficiency suspected	<i>Nutritional Disorder</i>
5	No pathogen found	<i>Undetermined</i>
1	Northern corn leaf blight; leaf spot	<i>Setosphaeria turcica (turcicum)</i>
1	Nutritional deficiency	<i>Nutritional Disorder</i>
1	Penicillium ear rot	<i>Penicillium sp./spp.</i>
7	Planting too shallow	<i>Abiotic disorder</i>
3	Physoderma brown spot	<i>Physoderma maydis</i>
2	Poor pollination	<i>Abiotic disorder</i>
2	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia crown and root rot	<i>Rhizoctonia solani</i>
5	Soil compaction	<i>Abiotic disorder</i>
10	Southern corn rust	<i>Puccinia polysora</i>
4	Undetermined abiotic injury	<i>Abiotic disorder</i>
1	Undetermined injury	<i>Undetermined</i>
<b>69</b>	<b>Total for Corn</b>	
<b>FORAGES</b>		
<b>Alfalfa</b>		
1	Alfalfa mosaic	<i>Alfalfa Mosaic Virus</i>
1	Alfalfa weevil	<i>Hypera postica</i>
4	Anthracnose	<i>Colletotrichum trifolii</i>
1	Cowpea aphid	<i>Aphis craccivora</i>
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Herbicide carryover	<i>Chemical</i>
6	Leptosphaerulina leaf spot; blight	<i>Leptosphaerulina trifolii</i>
1	Low pH	<i>Nutritional Disorder</i>
1	No pathogen found	<i>Undetermined</i>

6	Nutritional deficiency	<i>Nutritional Disorder</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
3	Poor nodulation (not on list)	<i>Abiotic disorder</i>
6	Potato leafhopper	<i>Empoasca fabae</i>
1	Rhizoctonia foliar/ aerial/ web blight	<i>Rhizoctonia solani</i>
1	Rhizoctonia root; crown rot	<i>Rhizoctonia sp./spp.</i>
1	Sclerotinia stem rot	<i>Sclerotinia sp./spp.</i>
4	Spring black stem	<i>Phoma medicaginis</i>
5	Summer black stem; leaf spot	<i>Cercospora medicaginis</i>

<b>45</b>	<b>Total for Alfalfa</b>	
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<b>Clover</b>		
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1	Crown rot	<i>Unidentified Fungus</i>
2	Excessive water	<i>Abiotic disorder</i>
2	Fungus gnat	<i>Mycetophila sp./spp.</i>
2	Heat stress	<i>Abiotic disorder</i>
1	Insect damage	<i>Unidentified Insect</i>
1	Leptosphaerulina leaf spot; blight	<i>Leptosphaerulina trifolii</i>
1	No pathogen found	<i>Undetermined</i>
1	Nutritional deficiency	<i>Nutritional Disorder</i>
3	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>

<b>15</b>	<b>Total for Clover</b>	
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<b>Eastern Gamma Grass</b>		
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1	Environmental stress; problem	<i>Abiotic disorder</i>
1	No virus found	<i>No Virus Found</i>

<b>2</b>	<b>Total for Eastern Gamma Grass</b>	
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<b>Fescue</b>		
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2	Brown patch	<i>Rhizoctonia sp./spp.</i>
1	Cultural/environmental problem	<i>Abiotic disorder</i>

<b>3</b>	<b>Total for Fescue</b>	
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<b>Orchardgrass</b>		
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7	Leaf Streak	<i>Cercosporidium sp./spp.</i>
1	No pathogen found	<i>Undetermined</i>

<b>8</b>	<b>Total for Orchardgrass</b>	
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<b>Teff grass</b>		
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1	Plant parasitic nematodes	<i>Unspecified Genera</i>
<b>1</b>	<b>Total for Teff grass</b>	

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**HEMP**

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**Hemp**

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2	Aerial blight	<i>Rhizoctonia sp./spp.</i>
1	Anthraxnose; Colletotrichum leaf spot	<i>Colletotrichum sp./spp.</i>
1	Bacterial blight	<i>Unidentified Bacteria</i>
1	Broad mite	<i>Polyphagotarsonemus latus</i>
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Chimera	<i>Abiotic disorder</i>
1	Cold injury suspected	<i>Abiotic disorder</i>
1	Fertilizer injury	<i>Nutritional Disorder</i>
2	Fusarium flower blight	<i>Fusarium sp./spp.</i>
1	Fusarium wilt	<i>Fusarium sp./spp.</i>
1	Glyphosate injury suspected	<i>Chemical</i>
2	High soluble salt	<i>Nutritional Disorder</i>
2	Insufficient sample	<i>Undetermined</i>
1	Leaf scorch	<i>Abiotic disorder</i>
4	Leaf spot	<i>Unidentified Fungus</i>
1	Natural senescence	<i>Abiotic disorder</i>
1	Nitrogen deficiency	<i>Nutritional Disorder</i>
3	No pathogen found	<i>Undetermined</i>
2	Powdery mildew	<i>Golovinomyces sp./spp.</i>
1	Pythium damping off	<i>Pythium sp./spp.</i>
6	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
3	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
1	Root rot	<i>Unidentified Agent</i>
2	Septoria leaf spot	<i>Septoria sp./spp.</i>
1	Soil compaction	<i>Abiotic disorder</i>
2	Southern Blight	<i>Sclerotium rolfsii</i>
1	Spider mite injury	<i>Unidentified Spider Mite</i>
1	Stemphylium leaf spot	<i>Stemphylium sp./spp.</i>
1	Thrips	<i>Order thysanoptera</i>
1	Twospotted spider mite	<i>Tetranychus urticae</i>
1	Undetermined injury	<i>Undetermined</i>
1	White mold	<i>Sclerotinia sp./spp.</i>

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**51 Total for Hemp**

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**SOYBEAN**

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**Soybean**

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10	Charcoal rot	<i>Macrophomina sp./spp.</i>
1	Deer damage	<i>Abiotic disorder</i>
1	Excessive water	<i>Abiotic disorder</i>
1	Fusarium wilt	<i>Fusarium oxysporum</i>
17	Growth regulator effect suspected	<i>Chemical</i>

8	Herbicide injury suspected	<i>Chemical</i>
1	High soluble salt	<i>Nutritional Disorder</i>
2	Insufficient sample	<i>Undetermined</i>
1	Leaf scorch	<i>Abiotic disorder</i>
1	Manganese deficiency	<i>Nutritional Disorder</i>
7	No pathogen found	<i>Undetermined</i>
3	Phomopsis seed decay	<i>Phomopsis sp./spp.</i>
1	Planting too shallow	<i>Abiotic disorder</i>
1	Poor nodulation (not on list)	<i>Abiotic disorder</i>
8	Potassium deficiency	<i>Nutritional Disorder</i>
5	Purple seed-stain; leaf blight	<i>Cercospora kikuchii</i>
4	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
2	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
4	Saprophytes	<i>Secondary Agents; Saprophytes;</i>
1	Slime mold	<i>Class Myxomycetes; Myxomycota</i>
6	Soil compaction	<i>Abiotic disorder</i>
10	Soybean anthracnose	<i>Glomerella glycines</i>
4	Soybean brown spot	<i>Septoria glycines</i>
6	Soybean cyst nematode (SCN)	<i>Heterodera glycines</i>
3	Soybean downy mildew	<i>Peronospora manshurica</i>
12	Soybean frog-eye leaf spot	<i>Cercospora sojina</i>
2	Soybean green stem syndrome	<i>Unidentified Agent</i>
3	Soybean Phytophthora root and stem rot	<i>Phytophthora sojae</i>
13	Soybean stem canker	<i>Diaporthe phaseolorum</i>
9	Soybean sudden death syndrome	<i>Fusarium virguliforme</i>
3	Target spot	<i>Corynespora cassiicola</i>
1	Twospotted spider mite	<i>Tetranychus urticae</i>
2	Undetermined abiotic injury	<i>Abiotic disorder</i>
1	Whiteflies	<i>Family Aleyrodidae</i>
<b>154</b>	<b>Total for Soybean</b>	

### SMALL GRAINS

<b>Oats</b>		
1	Insufficient sample; INAD	<i>Undetermined</i>
<b>1</b>	<b>Total for Oats</b>	

<b>Pearl Millet</b>		
1	Gray leaf spot	<i>Pyricularia grisea</i>
<b>1</b>	<b>Total for Pearl Millet</b>	

<b>Rye</b>		
1	Bacterial leaf blight	<i>Pseudomonas sp./spp.</i>
1	Barley yellow dwarf	<i>Barley Yellow Dwarf Virus</i>
12	Head blight; scab	<i>Fusarium graminearum</i>



3	Soil-borne wheat mosaic	<i>SBWMV</i>
3	Wheat spindle streak mosaic	<i>WSSMV</i>
<b>20</b>	<b>Total for Rye</b>	

<b>Sorghum</b>		
1	Glyphosate injury suspected	<i>Chemical</i>
1	Rough leaf spot	<i>Ascochyta sorghina</i>
<b>2</b>	<b>Total for Sorghum</b>	

<b>Wheat</b>		
2	Bacterial leaf spot	<i>Unidentified Bacteria</i>
1	Barley yellow dwarf	<i>Barley Yellow Dwarf Vir (BYDV)</i>
1	Chemical injury suspected	<i>Chemical</i>
1	Glume blotch	<i>Stagonospora nodorum</i>
1	Head blight; scab	<i>Fusarium graminearum</i>
1	Insufficient sample; INAD	<i>Undetermined</i>
1	Loose smut (wheat; rye)	<i>Ustilago tritici</i>
3	No pathogen found	<i>Undetermined</i>
8	Speckled leaf blotch	<i>Septoria tritici</i>
1	Stagonospora leaf blotch	<i>Stagonospora nodorum</i>
3	Stripe rust; yellow rust	<i>Puccinia striiformis var. striiformis</i>
1	Wheat leaf rust	<i>Puccinia triticina f.sp. tritici</i>
3	Wheat powdery mildew	<i>Blumeria graminis</i>
1	Wheat soil-borne mosaic	<i>WSBMV</i>
2	Wheat spindle streak mosaic	<i>WSSMV</i>
<b>30</b>	<b>Total for Wheat</b>	

## TOBACCO

<b>Tobacco</b>		
1	Abnormal plant growth	<i>Abiotic disorder</i>
1	Alfalfa mosaic	<i>Alfalfa Mosaic Virus (AMV)</i>
1	Anaerobic soil	<i>Abiotic disorder</i>
18	Angular leaf spot	<i>Pseudomonas syringae pv. tabaci</i>
1	Bacterial soft rot	<i>Erwinia sp./spp.</i>
2	Bacterial soft rot; blackleg	<i>Pectobacterium carotovorum subsp. carotovorum</i>
43	Black shank	<i>Phytophthora nicotianae</i>
3	Boron deficiency	<i>Nutritional Disorder</i>
3	Brown spot	<i>Alternaria alternata</i>
6	Chemical injury suspected	<i>Chemical</i>
2	Cold injury	<i>Abiotic disorder</i>
1	Collar rot	<i>Sclerotinia sclerotiorum</i>
4	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Excessive water	<i>Abiotic disorder</i>

1	Flea beetles	<i>Subfamily Alticinae</i>
1	Freeze; frost; cold damage	<i>Abiotic disorder</i>
1	Frenching	<i>Not On List</i>
40	Frogeye leaf spot	<i>Cercospora nicotianae</i>
2	Fusarium wilt	<i>Fusarium oxysporum</i>
1	Glyphosate injury suspected	<i>Chemical</i>
12	Growth regulator effect suspected	<i>Chemical</i>
2	Herbicide injury suspected	<i>Chemical</i>
2	Insufficient sample	<i>Undetermined</i>
1	Leaf scorch	<i>Abiotic disorder</i>
4	Low pH damage	<i>Nutritional Disorder</i>
5	Manganese toxicity	<i>Nutritional Disorder</i>
1	Mold	<i>Penicillium sp./spp.</i>
1	Nitrogen deficiency	<i>Nutritional Disorder</i>
12	No pathogen found	<i>Undetermined</i>
2	Nutritional deficiency	<i>Nutritional Disorder</i>
3	Physiological responses	<i>Abiotic disorder</i>
4	Potassium deficiency	<i>Nutritional Disorder</i>
1	Potyvirus Group	<i>Potyvirus sp./spp.</i>
22	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
4	Rhizoctonia damping-off	<i>Rhizoctonia sp./spp.</i>
2	Rhizoctonia root rot	<i>Rhizoctonia sp./spp.</i>
3	Scald; scorch	<i>Abiotic disorder</i>
5	Soil compaction	<i>Abiotic disorder</i>
12	Soreshin (Rhizoctonia stem rot)	<i>Rhizoctonia sp./spp.</i>
3	Sunscald	<i>Abiotic disorder</i>
7	Target spot	<i>Rhizoctonia sp./spp.</i>
4	Temporary phosphorus deficiency	<i>Nutritional disorder</i>
9	Tobacco hollow stalk	<i>Erwinia carotovora carotovora</i>
11	Tobacco hollow stalk; leaf rot	<i>Erwinia carotovora carotovora</i>
6	Tobacco mosaic (TMV)	<i>Tobamovirus Tobacco Mosaic Virus</i>
1	Tobacco streak	<i>Tobacco streak virus (TSV)</i>
3	Tomato spotted wilt	<i>Tomato Spotted Wilt Vir (TSWV)</i>
19	Transplant shock; stress	<i>Abiotic disorder</i>
4	Undetermined abiotic injury	<i>Abiotic disorder</i>
1	Undetermined injury or wound	<i>Undetermined</i>

