



College of Agriculture, Food and Environment

Plant Pathology

Plant Disease Diagnostic Laboratory Summary

2016

by:

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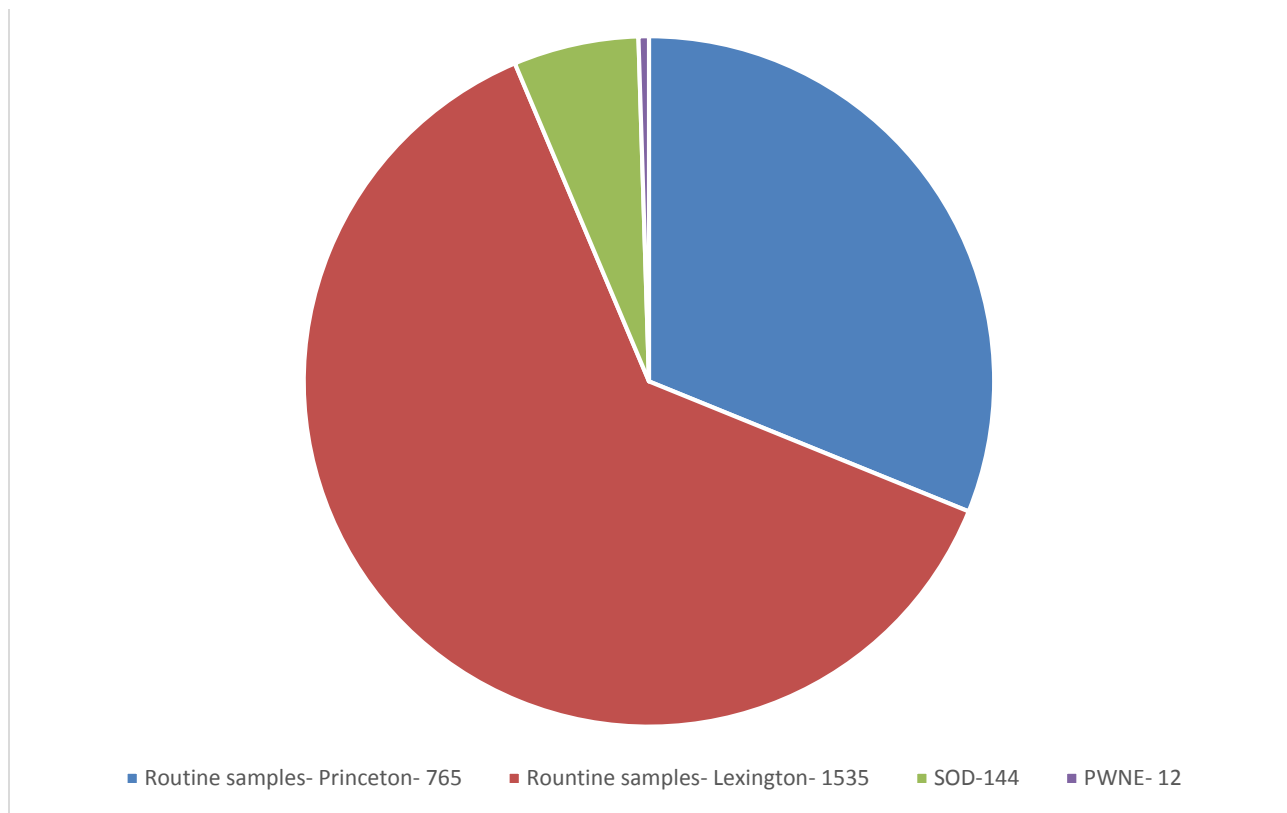
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INTRODUCTION

The Plant Disease Diagnostic Laboratory (Lexington and Princeton) processed 2456 plant samples. Many plant samples had more than one problem which added an additional 619 diagnoses, bringing the total number of diagnoses to 3075. The Lexington Laboratory diagnosed 1691 specimens, including 1535 routine plant samples, 144 samples from commercial nurseries surveyed for the Sudden Oak Death (SOD) pathogen, and 12 Eastern red cedar (*Juniperus virginiana*) samples from commercial lumber companies for pinewood nematode extraction (PWNE). The Princeton Laboratory diagnosed 765 routine plant specimens. Sample totals are summarized in Figure 1 below.

Figure 1: Plant Disease Diagnostic Laboratory – 2016



Total Samples	2456
<u>Additional diagnoses</u>	<u>619</u>
	3075

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, radio and television tapes, and plant health care workshops. Both laboratories report diagnoses of plant diseases to USDA-APHIS as part of the National Plant Diagnostic Network.