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**299 Total for Tobacco**

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**SMALL FRUIT**

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**Blackberry**

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1	Blackberry psyllid	<i>Trioza tripunctata</i>
1	Botrytis blight	<i>Botrytis sp./spp.</i>
6	Cane blight; canker	<i>Coniothyrium fuckelii</i>
8	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Insufficient sample	<i>Undetermined</i>

1	Orange rust	<i>Gymnoconia nitens</i>
1	Phomopsis leaf spot	<i>Phomopsis sp./spp.</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
4	Rednecked cane borer	<i>Agrilus ruficollis</i>
1	Root rot	<i>Various Fungi</i>
1	Spider mites	<i>Family Tetranychidae</i>
1	Spur; cane blight	<i>Didymella applanata</i>
1	Twospotted spider mite	<i>Tetranychus urticae</i>
1	Unknown abiotic disorder	<i>Abiotic disorder</i>
2	White drupelet disorder	<i>Abiotic disorder</i>
1	Winter injury	<i>Abiotic disorder</i>

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**32 Total for Blackberry**

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**Blueberry**

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1	Anthracnose	<i>Colletotrichum acutatum</i>
1	Anthracnose fruit rot	<i>Colletotrichum sp./spp.</i>
1	Blueberry leaf spot; Phomopsis leaf spot	<i>Phomopsis vaccinii</i>
1	Blueberry mosaic	<i>Blueberry Mosaic Virus (BMV)</i>
1	Cold injury suspected	<i>Abiotic disorder</i>
2	Decline; dieback	<i>Abiotic disorder</i>
1	Fungal canker	<i>Various Fungi</i>
3	Herbicide injury suspected	<i>Chemical</i>
3	Insufficient sample	<i>Undetermined</i>
3	Iron deficiency	<i>Nutritional Disorder</i>
1	Lichens	<i>Lichenes</i>
1	Nitrogen deficiency suspected	<i>Nutritional Disorder</i>
6	No pathogen found	<i>Undetermined</i>
2	Nutritional problem suspected	<i>Nutritional Disorder</i>
1	Oystershell scale	<i>Lepidosaphes ulmi</i>
1	Phomopsis leaf spot	<i>Phomopsis sp./spp.</i>
9	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
1	Stem canker	<i>Botryosphaeria corticis</i>
2	Thread blight	<i>Ceratobasidium (Corticium) ochroleucum (stevensii)</i>
1	Unspecified viral disease	<i>Unspecified Viral Disease</i>

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**42 Total for Blueberry**

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**Grape**

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2	Bitter rot	<i>Greeneria uvicola</i>
6	Black rot	<i>Guignardia bidwellii</i>
1	Botrytis blight	<i>Botrytis sp./spp.</i>
1	Botrytis fruit rot	<i>Botrytis sp./spp.</i>
1	Cladosporium fruit mold	<i>Cladosporium sp./spp.</i>
1	Decline; dieback	<i>Abiotic disorder</i>

8	Grape anthracnose; birds-eye rot	<i>Elsinoe (Sphaceloma) ampelina (ampelinum)</i>
2	Grape berry moth	<i>Endopiza viteana</i>
1	Grape downy mildew	<i>Plasmopara viticola</i>
2	Growth regulator effect suspected	<i>Chemical</i>
1	Insect gall	<i>Undetermined</i>
1	Insufficient sample	<i>Undetermined</i>
1	Japanese beetle	<i>Popillia japonica</i>
3	Leaf blight	<i>Pseudocercospora vitis</i>
2	Phomopsis cane; leaf spot	<i>Diaporthe ampelina</i>
1	Ripe rot	<i>Colletotrichum sp./spp.</i>
1	Unidentified caterpillar	<i>Unidentified Caterpillar</i>

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**35 Total for Grape**

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**Honeysuckle (Haskap)**

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1	Anthracnose	<i>Glomerella sp./spp.</i>
1	High soil moisture	<i>Abiotic disorder</i>
2	No pathogen found	<i>Undetermined</i>
9	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
5	Soil compaction	<i>Abiotic disorder</i>

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**18 Total for Honeysuckle (Haskap)**

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**Raspberry**

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1	No pathogen found	<i>Undetermined</i>
1	Rednecked cane borer	<i>Agrilus ruficollis</i>
1	Spur; Cane blight	<i>Didymella applanata</i>

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**3 Total for Raspberry**

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**Strawberry**

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1	Anthracnose fruit rot	<i>Colletotrichum gloeosporioides</i>
2	Freeze; frost; cold damage	<i>Abiotic disorder</i>
1	Herbicide injury suspected	<i>Chemical</i>
1	High pH	<i>Nutritional Disorder</i>
1	High soluble salt	<i>Nutritional Disorder</i>
1	Insect damage	<i>Unidentified Insect</i>
1	Insufficient sample	<i>Undetermined</i>
2	Leaf spot; blight	<i>Mycosphaerella fragariae</i>
1	No pathogen found	<i>Undetermined</i>
5	Phomopsis leaf blight	<i>Phomopsis obscurans</i>
2	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
1	Rhizoctonia foliar/ aerial/ web blight	<i>Rhizoctonia solani</i>
1	Strawberry angular leaf spot	<i>Xanthomonas fragariae</i>
1	Strawberry black root rot complex	<i>Various Fungi</i>
2	Twospotted spider mite	<i>Tetranychus urticae</i>

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**23 Total for Strawberry**

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**TREE FRUIT**

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**Apple**

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1	Aphids	<i>Family Aphididae</i>
1	Apple powdery mildew	<i>Podosphaera leucotricha</i>
4	Apple scab	<i>Venturia inaequalis</i>
2	Bird damage	<i>Abiotic disorder</i>
7	Bitter rot	<i>Colletotrichum sp./spp.</i>
23	Cedar-apple rust	<i>Gymnosporangium juniperi-virginianae</i>
1	Cedar-quince rust	<i>Gymnosporangium clavipes</i>
2	Chemical injury suspected	<i>Chemical</i>
1	Cold injury suspected	<i>Abiotic disorder</i>
1	Decline; dieback	<i>Abiotic disorder</i>
3	Fire blight	<i>Erwinia amylovora</i>
5	Frogeye leaf spot	<i>Botryosphaeria obtusa</i>
1	Insect damage	<i>Unidentified Insect</i>
1	Insufficient sample	<i>Undetermined</i>
1	Japanese beetle	<i>Popillia japonica</i>
2	Leaf scorch	<i>Abiotic disorder</i>
2	Lichens	<i>Lichenes</i>
3	No pathogen found	<i>Undetermined</i>
1	Phoma fruit rot	<i>Phoma sp./spp.</i>
1	Phoma leaf spot	<i>Phoma sp./spp.</i>
1	Phomopsis leaf spot	<i>Phomopsis sp./spp.</i>
1	Physiological responses	<i>Abiotic disorder</i>
4	Plum curculio	<i>Conotrachelus nenuphar</i>
9	Sooty blotch flyspeck complex	<i>Various fungi</i>
1	Sooty mold	<i>Unidentified Fungus</i>
1	Southern Blight	<i>Sclerotium rolfsii</i>
1	Spider mite injury	<i>Unidentified Spider Mite</i>
3	Thread blight	<i>Ceratobasidium (Corticium) ochroleucum (stevensii)</i>
1	Undetermined injury	<i>Undetermined</i>
1	Unknown abiotic disorder	<i>Abiotic disorder</i>
2	White rot	<i>Botryosphaeria dothidea</i>
2	Woolly apple aphid	<i>Eriosoma lanigerum</i>

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**90 Total for Apple**

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**Cherry**

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1	Brown rot; blossom and twig blight	<i>Monilinia fructicola</i>
1	Mechanical damage	<i>Abiotic disorder</i>
1	Poor growing conditions	<i>Abiotic disorder</i>
1	Root rot	<i>Various Fungi</i>

2	Stonefruit bacterial spot	<i>Xanthomonas campestris</i> pv. <i>Pruni</i>
1	Transplant shock; stress	<i>Abiotic disorder</i>
<b>7</b>	<b>Total for Cherry</b>	
<b>Nectarine</b>		
1	Plum Curculio	<i>Conotrachelus nenuphar</i>
<b>1</b>	<b>Total for Nectarine</b>	
<b>Pawpaw</b>		
1	High soil moisture	<i>Abiotic disorder</i>
2	Insufficient sample	<i>Undetermined</i>
1	Low pH damage	<i>Nutritional Disorder</i>
1	No pathogen found	<i>Undetermined</i>
<b>5</b>	<b>Total for Pawpaw</b>	
<b>Peach</b>		
2	Brown rot; blossom and twig blight	<i>Monilia fructicola</i>
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Gummosis	<i>Abiotic disorder</i>
1	Insect damage	<i>Unidentified Insect</i>
1	Leucostoma canker	<i>Leucostoma</i> sp./spp.
1	Mechanical damage	<i>Abiotic disorder</i>
1	No pathogen found	<i>Undetermined</i>
1	Oleander scale	<i>Aspidiotus nerii</i>
3	Oriental fruit moth	<i>Grapholita molesta</i>
3	Peach leaf curl	<i>Taphrina deformans</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora</i> sp./spp.
3	Plum curculio	<i>Conotrachelus nenuphar</i>
3	Scab	<i>Fusicladium carpophilum</i>
4	Stonefruit bacterial spot	<i>Xanthomonas campestris</i> pv. <i>Pruni</i>
1	Undetermined injury	<i>Undetermined</i>
1	White peach scale	<i>Pseudaulacaspis pentagona</i>
1	Winter injury	<i>Abiotic disorder</i>
<b>29</b>	<b>Total for Peach</b>	
<b>Pear</b>		
1	Bitter rot	<i>Colletotrichum</i> sp./spp.
1	Cedar-quince rust	<i>Gymnosporangium clavipes</i>
2	Fire blight	<i>Erwinia amylovora</i>
1	Plum curculio	<i>Conotrachelus nenuphar</i>
<b>5</b>	<b>Total for Pear</b>	
<b>Pecan</b>		

1	Anthracnose	<i>Colletotrichum gloeosporioides</i>
2	Hickory shuckworm	<i>Cydia caryana</i>
1	Insect damage	<i>Unidentified Insect</i>
2	No pathogen found	<i>Undetermined</i>
1	Pecan anthracnose	<i>Colletotrichum gloeosporioides</i>
1	Pecan phylloxera	<i>Phylloxera devastatrix</i>
4	Pecan; hickory scab	<i>Cladosporium caryigenum</i>
1	Physiological responses	<i>Abiotic disorder</i>
1	Poor pollination	<i>Abiotic disorder</i>
<b>14</b>	<b>Total for Pecan</b>	

<b>Plum</b>		
1	Black knot	<i>Apiosporina morbosa</i>
1	Stonefruit bacterial spot	<i>Xanthomonas campestris pv. pruni</i>
<b>2</b>	<b>Total for Plum</b>	

### HERBS

<b>Basil</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Basil</b>	

<b>Catnip</b>		
1	Garden fleahopper	<i>Halticus bractatus</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>2</b>	<b>Total for Catnip</b>	

<b>Common Borage; Talewort</b>		
1	Bacterial stalk rot	<i>Erwinia sp./spp.</i>
<b>1</b>	<b>Total for Common Borage; Talewort</b>	

<b>Hops</b>		
1	No pathogen found	<i>Undetermined</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
<b>2</b>	<b>Total for Hops</b>	

<b>Lavender</b>		
1	Fusarium crown rot	<i>Fusarium sp./spp.</i>
5	No pathogen found	<i>Undetermined</i>
4	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
3	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia root rot	<i>Rhizoctonia sp./spp.</i>
1	Root-knot nematodes	<i>Meloidogyne sp./spp.</i>

1	Soil compaction	<i>Abiotic disorder</i>
<b>16</b>	<b>Total for Lavender</b>	
<b>Lemon Balm</b>		
1	Garden fleahopper	<i>Halticus bractatus</i>
<b>1</b>	<b>Total for Lemon Balm</b>	
<b>Mint</b>		
1	No pathogen found	<i>Undetermined</i>
<b>1</b>	<b>Total for Mint</b>	
<b>Oregano</b>		
1	No pathogen found	<i>Undetermined</i>
<b>1</b>	<b>Total for Oregano</b>	
<b>Rosemary</b>		
1	Botrytis blight	<i>Botrytis sp./spp.</i>
1	High soluble salt	<i>Nutritional Disorder</i>
<b>2</b>	<b>Total for Rosemary</b>	
<b>Sage</b>		
1	Leaf scorch	<i>Abiotic disorder</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>3</b>	<b>Total for Sage</b>	
<b>Thyme</b>		
1	Botrytis blight	<i>Botrytis sp./spp.</i>
1	High soluble salt	<i>Nutritional Disorder</i>
2	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>4</b>	<b>Total for Thyme</b>	
<b>IDENTIFICATIONS</b>		
<b>Fungus Id Request</b>		
1	Not on list	<i>Not On List</i>
1	Slime mold	<i>Class Myxomycetes; Myxomycota</i>
1	Slime mold	<i>Fuligo septica</i>
<b>3</b>	<b>Total for Fungus Id Request</b>	
<b>Mushroom</b>		
1	Agaric mushroom	<i>Agaricus sp./spp.</i>



1	Amanita mushroom	<i>Amanita sp./spp.</i>
1	Lepiota mushroom	<i>Lepiota sp./spp.</i>
1	Purple-spored puffball	<i>Calvatia cyathiformis</i>
1	Wood decay fungus	<i>Steccherinum ochraceum</i>
1	Wood rot fungus; Turkey tail	<i>Trametes versicolor</i>
<b>6</b>	<b>Total for Mushroom</b>	

<b>Plant Id Request</b>		
2	Nostoc	<i>Nostoc sp./spp.</i>
<b>2</b>	<b>Total for Plant Id Request</b>	

### MISCELLANEOUS

<b>Arabidopsis</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Arabidopsis</b>	

<b>Home and Garden</b>		
1	Insufficient sample	<i>Undetermined</i>
<b>1</b>	<b>Total for Home and Garden</b>	

<b>Mixed Plant Material</b>		
1	No pathogen found	<i>Undetermined</i>
<b>1</b>	<b>Total for Mixed Plant Material</b>	

<b>Nicotiana</b>		
1	Black root rot	<i>Thielaviopsis basicola</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Undetermined injury or wound	<i>Undetermined</i>
<b>3</b>	<b>Total for Nicotiana</b>	

<b>Not Found On List</b>		
1	Insufficient sample	<i>Undetermined</i>
1	Root-knot nematodes	<i>Meloidogyne sp./spp.</i>
<b>2</b>	<b>Total for Not Found On List</b>	

<b>Salvia; Sage</b>		
2	No pathogen found	<i>Undetermined</i>
<b>2</b>	<b>Total for Salvia; Sage</b>	

<b>Soil</b>		
1	Insufficient information	<i>Undetermined</i>

1	Not on list	<i>Not On List</i>
1	Root-knot nematodes	<i>Meloidogyne sp./spp.</i>
<b>3</b>	<b>Total for Soil</b>	

### HERBACEOUS ORNAMENTALS

<b>Anemone</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Anemone</b>	

<b>Angel Flower</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Angel Flower</b>	

<b>Aster</b>		
1	Low pH damage	<i>Nutritional Disorder</i>
<b>1</b>	<b>Total for Aster</b>	

<b>Begonia</b>		
2	Bacterial blight	<i>Xanthomonas axonopodis pv. begoniae</i>
1	Botrytis blight	<i>Botrytis sp./spp.</i>
1	Freeze; frost; cold damage	<i>Abiotic disorder</i>
3	No pathogen found	<i>Undetermined</i>
1	Nutritional deficiency	<i>Nutritional Disorder</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
2	Undetermined abiotic injury	<i>Abiotic disorder</i>
<b>11</b>	<b>Total for Begonia</b>	

<b>Blechnum Fern</b>		
1	Freeze; frost; cold damage	<i>Abiotic disorder</i>
<b>1</b>	<b>Total for Blechnum Fern</b>	

<b>Bleeding Heart</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Bleeding Heart</b>	

<b>Boston Fern</b>		
1	Fern scale	<i>Pinnaspis aspidistrae</i>
<b>1</b>	<b>Total for Boston Fern</b>	

<b>Bugle-weed</b>		
1	Southern Blight	<i>Sclerotium rolfsii</i>

<b>1</b>	<b>Total for Bugle-weed</b>	
<b>Bugloss</b>		
1	Foliar nematodes	<i>Aphelenchoides sp./spp.</i>
<b>1</b>	<b>Total for Bugloss</b>	
<b>Buttercup; Crowfoot</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Buttercup; Crowfoot</b>	
<b>Chrysanthemum</b>		
5	Animal damage	<i>Abiotic disorder</i>
2	Bacterial leaf spot	<i>Pseudomonas cichorii</i>
1	Botrytis blight	<i>Botrytis sp./spp.</i>
5	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Chrysanthemum leafminer	<i>Phytomyza syngenesiae</i>
5	Fusarium wilt	<i>Fusarium oxysporum f.sp. chrysanthemi</i>
1	High soluble salt	<i>Nutritional Disorder</i>
3	Insufficient sample	<i>Undetermined</i>
1	Leafminer	<i>Phyllonorycter sp./spp.</i>
1	Leaf spot- abiotic	<i>Abiotic disorder</i>
1	No pathogen found	<i>Undetermined</i>
4	Nutritional deficiency	<i>Nutritional Disorder</i>
27	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
9	Rhizoctonia foliar/ aerial/ web blight	<i>Rhizoctonia solani</i>
1	Unidentified caterpillar	<i>Unidentified Caterpillar</i>
2	Undetermined injury	<i>Undetermined</i>
<b>69</b>	<b>Total for Chrysanthemum</b>	
<b>Clematis</b>		
1	Anthracnose	<i>Glomerella sp./spp.</i>
1	Ascochyta blight	<i>Ascochyta sp./spp.</i>
<b>2</b>	<b>Total for Clematis</b>	
<b>Cockscomb</b>		
1	Anthracnose	<i>Colletotrichum sp./spp.</i>
1	No pathogen found	<i>Undetermined</i>
2	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>4</b>	<b>Total for Cockscomb</b>	
<b>Coleus</b>		
1	No pathogen found	<i>Undetermined</i>

<b>1</b>	<b>Total for Coleus</b>	
<b>Common Golden Alexander</b>		
1	Anthracnose; Colletotrichum leaf spot	<i>Colletotrichum sp./spp.</i>
<b>1</b>	<b>Total for Common Golden Alexander</b>	
<b>Coneflower</b>		
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Insect damage	<i>Unidentified Insect</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>3</b>	<b>Total for Coneflower</b>	
<b>Coral Bells</b>		
1	Insect damage	<i>Unidentified Insect</i>
<b>1</b>	<b>Total for Coral Bells</b>	
<b>Creeping Inch plant</b>		
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	No pathogen found	<i>Undetermined</i>
<b>2</b>	<b>Total for Creeping Inch plant</b>	
<b>Culver's Root</b>		
1	Cultural/environmental problem	<i>Abiotic disorder</i>
<b>1</b>	<b>Total for Culver's Root</b>	
<b>Dahlia</b>		
1	No pathogen found	<i>Undetermined</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Spider mites	<i>Family Tetranychidae</i>
<b>3</b>	<b>Total for Dahlia</b>	
<b>Daisy</b>		
1	Excessive water	<i>Abiotic disorder</i>
1	Low pH damage	<i>Nutritional Disorder</i>
<b>2</b>	<b>Total for Daisy</b>	
<b>Daylily</b>		
1	Anthracnose; Colletotrichum leaf spot	<i>Colletotrichum sp./spp.</i>
1	Daylily leafminer	<i>Ophiomyia kwansonis</i>
1	Daylily rust	<i>Puccinia hemerocallidis</i>
<b>3</b>	<b>Total for Daylily</b>	

<b>Dusty Miller</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Dusty Miller</b>	
<b>Euphorbia</b>		
1	Chilling injury	<i>Abiotic disorder</i>
<b>1</b>	<b>Total for Euphorbia</b>	
<b>Feverfew</b>		
1	Garden fleahopper	<i>Halticus bractatus</i>
<b>1</b>	<b>Total for Feverfew</b>	
<b>Geranium</b>		
1	Bacterial blight	<i>Xanthomonas campestris pelargonii</i>
2	Bacterial leaf spot	<i>Pseudomonas sp./spp.</i>
2	Botrytis blight	<i>Botrytis sp./spp.</i>
1	High pH; low soluble salt damage	<i>Nutritional Disorder</i>
1	Insufficient sample	<i>Undetermined</i>
2	Iron toxicity	<i>Nutritional Disorder</i>
4	Low pH damage	<i>Nutritional Disorder</i>
2	Low pH; high soluble salt damage	<i>Nutritional Disorder</i>
1	Nitrogen deficiency	<i>Nutritional Disorder</i>
4	No pathogen found	<i>Undetermined</i>
1	Nutrient imbalance	<i>Nutritional Disorder</i>
1	Nutritional deficiency	<i>Nutritional Disorder</i>
2	Nutritional problem suspected	<i>Nutritional Disorder</i>
1	Oedema; edema	<i>Abiotic disorder</i>
6	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
1	White mold	<i>Sclerotinia sp./spp.</i>
<b>33</b>	<b>Total for Geranium</b>	
<b>Gerber Daisy</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Gerber Daisy</b>	
<b>Goldenrod</b>		
1	Leaf Rust; rust	<i>Puccinia sp./spp.</i>
<b>1</b>	<b>Total for Goldenrod</b>	
<b>Hellebore</b>		

1	Cultural/environmental problem	<i>Abiotic disorder</i>
<b>1</b>	<b>Total for Hellebore</b>	
<b>Heuchera; Coral Bells</b>		
2	Anthracnose; Colletotrichum leaf spot	<i>Colletotrichum sp./spp.</i>
1	Black root rot	<i>Thielaviopsis basicola</i>
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Foliar nematodes	<i>Aphelenchoides sp./spp.</i>
1	Leaf spot	<i>Undetermined</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>8</b>	<b>Total for Heuchera; Coral Bells</b>	
<b>Hosta</b>		
1	Foliar nematodes	<i>Aphelenchoides sp./spp.</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
2	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
<b>4</b>	<b>Total for Hosta</b>	
<b>Ipomoea; Morningglory</b>		
1	White rust	<i>Albugo ipomoeae-panduratae</i>
<b>1</b>	<b>Total for Ipomoea; Morningglory</b>	
<b>Iris</b>		
1	Iris leaf spot	<i>Heterosporium iridis</i>
1	Mycosphaerella leaf spot	<i>Mycosphaerella sp./spp.</i>
<b>1</b>	<b>Total for Iris</b>	
<b>Lantana</b>		
1	Cultural/environmental problem	<i>Abiotic disorder</i>
<b>1</b>	<b>Total for Lantana</b>	
<b>Larkspur</b>		
1	Southern Blight	<i>Sclerotium rolfsii</i>
<b>1</b>	<b>Total for Larkspur</b>	
<b>Lilyturf</b>		
3	Anthracnose basal rot; crown rot	<i>Colletotrichum sp./spp.</i>
<b>3</b>	<b>Total for Lilyturf</b>	
<b>Lisianthus</b>		

1	Impatiens necrotic spot	<i>Impatiens Necrotic Spot Virus</i>
1	Insect damage	<i>Unidentified Insect</i>
1	Undetermined abiotic injury	<i>Abiotic disorder</i>
<b>3</b>	<b>Total for Lisianthus</b>	

<b>Madagascar periwinkle</b>		
1	Animal damage	<i>Abiotic disorder</i>
1	Botrytis blight	<i>Botrytis sp./spp.</i>
1	No pathogen found	<i>Undetermined</i>
1	Phytophthora dieback; blight	<i>Phytophthora sp./spp.</i>
1	Poor root development	<i>Abiotic disorder</i>
3	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia root rot	<i>Rhizoctonia sp./spp.</i>
2	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
<b>11</b>	<b>Total for Madagascar periwinkle</b>	

<b>Marigold</b>		
1	Insufficient sample	<i>Undetermined</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>2</b>	<b>Total for Marigold</b>	

<b>Milkweed</b>		
1	Anthracnose; Colletotrichum leaf spot	<i>Colletotrichum sp./spp.</i>
1	Black root rot	<i>Thielaviopsis basicola</i>
1	High pH damage	<i>Nutritional Disorder</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Undetermined injury	<i>Undetermined</i>
<b>5</b>	<b>Total for Milkweed</b>	

<b>Million Bells</b>		
1	Iron deficiency	<i>Nutritional Disorder</i>
1	Powdery mildew	<i>Oidium sp./spp.</i>
2	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Undetermined injury	<i>Undetermined</i>
<b>5</b>	<b>Total for Million Bells</b>	

<b>New Guinea Impatiens</b>		
1	Bacterial soft rot	<i>Erwinia sp./spp.</i>
3	Broad mite	<i>Polyphagotarsonemus latus</i>
1	Cyclamen mite	<i>Phytonemus (Steneotarsonemus) pallidus</i>
1	High pH	<i>Nutritional Disorder</i>
1	High soluble salt	<i>Nutritional Disorder</i>
1	Iron deficiency suspected	<i>Nutritional Disorder</i>

1	Leaf spot- abiotic	<i>Abiotic disorder</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>10</b>	<b>Total for New Guinea Impatiens</b>	
<b>Pachysandra</b>		
1	Boxwood blight; Leaf and stem blight	<i>Calonectria pseudonaviculata</i>
5	Leaf and stem blight	<i>Volutella pachysandrae</i>
<b>6</b>	<b>Total for Pachysandra</b>	
<b>Pansy</b>		
2	Anthrachnose; Colletotrichum leaf spot	<i>Colletotrichum sp./spp.</i>
1	Chemical injury suspected	<i>Chemical</i>
3	Fungus gnat	<i>Mycetophila sp./spp.</i>
1	Nitrogen deficiency	<i>Nutritional Disorder</i>
1	No pathogen found	<i>Undetermined</i>
3	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>11</b>	<b>Total for Pansy</b>	
<b>Penstemon; Beard-tongue</b>		
1	White mold	<i>Sclerotinia sp./spp.</i>
<b>1</b>	<b>Total for Penstemon; Beard-tongue</b>	
<b>Peony</b>		
1	Bacterial blight	<i>Xanthomonas sp./spp.</i>
1	Botrytis blight	<i>Botrytis sp./spp.</i>
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Cold injury suspected	<i>Abiotic disorder</i>
2	Powdery mildew	<i>Erysiphe sp./spp.</i>
<b>6</b>	<b>Total for Peony</b>	
<b>Periwinkle</b>		
2	Phoma blight; dieback; rot	<i>Phoma sp./spp.</i>
<b>2</b>	<b>Total for Periwinkle</b>	
<b>Petunia</b>		
1	Chilling injury	<i>Abiotic disorder</i>
1	Insect damage	<i>Unidentified Insect</i>
2	No pathogen found	<i>Undetermined</i>
12	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
5	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
2	Undetermined injury or wound	<i>Undetermined</i>
1	White mold	<i>Sclerotinia sp./spp.</i>



<b>24 Total for Petunia</b>		
<b>Phlox</b>		
1	Alternaria leaf spot	<i>Alternaria sp./spp.</i>
1	Black root rot	<i>Thielaviopsis basicola</i>
1	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
<b>3 Total for Phlox</b>		
<b>Poinsettia</b>		
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Fungus gnat	<i>Mycetophila sp./spp.</i>
1	High soluble salt	<i>Nutritional Disorder</i>
1	Phomopsis leaf spot	<i>Phomopsis sp./spp.</i>
6	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Undetermined abiotic injury	<i>Abiotic disorder</i>
1	Whiteflies	<i>Family Aleyrodidae</i>
<b>12 Total for Poinsettia</b>		
<b>Rudbeckia</b>		
1	Fuller rose beetle (weevil)	<i>Asynonychus godmanni</i>
1	Herbicide injury suspected	<i>Chemical</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
2	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
1	Southern blight	<i>Sclerotium rolfsii</i>
<b>6 Total for Rudbeckia</b>		
<b>Sedges</b>		
2	Crown rot	<i>Rhizoctonia sp./spp.</i>
<b>2 Total for Sedges</b>		
<b>Snapdragon</b>		
1	Botrytis blight	<i>Botrytis sp./spp.</i>
<b>1 Total for Snapdragon</b>		
<b>Stonecrop</b>		
1	Anthraxnose	<i>Unidentified Fungus</i>
<b>1 Total for Stonecrop</b>		
<b>Streptocarpus (Streptocarpella)</b>		
1	Undetermined abiotic injury	<i>Abiotic disorder</i>
<b>1 Total for Streptocarpus (Streptocarpella)</b>		

<b>Sunflower</b>		
1	Botrytis blight	<i>Botrytis sp./spp.</i>
1	Sunflower headclipper weevil	<i>Haplorhynchites aeneus</i>
1	Sunflower leaf spot	<i>Septoria helianthi</i>
<b>3</b>	<b>Total for Sunflower</b>	
<b>Tickseed</b>		
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>2</b>	<b>Total for Tickseed</b>	
<b>Tulip</b>		
1	Blue mold rot	<i>Penicillium sp./spp.</i>
1	No pathogen found	<i>Undetermined</i>
<b>2</b>	<b>Total for Tulip</b>	
<b>Verbena</b>		
1	Twospotted spider mite	<i>Tetranychus urticae</i>
<b>1</b>	<b>Total for Verbena</b>	
<b>Wormwood; Artemisia</b>		
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Insufficient sample	<i>Undetermined</i>
<b>2</b>	<b>Total for Wormwood; Artemisia</b>	
<b>Zinnia</b>		
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
<b>1</b>	<b>Total for Zinnia</b>	
<b>INDOOR PLANTS</b>		
<b>Desert rose</b>		
1	No pathogen found	<i>Undetermined</i>
<b>1</b>	<b>Total for Desert rose</b>	
<b>Elephant Bush</b>		
1	No pathogen found	<i>Undetermined</i>
<b>1</b>	<b>Total for Elephant Bush</b>	
<b>Fig</b>		
1	No pathogen found	<i>Undetermined</i>
1	Sooty mold	<i>Unidentified fungus</i>

1	Spider mite injury	<i>Unidentified Spider Mite</i>
<b>3</b>	<b>Total for Fig</b>	

<b>Gardenia</b>		
1	No pathogen found	<i>Undetermined</i>
1	Rhizoctonia root rot	<i>Rhizoctonia sp./spp.</i>
<b>2</b>	<b>Total for Gardenia</b>	

<b>Hibiscus</b>		
2	Bacterial leaf spot	<i>Pseudomonas cichorii</i>
1	Botrytis blight	<i>Botrytis sp./spp.</i>
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Spider mites	<i>Family Tetranychidae</i>
1	Unidentified caterpillar	<i>Unidentified Caterpillar</i>
<b>6</b>	<b>Total for Hibiscus</b>	

<b>Jaboticaba</b>		
1	Insufficient sample	<i>Undetermined</i>
<b>1</b>	<b>Total for Jaboticaba</b>	

<b>Lemon</b>		
1	Oedema; edema	<i>Abiotic disorder</i>
<b>1</b>	<b>Total for Lemon</b>	

<b>Natal Plum</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Natal Plum</b>	

<b>Peacelily</b>		
1	Insufficient sample	<i>Undetermined</i>
1	No pathogen found	<i>Undetermined</i>
<b>2</b>	<b>Total for Peacelily</b>	

<b>Schefflera</b>		
1	Twospotted spider mite	<i>Tetranychus urticae</i>
<b>1</b>	<b>Total for Schefflera</b>	

### TURFGRASS

<b>Bentgrass</b>		
3	Anthraxnose	<i>Colletotrichum graminicola</i>
1	Black layer of turfgrass	<i>Abiotic disorder</i>

1	Environmental stress; problem	<i>Abiotic disorder</i>
1	Pythium blight; cottony blight	<i>Pythium sp./spp.</i>
13	Pythium root dysfunction	<i>Pythium sp./spp.</i>
15	Take-all	<i>Gaeumannomyces graminis var. avenae</i>

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**34 Total for Bentgrass**

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**Bermudagrass**

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1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Root decline of warm season grasses	<i>Gaeumannomyces graminis var. graminis</i>

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**2 Total for Bermudagrass**

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**Bluegrass**

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2	Brown patch	<i>Rhizoctonia sp./spp.</i>
1	Dense thatch layer	<i>Abiotic disorder</i>
1	Leaf rust; rust	<i>Puccinia sp./spp.</i>
2	Red thread	<i>Laetisaria fuciformis</i>
1	Southern Blight	<i>Sclerotium rolfsii</i>
4	Summer patch	<i>Magnaporthe poae</i>

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**11 Total for Bluegrass**

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**Fescue**

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1	Anthracnose	<i>Colletotrichum graminicola</i>
15	Brown patch	<i>Rhizoctonia sp./spp.</i>
3	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Excessive water	<i>Abiotic disorder</i>
2	No pathogen found	<i>Undetermined</i>
3	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Red thread	<i>Laetisaria fuciformis</i>

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**26 Total for Fescue**

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**Ryegrass**

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1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Gray leaf spot	<i>Pyricularia grisea</i>
1	Insufficient sample; INAD	<i>Undetermined</i>
1	Leptosphaerulina leaf spot	<i>Leptosphaerulina sp./spp.</i>
1	Pythium root dysfunction	<i>Pythium sp./spp.</i>

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**5 Total for Ryegrass**

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**Turfgrass**

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2	Brown patch	<i>Rhizoctonia sp./spp.</i>
5	Cultural/environmental problem	<i>Abiotic disorder</i>
3	Dense thatch layer	<i>Abiotic disorder</i>
2	Insufficient sample	<i>Undetermined</i>

1	Poor growing conditions	<i>Abiotic disorder</i>
2	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Red thread	<i>Laetisaria fuciformis</i>
1	Rhizoctonia root rot	<i>Rhizoctonia sp./spp.</i>
1	Summer patch	<i>Magnaporthe poae</i>
<b>18</b>	<b>Total for Turfgrass</b>	

### WOODY ORNAMENTALS

<b>Algerian Ivy</b>		
1	Low pH; high soluble salt damage	<i>Nutritional Disorder</i>
<b>1</b>	<b>Total for Algerian Ivy</b>	

<b>Arborvitae</b>		
4	Arborvitae leafminer	<i>Argyresthia thuiella</i>
5	Bagworm	<i>Thyridopteryx ephemeraeformis</i>
1	Canker	<i>Seiridium sp./spp.</i>
6	Decline; dieback	<i>Abiotic disorder</i>
3	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
1	Growth regulator effect suspected	<i>Chemical</i>
1	Kabatina twig blight	<i>Kabatina thujae</i>
2	Mites	<i>Order acari</i>
1	No pathogen found	<i>Undetermined</i>
7	Pestalotiopsis needle blight; Tip blight	<i>Pestalotiopsis sp./spp.</i>
2	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
3	Spider mite injury	<i>Unidentified Spider Mite</i>
1	Spruce spider mite	<i>Oligonychus ununguis</i>
6	Transplant shock; stress	<i>Abiotic disorder</i>
1	Twospotted spider mite	<i>Tetranychus urticae</i>
1	Winter injury	<i>Abiotic disorder</i>
<b>45</b>	<b>Total for Arborvitae</b>	

<b>Ash</b>		
3	Ash anthracnose	<i>Plagiostoma fraxinii</i>
1	Growth regulator effect suspected	<i>Chemical</i>
1	Leaf spot	<i>Marssonina sp./spp.</i>
1	Mycosphaerella leaf spot	<i>Mycosphaerella effigurata</i>
1	No pathogen found	<i>Undetermined</i>
<b>7</b>	<b>Total for Ash</b>	

<b>Azalea</b>		
1	Azalea lace bug	<i>Stephanitis pyrioides</i>
1	Leaf and flower gall	<i>Exobasidium sp./spp.</i>
1	Lichens	<i>Lichenes</i>

<b>3 Total for Azalea</b>		
<b>Baldcypress</b>		
1	Cypress twig gall midge	<i>Taxodiomyia cupressiananassa</i>
1	Transplant shock; stress	<i>Abiotic disorder</i>
<b>2 Total for Baldcypress</b>		
<b>Barberry</b>		
1	No pathogen found	<i>Undetermined</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>2 Total for Barberry</b>		
<b>Beech</b>		
1	Anthracnose	<i>Apiognomonina sp./spp.</i>
<b>1 Total for Beech</b>		
<b>Birch</b>		
1	Anthracnose	<i>Cryptocline betularum</i>
1	Anthracnose	<i>Gloeosporium sp./spp.</i>
1	No pathogen found	<i>Undetermined</i>
1	Phomopsis leaf spot	<i>Phomopsis sp./spp.</i>
1	Trunk girdling; girdling root	<i>Abiotic disorder</i>
<b>5 Total for Birch</b>		
<b>Black Gum</b>		
1	Decline; dieback	<i>Abiotic disorder</i>
1	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
1	Transplant shock; stress	<i>Abiotic disorder</i>
1	Undetermined injury	<i>Undetermined</i>
<b>4 Total for Black Gum</b>		
<b>Boxwood</b>		
69	Boxwood blight; leaf and stem blight	<i>Cylindrocladium pseudonaviculatum</i>
25	Boxwood leafminer	<i>Monarthropalpus flavus (buxi)</i>
3	Boxwood mite	<i>Eurytetranychus buxi</i>
1	Boxwood psyllid	<i>Psylla buxi</i>
79	Boxwood Volutella canker	<i>Volutella buxi</i>
2	Cultural/environmental problem	<i>Abiotic disorder</i>
3	Decline; dieback	<i>Abiotic disorder</i>
1	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
1	Foliar distortion	<i>Unidentified Agent</i>
1	Freeze; frost; cold damage	<i>Abiotic disorder</i>

55	Macrophoma dieback	<i>Macrophoma sp./spp.</i>
44	No pathogen found	<i>Undetermined</i>
2	Oedema; edema	<i>Abiotic disorder</i>
2	Phomopsis dieback; tip blight; canker	<i>Phomopsis sp./spp.</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
1	Poor growing conditions	<i>Abiotic disorder</i>
4	Spider mite injury	<i>Unidentified Spider Mite</i>
4	Transplant shock; stress	<i>Abiotic disorder</i>
1	Unknown abiotic disorder	<i>Abiotic disorder</i>
11	Winter injury; winter desiccation	<i>Abiotic disorder</i>
<b>310</b>	<b>Total for Boxwood</b>	
<b>Buckeye</b>		
1	Insufficient sample	<i>Undetermined</i>
1	Undetermined abiotic injury	<i>Abiotic disorder</i>
<b>2</b>	<b>Total for Buckeye</b>	
<b>Buckthorn</b>		
1	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
<b>1</b>	<b>Total for Buckthorn</b>	
<b>Butterfly Bush</b>		
1	Cladosporium leaf spot	<i>Cladosporium sp./spp.</i>
1	Herbicide injury suspected	<i>Chemical</i>
2	Spider mite injury	<i>Unidentified Spider Mite</i>
<b>4</b>	<b>Total for Butterfly Bush</b>	
<b>Butternut</b>		
1	Walnut anthracnose	<i>Ophiognomonina leptostyla</i>
<b>1</b>	<b>Total for Butternut</b>	
<b>Cedar</b>		
1	Bagworm	<i>Thyridopteryx ephemeraeformis</i>
1	Canker	<i>Seiridium sp./spp.</i>
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	No pathogen found	<i>Undetermined</i>
1	Tip blight	<i>Kabatina sp./spp.</i>
<b>5</b>	<b>Total for Cedar</b>	
<b>Cherry</b>		
2	Decline; dieback	<i>Abiotic disorder</i>
1	Environmental stress; problem	<i>Abiotic disorder</i>

1	Insufficient sample; INAD	<i>Undetermined</i>
1	Japanese beetle	<i>Popillia japonica</i>
3	Leaf spot	<i>Unidentified Fungus</i>
3	Leaf spot; shothole	<i>Blumeriella jaapii</i>
1	Leucostoma canker	<i>Leucostoma sp./spp.</i>
3	No pathogen found	<i>Undetermined</i>
1	Normal plant growth	<i>Undetermined</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
1	Transplant shock; stress	<i>Abiotic disorder</i>

**18 Total for Cherry**

**Cherrylaurel**

1	Anthraxnose	<i>Colletotrichum sp./spp.</i>
5	Bacterial leaf spot	<i>Xanthomonas campestris pv. pruni</i>
2	Cultural/environmental problem	<i>Abiotic disorder</i>
2	Decline; dieback	<i>Abiotic disorder</i>
2	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
1	Leaf spot	<i>Unidentified Fungus</i>
1	Leaf spot	<i>Unknown cause</i>
2	No pathogen found	<i>Undetermined</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
1	Root rot	<i>Unidentified Agent</i>
1	Spider mite injury	<i>Unidentified Spider Mite</i>
1	Transplant shock; stress	<i>Abiotic disorder</i>
1	Verticillium wilt	<i>Verticillium sp./spp.</i>
5	Winter injury	<i>Abiotic disorder</i>

**26 Total for Cherrylaurel**

**Chestnut**

1	Anthraxnose	<i>Glomerella sp./spp.</i>
1	Anthraxnose	<i>Unidentified Fungus</i>
1	Canker	<i>Cryptodiaporthe sp./spp.</i>
1	Unidentified insect	<i>Unidentified Insect</i>

**4 Total for Chestnut**

**Common Elderberry**

1	Undetermined injury or wound	<i>Undetermined</i>
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**1 Total for Common Elderberry**

**Cotoneaster**

1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Lace bugs	<i>Family Tingidae</i>

**2 Total for Cotoneaster**



<b>Crabapple</b>		
4	Apple scab	<i>Venturia inaequalis</i>
1	Decline; dieback	<i>Abiotic disorder</i>
1	Fire blight	<i>Erwinia amylovora</i>
2	Frogeye leaf spot; black rot	<i>Botryosphaeria obtusa</i>
1	Growth regulator effect suspected	<i>Chemical</i>
1	Leaf skeletonizers	<i>Family Zygaenidae</i>
1	Lichens	<i>Lichenes</i>
1	Woolly aphids	<i>Family Aphididae; Adelgidae</i>
<b>12</b>	<b>Total for Crabapple</b>	
<b>Cryptomeria</b>		
1	Dieback; canker	<i>Diplodia sp./spp.</i>
<b>1</b>	<b>Total for Cryptomeria</b>	
<b>Cypress</b>		
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Insect damage	<i>Unidentified Insect</i>
1	Mechanical damage	<i>Abiotic disorder</i>
1	Phomopsis dieback; tip blight; canker	<i>Phomopsis sp./spp.</i>
1	Spider mite injury	<i>Unidentified Spider Mite</i>
<b>5</b>	<b>Total for Cypress</b>	
<b>Dawn Redwood</b>		
1	Leaf scorch	<i>Abiotic disorder</i>
<b>1</b>	<b>Total for Dawn Redwood</b>	
<b>Dogwood</b>		
1	Armored scales	<i>Family Diaspididae</i>
1	Cicada egg-laying injury	<i>Unidentified Cicada</i>
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
3	Dogwood leaf spot	<i>Septoria cornicola</i>
4	Dogwood powdery mildew	<i>Erysiphe pulchra</i>
1	Growth regulator effect suspected	<i>Chemical</i>
1	Leaf scorch	<i>Abiotic disorder</i>
2	No pathogen found	<i>Undetermined</i>
1	Nutritional problem suspected	<i>Nutritional Disorder</i>
2	Septoria leaf spot	<i>Septoria sp./spp.</i>
8	Spot anthracnose	<i>Elsinoe corni</i>
3	Transplant shock; stress	<i>Abiotic disorder</i>
<b>29</b>	<b>Total for Dogwood</b>	

<b>Douglas-fir</b>		
4	Swiss needle cast	<i>Phaeocryptopus gaeumanni</i>
<b>4</b>	<b>Total for Douglas-fir</b>	
<b>Elm</b>		
1	Artillery fungus	<i>Sphaerobolus stellatus</i>
1	Decline; dieback	<i>Abiotic disorder</i>
2	Insufficient sample	<i>Undetermined</i>
2	No pathogen found	<i>Undetermined</i>
1	Trunk girdling; girdling root	<i>Abiotic disorder</i>
1	Verticillium wilt	<i>Verticillium sp./spp.</i>
1	Wood boring insect damage	<i>Unidentified Insect</i>
<b>9</b>	<b>Total for Elm</b>	
<b>Euonymus</b>		
1	Anthracnose	<i>Unidentified Fungus</i>
2	Cultural/environmental problem	<i>Abiotic disorder</i>
3	Euonymus scale	<i>Unaspis euonymi</i>
1	Freeze; frost; cold damage	<i>Abiotic disorder</i>
1	Growth regulator effect suspected	<i>Chemical</i>
1	Insufficient sample	<i>Undetermined</i>
3	No pathogen found	<i>Undetermined</i>
1	Oedema; edema	<i>Abiotic disorder</i>
1	Phomopsis dieback; tip blight; canker	<i>Phomopsis sp./spp.</i>
1	Rhizoctonia foliar/ aerial/ web blight	<i>Rhizoctonia solani</i>
1	Rhizoctonia stem rot	<i>Rhizoctonia sp./spp.</i>
1	Scald; scorch	<i>Abiotic disorder</i>
2	Spider mite injury	<i>Unidentified Spider Mite</i>
1	Undetermined abiotic injury	<i>Abiotic disorder</i>
1	Winter injury	<i>Abiotic disorder</i>
1	Wood decay fungus	<i>Steccherinum ochraceum</i>
<b>22</b>	<b>Total for Euonymus</b>	
<b>Falsecypress</b>		
1	Decline; dieback	<i>Abiotic disorder</i>
1	Leaf scorch	<i>Abiotic disorder</i>
1	No pathogen found	<i>Undetermined</i>
2	Scald; scorch	<i>Abiotic disorder</i>
<b>5</b>	<b>Total for Falsecypress</b>	
<b>Filbert</b>		
1	Spider mite injury	<i>Unidentified Spider Mite</i>

<b>1</b>	<b>Total for Filbert</b>	
<b>Fir</b>		
1	Transplant shock; stress	<i>Abiotic disorder</i>
<b>1</b>	<b>Total for Fir</b>	
<b>Fothergilla</b>		
1	Cultural/environmental problem	<i>Abiotic disorder</i>
<b>1</b>	<b>Total for Fothergilla</b>	
<b>Franklinia</b>		
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
<b>1</b>	<b>Total for Franklinia</b>	
<b>Fringetree</b>		
1	No pathogen found	<i>Undetermined</i>
<b>1</b>	<b>Total for Fringetree</b>	
<b>Ginkgo</b>		
1	Anthracnose	<i>Colletotrichum sp./spp.</i>
1	Chemical injury suspected	<i>Chemical</i>
1	Cold injury suspected	<i>Abiotic disorder</i>
2	Growth regulator effect suspected	<i>Chemical</i>
<b>5</b>	<b>Total for Ginkgo</b>	
<b>Hackberry</b>		
1	Powdery mildew	<i>Erysiphe sp./spp.</i>
<b>1</b>	<b>Total for Hackberry</b>	
<b>Hawthorn</b>		
1	Cedar-quince rust	<i>Gymnosporangium clavipes</i>
<b>1</b>	<b>Total for Hawthorn</b>	
<b>Heavenly Bamboo</b>		
2	Winter injury	<i>Abiotic disorder</i>
<b>2</b>	<b>Total for Heavenly Bamboo</b>	
<b>Hemlock</b>		
1	Hemlock decline; dieback	<i>Abiotic disorder</i>
1	No pathogen found	<i>Undetermined</i>
1	Rosellinia blight	<i>Rosellinia herpotrichoides</i>

<b>3</b>	<b>Total for Hemlock</b>	
<b>Hickory</b>		
1	Phomopsis gall	<i>Phomopsis sp./spp.</i>
<b>1</b>	<b>Total for Hickory</b>	
<b>Holly</b>		
7	Black root rot	<i>Thielaviopsis basicola</i>
1	Cottony camellia scale	<i>Pulvinaria floccifera</i>
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
10	Decline; dieback	<i>Abiotic disorder</i>
1	Insufficient sample	<i>Undetermined</i>
3	Japanese maple scale	<i>Lopholeucaspis japonica</i>
1	Leaf spot	<i>Unidentified Fungus</i>
1	Lichens	<i>Lichenes</i>
4	No pathogen found	<i>Undetermined</i>
1	Normal plant growth	<i>Undetermined</i>
2	Obscure scale	<i>Melanaspis obscura</i>
2	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Scald; scorch	<i>Abiotic disorder</i>
1	Spider mite injury	<i>Unidentified Spider Mite</i>
2	Transplant shock; stress	<i>Abiotic disorder</i>
1	Whiteflies	<i>Family Aleyrodidae</i>
2	Winter injury	<i>Abiotic disorder</i>
<b>42</b>	<b>Total for Holly</b>	
<b>Honeylocust</b>		
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Lichens	<i>Lichenes</i>
1	No pathogen found	<i>Undetermined</i>
1	Normal plant growth	<i>Undetermined</i>
1	Passalora leaf spot	<i>Passalora sp./spp.</i>
1	Unidentified fungus	<i>Unidentified fungus</i>
<b>6</b>	<b>Total for Honeylocust</b>	
<b>Hornbeam</b>		
1	Decline; dieback	<i>Abiotic disorder</i>
<b>1</b>	<b>Total for Hornbeam</b>	
<b>Horsechestnut; Buckeye</b>		
1	Powdery mildew	<i>Erysiphe sp./spp.</i>
<b>1</b>	<b>Total for Horsechestnut; Buckeye</b>	

<b>Hydrangea</b>		
1	Armillaria root rot	<i>Armillaria sp./spp.</i>
1	Chemical injury suspected	<i>Chemical</i>
1	Chimera	<i>Abiotic disorder</i>
5	Fungal leaf spot	<i>Cercospora hydrangeae</i>
1	Insect damage	<i>Unidentified Insect</i>
1	Iron deficiency	<i>Nutritional Disorder</i>
1	No pathogen found	<i>Undetermined</i>
1	Nutritional problem suspected	<i>Nutritional Disorder</i>
1	Sooty mold	<i>Unidentified Fungus</i>
1	Spider mite injury	<i>Unidentified Spider Mite</i>
1	Winter injury	<i>Abiotic disorder</i>
<b>15</b>	<b>Total for Hydrangea</b>	
<b>Itea</b>		
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Insect damage	<i>Unidentified Insect</i>
<b>2</b>	<b>Total for Itea</b>	
<b>Juniper</b>		
1	Arborvitae leafminer	<i>Argyresthia thuiella</i>
1	Cedar-apple rust	<i>Gymnosporangium juniperi-virginianae</i>
2	Cedar-quince rust	<i>Gymnosporangium clavipes</i>
1	Decline; dieback	<i>Abiotic disorder</i>
2	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
1	Fletcher scale	<i>Parthenolecanium fletcheri</i>
1	Freeze; frost; cold damage	<i>Abiotic disorder</i>
1	Insect damage	<i>Unidentified Insect</i>
2	Kabatina tip blight; needle blight	<i>Kabatina juniperi</i>
2	Mites	<i>Order Acari</i>
5	No pathogen found	<i>Undetermined</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
1	Praying mantis	<i>Hierodula patellifera</i>
5	Spider mite injury	<i>Unidentified Spider Mite</i>
2	Transplant shock; stress	<i>Abiotic disorder</i>
<b>28</b>	<b>Total for Juniper</b>	
<b>Katsura Tree</b>		
1	Scale insects	<i>Order homoptera</i>
1	Transplant shock; stress	<i>Abiotic disorder</i>
<b>2</b>	<b>Total for Katsura Tree</b>	

<b>Kentucky Coffee Tree</b>		
2	No pathogen found	<i>Undetermined</i>
<b>2</b>	<b>Total for Kentucky Coffee Tree</b>	
<b>Leyland Cypress</b>		
1	Bagworm	<i>Thyridopteryx ephemeraeformis</i>
1	Cold injury suspected	<i>Abiotic disorder</i>
3	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
1	Environmental stress; problem	<i>Abiotic disorder</i>
1	Juniper scale	<i>Carulaspis juniperi</i>
1	No pathogen found	<i>Undetermined</i>
3	Seiridium canker	<i>Seiridium unicorne</i>
3	Transplant shock; stress	<i>Abiotic disorder</i>
2	Winter injury	<i>Abiotic disorder</i>
<b>16</b>	<b>Total for Leyland Cypress</b>	
<b>Lilac</b>		
1	Excessive water	<i>Abiotic disorder</i>
1	Leaf scorch	<i>Abiotic disorder</i>
1	Lilac borer; Ash clearwing	<i>Podosesia syringae</i>
1	No pathogen found	<i>Undetermined</i>
1	Phomopsis leaf spot	<i>Phomopsis sp./spp.</i>
1	Poor growing conditions	<i>Abiotic disorder</i>
1	Powdery mildew	<i>Podosphaera sp./spp.</i>
1	Transplant shock; stress	<i>Abiotic disorder</i>
1	Trunk girdling; girdling root	<i>Abiotic disorder</i>
1	Winter injury	<i>Abiotic disorder</i>
<b>10</b>	<b>Total for Lilac</b>	
<b>Locust</b>		
1	No pathogen found	<i>Undetermined</i>
<b>1</b>	<b>Total for Locust</b>	
<b>Magnolia</b>		
1	Chimera	<i>Abiotic disorder</i>
3	No pathogen found	<i>Undetermined</i>
2	Phomopsis leaf spot	<i>Phomopsis sp./spp.</i>
5	Seasonal leaf drop	<i>Abiotic disorder</i>
1	Transplant shock; stress	<i>Abiotic disorder</i>
13	Winter injury	<i>Abiotic disorder</i>
3	Yellow-poplar weevil	<i>Odontopus calceatus</i>
<b>28</b>	<b>Total for Magnolia</b>	

<b>Maple</b>		
1	Alternaria leaf spot	<i>Alternaria sp./spp.</i>
10	Anthrachnose (Monostichella leaf spot)	<i>Monostichella hysteroidea</i>
1	Burls; adventitious growth	<i>Abiotic disorder</i>
1	Cold injury suspected	<i>Abiotic disorder</i>
2	Cultural/environmental problem	<i>Abiotic disorder</i>
4	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
1	Gloomy scale	<i>Melanaspis tenebricosa</i>
5	Growth regulator effect suspected	<i>Chemical</i>
1	Herbicide injury suspected	<i>Chemical</i>
2	Insect damage	<i>Unidentified Insect</i>
2	Japanese beetle	<i>Popillia japonica</i>
2	Japanese maple scale	<i>Lopholeucaspis japonica</i>
1	Leaf spot	<i>Unidentified Fungus</i>
1	Lichens	<i>Lichenes</i>
27	Maple anthracnose	<i>Aureobasidium apocryptum</i>
2	Maple bladdergall mite	<i>Vasates quadripedes</i>
14	Maple decline	<i>Complex</i>
19	Maple leaf blister	<i>Taphrina carveri</i>
4	Maple leaf spot	<i>Phyllosticta minima</i>
1	Maple petiole borer	<i>Caulocampus acericaulis</i>
2	Maple tar spot	<i>Rhytisma acerinum</i>
8	No pathogen found	<i>Undetermined</i>
1	Normal plant growth	<i>Undetermined</i>
1	Obscure scale	<i>Melanaspis obscura</i>
1	Oystershell scale	<i>Lepidosaphes ulmi</i>
1	Phomopsis leaf spot	<i>Phomopsis sp./spp.</i>
7	Phyllosticta leaf spot	<i>Phyllosticta sp./spp.</i>
2	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
1	Potato leafhopper	<i>Empoasca fabae</i>
2	Transplant shock; stress	<i>Abiotic disorder</i>
1	Trunk girdling; girdling root	<i>Abiotic disorder</i>
2	Transplant shock; stress	<i>Abiotic disorder</i>
1	Undetermined abiotic injury	<i>Abiotic disorder</i>
1	Undetermined injury or wound	<i>Undetermined</i>
1	Verticillium wilt	<i>Verticillium sp./spp.</i>
2	Wood decay fungus	<i>Unidentified fungus</i>
<b>135</b>	<b>Total for Maple</b>	
<b>Mulberry</b>		
1	Leaf spot	<i>Phloeospora multimaculans</i>
<b>1</b>	<b>Total for Mulberry</b>	

<b>Oak</b>		
34	Actinopelte leaf spot	<i>Tubakia dryina</i>
34	Anthrachnose	<i>Apiognomonina sp./spp.</i>
29	Bacterial leaf scorch	<i>Xylella fastidiosa</i>
2	Cultural/environmental problem	<i>Abiotic disorder</i>
4	Decline; dieback	<i>Abiotic disorder</i>
1	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
1	Fungal canker	<i>Various Fungi</i>
13	Growth regulator effect suspected	<i>Chemical</i>
6	Horned oak gall wasp	<i>Callirhytis cornigera</i>
5	Insect damage	<i>Unidentified Insect</i>
3	Insect gall	<i>Insect gall</i>
2	Insufficient sample	<i>Undetermined</i>
7	Iron deficiency	<i>Nutritional Disorder</i>
4	Jumping oak gall wasp	<i>Neuroterus saltatorius</i>
2	Lace bugs	<i>Family Tingidae</i>
2	Leaf scorch	<i>Abiotic disorder</i>
11	Leaf skeletonizers	<i>Family Zygaenid</i>
6	Leaf spot	<i>Monochaetia sp./spp.</i>
1	Lichens	<i>Lichenes</i>
8	No pathogen found	<i>Undetermined</i>
1	Normal plant growth	<i>Undetermined</i>
11	Oak powdery mildew	<i>Erysiphe (Oidium) alphitoides</i>
1	Oak shothole leafminer	<i>Agromyza viridula</i>
1	Oak vein pocket gallmaker	<i>Macrodiplosis quercusoruca</i>
2	Pine oak gall rust	<i>Cronartium quercuum</i>
1	Roundheaded wood borers	<i>Family Cerambycidae</i>
1	Scald; scorch	<i>Abiotic disorder</i>
1	Spider mite injury	<i>Unidentified Spider Mite</i>
7	Spider mites	<i>Family Tetranychidae</i>
1	Transplant shock; stress	<i>Abiotic disorder</i>
2	Undetermined injury	<i>Undetermined</i>
2	Unknown abiotic disorder	<i>Abiotic disorder</i>
1	Unidentified caterpillar	<i>Unidentified Caterpillar</i>
<b>207</b>	<b>Total for Oak</b>	

<b>Pear</b>		
1	Anthrachnose	<i>Colletotrichum sp./spp.</i>
2	Cedar-quince rust	<i>Gymnosporangium clavipes</i>
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
4	Fire blight	<i>Erwinia amylovora</i>
3	Growth regulator effect suspected	<i>Chemical</i>
1	Leaf spot	<i>Unidentified Fungus</i>



1	Lichens	<i>Lichenes</i>
1	Mechanical damage	<i>Abiotic disorder</i>
2	No pathogen found	<i>Undetermined</i>
5	Pear decline	<i>Abiotic disorder</i>
1	Phomopsis leaf spot	<i>Phomopsis sp./spp.</i>
<b>23</b>	<b>Total for Pear</b>	
<b>Persimmon</b>		
1	No pathogen found	<i>Undetermined</i>
1	Undetermined abiotic injury	<i>Abiotic disorder</i>
<b>2</b>	<b>Total for Persimmon</b>	
<b>Pieris</b>		
2	No pathogen found	<i>Undetermined</i>
<b>2</b>	<b>Total for Pieris</b>	
<b>Pine</b>		
1	Black pineleaf scale	<i>Nuculaspis californica</i>
3	Brown spot; needle blight	<i>Mycosphaerella dearnessii</i>
1	Cytospora canker; Dieback	<i>Cytospora sp./spp.</i>
2	Decline; dieback	<i>Abiotic disorder</i>
5	Diplodia tip blight; canker	<i>Diplodia sapinea</i>
8	Dothistroma needle blight	<i>Dothistroma pini</i>
1	Environmental stress; problem	<i>Abiotic disorder</i>
2	Fall needle drop	<i>Abiotic disorder</i>
1	Insect damage	<i>Unidentified Insect</i>
1	Insufficient sample	<i>Undetermined</i>
1	Leaf scorch	<i>Abiotic disorder</i>
1	Lichens	<i>Lichenes</i>
6	No pathogen found	<i>Undetermined</i>
1	Pine bark adelgid	<i>Pineus strobi</i>
1	Pine needle scale	<i>Chionaspis pinifoliae</i>
2	Pine sawflies	<i>Family Diprionidae</i>
1	Poor growing conditions	<i>Abiotic disorder</i>
2	Root problems	<i>Abiotic disorder</i>
2	Transplant shock; stress	<i>Abiotic disorder</i>
4	Undetermined injury	<i>Undetermined</i>
8	White pine decline	<i>Abiotic disorder</i>
1	White pine root decline	<i>Leptographium procerum</i>
1	Winter injury	<i>Abiotic disorder</i>
1	Woolly aphids	<i>Family Aphididae; Adelgidae</i>
<b>57</b>	<b>Total for Pine</b>	

<b>Plum</b>		
1	Black knot	<i>Apiosporina morbosa</i>
<b>1</b>	<b>Total for Plum</b>	
<b>Poplar</b>		
1	Insufficient sample; INAD	<i>Undetermined</i>
2	Leaf spot	<i>Marssonina sp./spp.</i>
1	Rust	<i>Melampsora sp./spp.</i>
<b>4</b>	<b>Total for Poplar</b>	
<b>Quince</b>		
1	Woolly aphids	<i>Family Aphididae; Adelgidae</i>
<b>1</b>	<b>Total for Quince</b>	
<b>Redbud</b>		
1	Anthracnose	<i>Gloeosporium sp./spp.</i>
1	Anthracnose	<i>Unidentified Fungus</i>
1	Decline; dieback	<i>Abiotic disorder</i>
2	Growth regulator effect suspected	<i>Chemical</i>
1	Transplant shock; stress	<i>Abiotic disorder</i>
1	Twospotted spider mite	<i>Tetranychus urticae</i>
1	Undetermined abiotic injury	<i>Abiotic disorder</i>
2	Verticillium wilt	<i>Verticillium sp./spp.</i>
<b>10</b>	<b>Total for Redbud</b>	
<b>Rhododendron</b>		
4	Winter injury	<i>Abiotic disorder</i>
<b>4</b>	<b>Total for Rhododendron</b>	
<b>Rose</b>		
2	Black spot (rose)	<i>Diplocarpon (Marssonina) rosae</i>
1	Botrytis blight	<i>Botrytis sp./spp.</i>
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Chemical injury suspected	<i>Chemical</i>
1	Fungal canker	<i>Various Fungi</i>
1	Glyphosate injury suspected	<i>Chemical</i>
1	Herbicide injury suspected	<i>Chemical</i>
1	Insect damage	<i>Unidentified Insect</i>
2	Insufficient sample	<i>Undetermined</i>
1	Leaf spot	<i>Pseudocercospora puderi</i>
1	No pathogen found	<i>Undetermined</i>
1	Powdery mildew	<i>Sphaerotheca sp./spp.</i>
2	Rose canker	<i>Coniothyrium sp./spp.</i>

3	Rose rosette disease	<i>Rose Rosette Virus (RRV)</i>
3	Roseslug (sawfly)	<i>Endelomyia sp./spp.</i>
2	Spider mites	<i>Family Tetranychidae</i>
1	Thrips	<i>Order thysanoptera</i>
1	Twospotted spider mite	<i>Tetranychus urticae</i>
1	Winter injury	<i>Abiotic disorder</i>
<b>27</b>	<b>Total for Rose</b>	
<b>Rose-of-sharon</b>		
1	Crown gall	<i>Agrobacterium sp./spp.</i>
<b>1</b>	<b>Total for Rose-of-sharon</b>	
<b>Sassafras</b>		
1	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
1	Mechanical damage	<i>Abiotic disorder</i>
1	No pathogen found	<i>Undetermined</i>
<b>3</b>	<b>Total for Sassafras</b>	
<b>Silverbell</b>		
1	No pathogen found	<i>Undetermined</i>
<b>1</b>	<b>Total for Silverbell</b>	
<b>Smoke Tree</b>		
1	No pathogen found	<i>Undetermined</i>
1	Verticillium wilt	<i>Verticillium sp./spp.</i>
<b>2</b>	<b>Total for Smoke Tree</b>	
<b>Spice Bush</b>		
1	Unspecified viral disease	<i>Unspecified Viral Disease</i>
<b>1</b>	<b>Total for Spice Bush</b>	
<b>Spirea</b>		
1	Phyllosticta leaf spot	<i>Phyllosticta sp./spp.</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
<b>2</b>	<b>Total for Spirea</b>	
<b>Spruce</b>		
1	Abnormal plant growth	<i>Abiotic disorder</i>
2	Bagworm	<i>Thyridopteryx ephemeraeformis</i>
1	Black root rot	<i>Thielaviopsis basicola</i>
1	Chemical injury suspected	<i>Chemical</i>
1	Cultural/environmental problem	<i>Abiotic disorder</i>

4	Decline; dieback	<i>Abiotic disorder</i>
1	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
6	Dothistroma needle blight	<i>Dothistroma sp./spp.</i>
1	Freeze; frost; cold damage	<i>Abiotic disorder</i>
1	High pH damage	<i>Nutritional Disorder</i>
1	Lophodermium needle cast	<i>Lophodermium seditiosum</i>
1	Magnesium deficiency	<i>Nutritional Disorder</i>
1	Nitrogen deficiency	<i>Nutritional Disorder</i>
7	No pathogen found	<i>Undetermined</i>
4	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
2	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
35	Rhizosphaera needle cast	<i>Rhizosphaera kalkhoffii</i>
1	Scald; scorch	<i>Abiotic disorder</i>
9	Spider mite injury	<i>Unidentified Spider Mite</i>
1	Spruce needleminer	<i>Endothenia albolineana</i>
3	Spruce spider mite	<i>Oligonychus ununguis</i>
13	Stigmina needle blight	<i>Stigmina lautii</i>
5	Transplant shock; stress	<i>Abiotic disorder</i>
<b>102</b>	<b>Total for Spruce</b>	

<b>Stinking Cedar</b>		
1	Phyllosticta leaf spot	<i>Phyllosticta sp./spp.</i>
<b>1</b>	<b>Total for Stinking Cedar</b>	

<b>Sumac</b>		
1	Insufficient information	<i>Undetermined</i>
1	No pathogen found	<i>Undetermined</i>
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
<b>3</b>	<b>Total for Sumac</b>	

<b>Sweetgum</b>		
1	Growth regulator effect suspected	<i>Chemical</i>
2	No pathogen found	<i>Undetermined</i>
<b>3</b>	<b>Total for Sweetgum</b>	

<b>Sycamore</b>		
1	Bacterial leaf scorch	<i>Xylella fastidiosa</i>
1	No pathogen found	<i>Undetermined</i>
1	Sycamore lace bug	<i>Corythucha ciliata</i>
1	Verticillium wilt	<i>Verticillium sp./spp.</i>
<b>4</b>	<b>Total for Sycamore</b>	

<b>Taxus</b>		
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1	Cottony camellia scale	<i>Pulvinaria floccifera</i>
1	Fletcher scale	<i>Parthenolecanium fletcheri</i>
2	No pathogen found	<i>Undetermined</i>
7	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
2	Spider mite injury	<i>Unidentified Spider Mite</i>
7	Taxus decline; dieback	<i>Abiotic disorder</i>
2	Transplant shock; stress	<i>Abiotic disorder</i>
<b>22</b>	<b>Total for Taxus</b>	

<b>Tulip Tree</b>		
3	No pathogen found	<i>Undetermined</i>
2	Sooty mold	<i>Unidentified Fungus</i>
1	Trunk girdling; girdling root	<i>Abiotic disorder</i>
2	Tuliptree scale	<i>Toumeyella liriodendri</i>
1	Undetermined injury	<i>Undetermined</i>
4	Yellow-poplar weevil	<i>Odontopus calceatus</i>
<b>13</b>	<b>Total for Tulip Tree</b>	

<b>Viburnum</b>		
1	Decline; dieback	<i>Abiotic disorder</i>
1	Mold	<i>Unidentified Fungus</i>
1	No pathogen found	<i>Undetermined</i>
1	Phytophthora dieback; blight	<i>Phytophthora sp./spp.</i>
1	Thread blight	<i>Ceratobasidium (Corticium) ochroleucum (stevensii)</i>
1	Transplant shock; stress	<i>Abiotic disorder</i>
<b>6</b>	<b>Total for Viburnum</b>	

<b>Walnut</b>		
1	Black walnut petiole gall mite	<i>Eriophyes caulis</i>
3	Walnut anthracnose	<i>Ophiognomonia leptostyla</i>
<b>4</b>	<b>Total for Walnut</b>	

<b>Willow</b>		
1	Anthracnose; Colletotrichum leaf spot	<i>Colletotrichum sp./spp.</i>
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Dieback; canker; twig blight	<i>Botryosphaeria sp./spp.</i>
1	Leaf spot	<i>Unidentified Fungus</i>
1	Phomopsis dieback; tip blight; canker	<i>Phomopsis sp./spp.</i>
1	Poor growing conditions	<i>Abiotic disorder</i>
1	Poplar; willow Cytospora canker	<i>Valsa (Cytospora) sordida (chrysosperma)</i>
1	Spider mites	<i>Family Tetranychidae</i>
2	Transplant shock; stress	<i>Abiotic disorder</i>

1	Undetermined injury or wound	<i>Undetermined</i>
1	Willow leaf blight; scab	<i>Venturia saliciperda</i>
<b>12</b>	<b>Total for Willow</b>	

<b>Wisteria</b>		
1	Leaf spot	<i>Unidentified Fungus</i>
<b>1</b>	<b>Total for Wisteria</b>	

<b>Woody Ornamental</b>		
1	Bagworm	<i>Thyridopteryx ephemeraeformis</i>
1	Insufficient sample; INAD	<i>Undetermined</i>
1	No pathogen found	<i>Undetermined</i>
1	Poor pruning practice	<i>Abiotic disorder</i>
1	Scorch	<i>Abiotic disorder</i>
<b>5</b>	<b>Total for Woody Ornamental</b>	

<b>Yellowwood</b>		
1	Canker- unidentified fungus	<i>Unidentified fungus</i>
1	Insufficient sample	<i>Undetermined</i>
1	Wood boring insect damage	<i>Unidentified Insect</i>
<b>3</b>	<b>Total for Yellowwood</b>	

<b>Zelkova</b>		
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Excessive water	<i>Abiotic disorder</i>
1	No pathogen found	<i>Undetermined</i>
<b>3</b>	<b>Total for Zelkova</b>	

**P. RAMORUM NURSERY SURVEY**

<b>Azalea</b>		
13	No pathogen found	<i>Undetermined</i>
1	Phytophthora dieback; blight	<i>Phytophthora sp./spp.</i>
<b>14</b>	<b>Total for Azalea</b>	

<b>Camellia</b>		
4	No pathogen found	<i>Undetermined</i>
<b>4</b>	<b>Total for Camellia</b>	

<b>Pieris</b>		
24	No pathogen found	<i>Undetermined</i>
2	Phytophthora dieback; blight	<i>Phytophthora sp./spp.</i>

<b>26</b>	<b>Total for Pieris</b>	
<b>Rhododendron</b>		
56	No pathogen found	<i>Undetermined</i>
19	Phytophthora dieback; blight	<i>Phytophthora sp./spp.</i>
<b>75</b>	<b>Total for Rhododendron</b>	
<b>Viburnum</b>		
46	No pathogen found	<i>Undetermined</i>
7	Phytophthora dieback; blight	<i>Phytophthora sp./spp.</i>
<b>53</b>	<b>Total for Viburnum</b>	
<b>PINEWOOD NEMATODE EXTRACTION</b>		
<b>Juniper</b>		
20	PWNE-no pathogen found	<i>Undetermined</i>
<b>20</b>	<b>Total for Juniper</b>	
<b>VEGETABLES</b>		
<b>Arugula</b>		
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Rhizoctonia foliar/ aerial/ web blight	<i>Rhizoctonia solani</i>
<b>2</b>	<b>Total for Arugula</b>	
<b>Asparagus</b>		
1	Cercospora blight	<i>Cercospora asparagi</i>
1	No pathogen found	<i>Undetermined</i>
<b>2</b>	<b>Total for Asparagus</b>	
<b>Bean</b>		
1	Animal damage	<i>Abiotic disorder</i>
1	Aphids	<i>Family Aphididae</i>
1	Ashy stem blight	<i>Macrophomina phaseolina</i>
3	Bean angular leaf spot	<i>Phaeoisariopsis griseola</i>
3	Bean anthracnose	<i>Colletotrichum lindemuthianum</i>
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Insect damage	<i>Unidentified Insect</i>
1	Insufficient information	<i>Undetermined</i>
4	Insufficient sample	<i>Undetermined</i>
3	Leaf scorch	<i>Abiotic disorder</i>
1	Nutritional problem suspected	<i>Nutritional Disorder</i>
2	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
2	Rhizoctonia foliar/ aerial/ web blight	<i>Rhizoctonia solani</i>

3	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
1	Scald; scorch	<i>Abiotic disorder</i>
2	Southern Blight	<i>Sclerotium rolfsii</i>
3	Thrips	<i>Order thysanoptera</i>
2	Twospotted spider mite	<i>Tetranychus urticae</i>
1	Unknown abiotic disorder	<i>Abiotic disorder</i>
<b>36</b>	<b>Total for Bean</b>	
<b>Broccoli</b>		
1	Pythium damping off	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Broccoli</b>	
<b>Brussels-sprouts</b>		
1	Alternaria leaf spot	<i>Alternaria japonica</i>
1	Leaf spot- abiotic	<i>Abiotic disorder</i>
1	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
<b>3</b>	<b>Total for Brussels-sprouts</b>	
<b>Cabbage</b>		
1	Alternaria leaf spot	<i>Alternaria sp./spp.</i>
1	Cabbage maggot	<i>Delia radicum</i>
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	Crucifer black leg; root rot	<i>Phoma lingam</i>
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Growth regulator effect suspected	<i>Chemical</i>
2	Insect damage	<i>Unidentified Insect</i>
2	Phytophthora root and crown rot	<i>Phytophthora megasperma</i>
1	Planted too densely	<i>Abiotic disorder</i>
1	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
1	Southern Blight	<i>Sclerotium rolfsii</i>
2	Undetermined injury	<i>Undetermined</i>
1	Unknown abiotic disorder	<i>Abiotic disorder</i>
1	White mold (stem rot)	<i>Sclerotinia sclerotiorum</i>
<b>17</b>	<b>Total for Cabbage</b>	
<b>Cantaloupe</b>		
2	Alternaria leaf blight and spot	<i>Alternaria cucumerina</i>
1	Cercospora leaf spot	<i>Cercospora sp./spp.</i>
1	No pathogen found	<i>Undetermined</i>
2	Nutritional problem suspected	<i>Nutritional Disorder</i>
1	Pythium fruit rot;Cottony leak	<i>Pythium sp./spp.</i>
<b>7</b>	<b>Total for Cantaloupe</b>	



<b>Cardoon; Artichoke thistle</b>		
1	Undetermined injury	<i>Undetermined</i>
<b>1</b>	<b>Total for Cardoon; Artichoke thistle</b>	
<b>Carrot</b>		
1	Root-knot nematodes	<i>Meloidogyne sp./spp.</i>
<b>1</b>	<b>Total for Carrot</b>	
<b>Cauliflower</b>		
1	High soluble salt	<i>Nutritional Disorder</i>
<b>1</b>	<b>Total for Cauliflower</b>	
<b>Celery</b>		
1	Chimera	<i>Abiotic disorder</i>
1	Insect damage	<i>Unidentified Insect</i>
<b>2</b>	<b>Total for Celery</b>	
<b>Corn</b>		
2	Corn gray leaf spot	<i>Cercospora zeae-maydis</i>
1	Cultural/environmental problem	<i>Abiotic disorder</i>
1	Magnesium deficiency	<i>Nutritional disorder</i>
3	Northern corn leaf blight; leaf spot	<i>Setosphaeria turcica (turcicum)</i>
1	Nutritional deficiency	<i>Nutritional Disorder</i>
1	Poor pollination	<i>Abiotic disorder</i>
1	Rhizoctonia root rot	<i>Rhizoctonia sp./spp.</i>
1	Wireworm	<i>Family Elateridae</i>
<b>11</b>	<b>Total for Corn</b>	
<b>Cucumber</b>		
3	Anthraxnose	<i>Colletotrichum orbiculare</i>
1	Aphids	<i>Family Aphididae</i>
5	Cercospora leaf spot	<i>Cercospora citrullina</i>
1	Cucumber beetle	<i>Acalymma sp./spp.</i>
5	Cucurbit bacterial wilt	<i>Erwinia tracheiphila</i>
2	Cucurbit downy mildew	<i>Pseudoperonospora cubensis</i>
1	Fusarium wilt	<i>Fusarium oxysporum f.sp.cucumerinum</i>
3	No pathogen found	<i>Undetermined</i>
2	Nutritional deficiency	<i>Nutritional Disorder</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia fruit rot; belly rot	<i>Rhizoctonia solani</i>
1	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
2	Spider mite injury	<i>Unidentified Spider Mite</i>
2	Thrips damage	<i>Unidentified Thrips</i>

1	Twospotted spider mite	<i>Tetranychus urticae</i>
1	Undetermined injury	<i>Undetermined</i>
1	Unidentified caterpillar	<i>Unidentified Caterpillar</i>
<b>33</b>	<b>Total for Cucumber</b>	
<b>Curly Mustard; Leaf Mustard</b>		
1	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
<b>1</b>	<b>Total for Curly Mustard; Leaf Mustard</b>	
<b>Eggplant</b>		
1	Nutritional deficiency	<i>Nutritional Disorder</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Undetermined injury or wound	<i>Undetermined</i>
<b>3</b>	<b>Total for Eggplant</b>	
<b>Garlic</b>		
1	Bacterial soft rot	<i>Erwinia sp./spp.</i>
2	Cercospora leaf spot	<i>Cercospora duddiae</i>
1	Thrips damage	<i>Unidentified Thrips</i>
<b>4</b>	<b>Total for Garlic</b>	
<b>Globe Artichoke</b>		
1	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
<b>1</b>	<b>Total for Globe Artichoke</b>	
<b>Groundcherry</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
<b>2</b>	<b>Total for Groundcherry</b>	
<b>Indian Mustard</b>		
1	Nutritional deficiency	<i>Nutritional Disorder</i>
1	Unspecified viral disease	<i>Unspecified Viral Disease</i>
<b>2</b>	<b>Total for Indian Mustard</b>	
<b>Kale</b>		
1	Growth regulator effect suspected	<i>Chemical</i>
1	High pH	<i>Nutritional Disorder</i>
1	High pH; low soluble salt damage	<i>Nutritional Disorder</i>
1	High soluble salt	<i>Nutritional Disorder</i>
1	Rhizoctonia stem rot	<i>Rhizoctonia sp./spp.</i>
<b>5</b>	<b>Total for Kale</b>	

<b>Lettuce</b>		
1	Bacterial soft rot	<i>Erwinia sp./spp.</i>
1	Lacewing	<i>Micromus sp./spp.</i>
1	Lettuce leaf spot	<i>Septoria lactucae</i>
1	Nitrogen deficiency	<i>Nutritional Disorder</i>
1	No pathogen found	<i>Undetermined</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>6</b>	<b>Total for Lettuce</b>	
<b>Melon</b>		
1	Alternaria leaf blight and spot	<i>Alternaria cucumerina</i>
1	Anthraco nose	<i>Colletotrichum orbiculare</i>
1	Cercospora leaf spot	<i>Cercospora citrullina</i>
4	Cucurbit bacterial wilt	<i>Erwinia tracheiphila</i>
1	Insufficient sample	<i>Undetermined</i>
1	No pathogen found	<i>Undetermined</i>
1	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
<b>10</b>	<b>Total for Melon</b>	
<b>Okra</b>		
1	No pathogen found	<i>Undetermined</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>2</b>	<b>Total for Okra</b>	
<b>Onion</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Onion</b>	
<b>Pea</b>		
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
<b>1</b>	<b>Total for Pea</b>	
<b>Peanut</b>		
1	No pathogen found	<i>Undetermined</i>
<b>1</b>	<b>Total for Peanut</b>	
<b>Pepper</b>		
3	Blossom end rot	<i>Abiotic disorder</i>
1	Botrytis Fruit Rot	<i>Botrytis sp./spp.</i>
1	Heat stress	<i>Abiotic disorder</i>
1	High pH damage	<i>Nutritional Disorder</i>

1	High soluble salt	<i>Nutritional Disorder</i>
1	High temperature damage	<i>Abiotic disorder</i>
1	Magnesium deficiency	<i>Nutritional Disorder</i>
3	No pathogen found	<i>Undetermined</i>
1	Normal plant growth	<i>Undetermined</i>
2	Nutritional problem suspected	<i>Nutritional Disorder</i>
12	Pepper bacterial spot	<i>Xanthomonas campestris pv. vesicatoria</i>
1	Poor growing conditions	<i>Abiotic disorder</i>
10	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
2	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
1	Southern Blight	<i>Sclerotium rolfsii</i>
4	Sunscald	<i>Abiotic disorder</i>
1	Tomato spotted wilt	<i>Tomato Spotted Wilt Virus</i>
<b>46</b>	<b>Total for Pepper</b>	

<b>Potato</b>		
1	Bacterial soft rot	<i>Unidentified bacterium</i>
1	Charcoal rot	<i>Macrophomina sp./spp.</i>
1	Insufficient sample	<i>Undetermined</i>
1	Potato black dot	<i>Colletotrichum coccodes</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
1	Root-knot nematodes	<i>Meloidogyne sp./spp.</i>
<b>7</b>	<b>Total for Potato</b>	

<b>Pumpkin</b>		
1	Alternaria leaf blight and spot	<i>Alternaria cucumerina</i>
1	Anthraxnose	<i>Colletotrichum orbiculare</i>
1	Bacterial soft rot	<i>Unidentified Bacterium</i>
1	Cercospora leaf spot	<i>Cercospora citrullina</i>
3	Cucurbit powdery mildew	<i>Golovinomyces cichoracearum</i>
2	Fusarium crown rot; foot rot	<i>Fusarium solani f.sp. cucurbitae</i>
1	Fusarium fruit rot	<i>Fusarium sp./spp.</i>
1	Herbicide injury suspected	<i>Chemical</i>
1	Insufficient sample	<i>Undetermined</i>
1	Leaf scorch	<i>Abiotic disorder</i>
3	Microdochium blight	<i>Plectosphaerella cucumerina</i>
2	No pathogen found	<i>Undetermined</i>
2	Phytophthora crown rot; root rot; stem rot	<i>Phytophthora sp./spp.</i>
1	Phytophthora fruit rot; blight	<i>Phytophthora capsici</i>
2	Phytophthora root/ stem/ crown rot	<i>Phytophthora capsici</i>
1	Pythium fruit rot;cottony leak	<i>Pythium sp./spp.</i>
1	Rhizoctonia root rot	<i>Rhizoctonia sp./spp.</i>
1	Scald; scorch	<i>Abiotic disorder</i>

1	Soil compaction	<i>Abiotic disorder</i>
1	Twospotted spider mite	<i>Tetranychus urticae</i>
1	Undetermined abiotic injury	<i>Abiotic disorder</i>
<b>29</b>	<b>Total for Pumpkin</b>	
<b>Radish</b>		
1	Nitrogen deficiency	<i>Nutritional Disorder</i>
<b>1</b>	<b>Total for Radish</b>	
<b>Rhubarb</b>		
1	No pathogen found	<i>Undetermined</i>
<b>1</b>	<b>Total for Rhubarb</b>	
<b>Spinach</b>		
3	Cercospora leaf spot	<i>Cercospora beticola</i>
1	Rhizoctonia damping-off	<i>Rhizoctonia sp./spp.</i>
<b>4</b>	<b>Total for Spinach</b>	
<b>Squash</b>		
4	Anthraxnose	<i>Colletotrichum orbiculare</i>
1	Bacterial soft rot	<i>Unidentified Bacterium</i>
1	Belly rot	<i>Rhizoctonia solani</i>
3	Cercospora leaf spot	<i>Cercospora citrullina</i>
1	Cucumber beetles	<i>Subfamily Galerucinae</i>
2	Cucurbit bacterial wilt	<i>Erwinia tracheiphila</i>
1	Cucurbit downy mildew	<i>Pseudoperonospora cubensis</i>
2	Cucurbit powdery mildew	<i>Golovinomyces cichoracearum</i>
2	Insufficient sample; INAD	<i>Undetermined</i>
5	No pathogen found	<i>Undetermined</i>
1	Nutritional deficiency	<i>Nutritional Disorder</i>
1	Poor pollination	<i>Abiotic disorder</i>
1	Potyvirus Group	<i>Potyvirus sp./spp.</i>
1	Soil compaction	<i>Abiotic disorder</i>
1	Squash bug	<i>Anasa tristis</i>
<b>27</b>	<b>Total for Squash</b>	
<b>Sweetpotato</b>		
1	No pathogen found	<i>Undetermined</i>
1	Twospotted spider mite	<i>Tetranychus urticae</i>
<b>2</b>	<b>Total for Sweetpotato</b>	
<b>Tomato</b>		

3	Abnormal plant growth	<i>Abiotic disorder</i>
1	Anthrachnose (black dot root rot)	<i>Colletotrichum coccodes</i>
1	Anthrachnose fruit rot	<i>Colletotrichum sp./spp.</i>
1	Aphids	<i>Family Aphididae</i>
3	Bacterial canker	<i>Clavibacter michiganensis</i>
2	Bacterial spot	<i>Xanthomonas sp./spp.</i>
4	Black root rot	<i>Thielaviopsis basicola</i>
5	Blossom end rot	<i>Abiotic disorder</i>
8	Botrytis blight	<i>Botrytis sp./spp.</i>
2	Botrytis fruit rot	<i>Botrytis sp./spp.</i>
1	Broad mite	<i>Polyphagotarsonemus latus</i>
4	Chemical injury suspected	<i>Chemical</i>
11	Early blight; leaf spot	<i>Alternaria solani</i>
1	Fertilizer injury	<i>Nutritional Disorder</i>
2	Freeze; frost; cold damage	<i>Abiotic disorder</i>
1	Fungus gnats	<i>Mycetophilidae fam.</i>
6	Fusarium wilt	<i>Fusarium oxysporum</i>
6	Glyphosate injury suspected	<i>Chemical</i>
1	Gray leaf spot	<i>Stemphylium botryosum</i>
20	Growth regulator effect suspected	<i>Chemical</i>
1	Heat stress	<i>Abiotic disorder</i>
3	High pH damage	<i>Nutritional Disorder</i>
8	High soluble salt	<i>Nutritional Disorder</i>
4	Insect damage	<i>Unidentified Insect</i>
12	Insufficient sample	<i>Undetermined</i>
8	Leaf mold	<i>Fulvia fulva</i>
5	Leaf scorch	<i>Abiotic disorder</i>
2	Leaf spot- abiotic	<i>Abiotic disorder</i>
5	Magnesium deficiency	<i>Nutritional Disorder</i>
2	Nitrogen deficiency	<i>Nutritional Disorder</i>
26	No pathogen found	<i>Undetermined</i>
1	Nutrient imbalance	<i>Nutritional Disorder</i>
2	Nutritional deficiency	<i>Nutritional Disorder</i>
3	Nutritional problem suspected	<i>Nutritional Disorder</i>
1	Phosphorus deficiency	<i>Nutritional Disorder</i>
4	Physiological leaf roll	<i>Abiotic disorder</i>
4	Physiological responses	<i>Abiotic disorder</i>
2	Physiological responses (yellow shoulder)	<i>Abiotic disorder</i>
3	Poor growing conditions	<i>Abiotic disorder</i>
28	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
6	Rhizoctonia stem and root rot	<i>Rhizoctonia sp./spp.</i>
1	Ripe rot	<i>Colletotrichum sp./spp.</i>
8	Root-knot nematodes	<i>Meloidogyne sp./spp.</i>
1	Saprophyte	<i>Secondary Agents; Saprophytes;</i>
24	Septoria leaf spot	<i>Septoria lycopersici</i>

1	Sour rot	<i>Geotrichum sp./spp.</i>
10	Southern Blight	<i>Sclerotium rolfsii</i>
2	Spider mite	Family Tetranychidae
3	Stink bug damage	Unidentified stink bug
3	Sunscald	Abiotic disorder
1	Target spot	<i>Corynespora cassiicola</i>
1	Thrips	Order thysanoptera
3	Tobacco mosaic	Tobacco Mosaic Virus (TMV)
1	Tomato bacterial speck	<i>Pseudomonas tomato</i>
2	Tomato bacterial spot	<i>Xanthomonas sp./spp.</i>
3	Tomato pith necrosis	<i>Pseudomonas sp./spp.</i>
10	Tomato spotted wilt	Tomato Spotted Wilt Vir (TSWV)
1	Twospotted spider mite	<i>Tetranychus urticae</i>
10	Undetermined injury	Undetermined
1	Unknown abiotic disorder	Abiotic disorder
1	Walnut wilt/ juglone toxicity	Abiotic disorder
11	White mold (stem rot); timber rot	<i>Sclerotinia sclerotiorum</i>
<b>311 Total for Tomato</b>		
<b>Turnip</b>		
1	Flea beetles	Subfamily Alticinae
1	Undetermined abiotic injury	Abiotic disorder
<b>2 Total for Turnip</b>		
<b>Watermelon</b>		
2	Anthracnose	<i>Colletotrichum orbiculare</i>
1	Chemical injury suspected	Chemical
1	Cucumber mosaic (CMV)	Cucumovirus Cucumber Mosaic Virus
1	Excessive water	Abiotic disorder
1	High pH damage	Nutritional Disorder
1	High soluble salt	Nutritional Disorder
1	Leaf scorch	Abiotic disorder
4	No pathogen found	Undetermined
1	Poor pollination	Abiotic disorder
1	Powdery mildew	<i>Podosphaera sp./spp.</i>
1	Pythium fruit rot;Cottony leak	<i>Pythium sp./spp.</i>
1	Pythium root and/or crown rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia root rot	<i>Rhizoctonia sp./spp.</i>
1	Soil compaction	Abiotic disorder
1	Spider mites	Family Tetranychidae
1	Undetermined abiotic injury	Abiotic disorder
<b>20 Total for Watermelon</b>		