WEATHER SUMMARY

Mother Nature kept Kentuckians on their toes in 2016, throwing curve-balls throughout the year. Multiple snowfall events occurred in January. The most significant came between the 21st and 23rd where parts of Kentucky received 12 to 18+inches and was followed by temperatures falling into the single digits. February and March had above average precipitation, with a significant winter storm on February 14th. Temperatures rose quickly in March, staying in the 60s-70s by the second week, which is about 16 degrees above normal. Some crops, such as strawberries and fruit trees needed cold weather advisories by the end of the month. By April the US Drought Monitor had about 55% of the state under “abnormally dry” conditions, but the last week of April brought 2.5inches of rain. May also had an active precipitation pattern with Eastern Kentucky receiving 6.5 inches. June was consistently warm and dry.

To start the second half of the year, the state averaged 8.44 inches of rain in July, which made it the 2nd wettest in 122 years of data. Western Kentucky was the wettest part of the state averaging 11.76 inches in July. The wet conditions and high humidity increased disease pressure across the state. Extreme heat was also a problem midway through July, with temperatures consistently reaching the upper 80s and mid-90s. August continued the pattern of above normal precipitation and temperatures. Heavy rainfall led to localized flooding during both July and August, and by the end of August, Kentucky had had eight weeks of above normal temperatures. September began a significant dry period, with September, October and November all having below normal precipitation. October was the 11th driest on record and several wildfires became problematic during the end of the month. Most of the state was under “Severe” drought conditions, while parts of South-Central and Eastern Kentucky were moved into the “Extreme” category. The first widespread hard freeze was received on November 12th. Normal rainfall returned during December and by the end of the year no drought conditions were recorded in the state. December temperatures were also above normal and 2016 ended up being the 4th warmest year on record for Kentucky.

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EXPLANATORY REMARKS

In 2016, we implemented a new database system called PClinic that allows us to record all pathogens, insects and other disorders observed on each plant sample. In past summaries, only two diagnoses were recorded per sample and those diagnoses were reported in columns designated as the primary and secondary problems. Our new system does not differentiate whether a problem was primary or secondary, but it does allow us to document every problem found on a particular sample. This year, the main body of the 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^a BY CROP CATEGORY AND CAUSAL AGENT TYPE

Crop Category	Abiotic Problems	Biotic^b Problems	Chemical Injury	Inadequate Specimen	Insect Injury	Other^c	Total Diagnoses
Agronomic							
Corn	8	61	1	4	8	7	89
Forages	9	52	3	1	1	2	68
Hemp	1	16	0	0	1	6	24
Small grains	2	62	1	1	2	3	71
Soybeans	26	75	4	1	3	6	115
Tobacco	53	224	5	2	3	20	307
Fruit							
Small fruit	26	77	5	7	11	15	141
Tree fruit	18	111	0	5	23	11	168
Herbs	2	4	0	0	2	0	8
Identifications	0	15	0	3	0	1	19
Ornamentals							
Herbaceous/ Houseplants	35	132	4	8	23	17	219
Turfgrass	22	72	0	0	1	1	96
Woody	204	457 ^d	23	13	161	250 ^d	1108
Vegetables	104	375	37	17	54	47	634
Miscellaneous	1	5	0	0	0	2	8
Total	511	1738	83	62	293	388	3075

^aCounts and totals include all diagnoses entered into the PDDL database.

^bRefer to Table 2 for further breakdown of this category.

^c“Other” includes the causal agent categories: No disease and Unknown.

^dNumbers include 144 SOD survey samples (26 fungal disease diagnoses; 118 samples with no disease) and 12 PWNE juniper with no disease.

Table 2. SUMMARY OF BIOTIC PROBLEMS^a BY CROP CATEGORY

Crop Category	Bacterial	Fungal	Nematode	Virus	Other^b
Agronomic					
Corn	1	60	0	0	0
Forages	0	51	0	1	0
Hemp	1	15	0	0	0
Small grains	1	40	0	21	0
Soybeans	0	70	5	0	0
Tobacco	21	198	0	5	0
Fruit					
Small fruit	1	75	0	1	0
Tree fruit	25	85	0	0	1
Herbs					
	0	4	0	0	0
Identifications					
	0	9	0	0	6
Ornamentals					
Herbaceous/ Houseplants	5	122	2	2	1
Turfgrass	0	71	0	0	1
Woody	34	411 ^c	2	4	6
Vegetables					
	59	297	3	16	0
Miscellaneous					
	0	5	0	0	0
Total	148	1513	12	50	15

^aCounts and totals include all diagnoses entered into the PDDL database.

^b"Other" includes these categories: Animal (rodent and bird damage), Plant (plant identifications or parasitic plant) and Alga, Lichen and Phytoplasma.

^cNumber includes 26 Sudden Oak Death (SOD) survey samples with problems caused by fungi.

Table 3. NUMBER OF SAMPLES AND DIAGNOSES BY CROP

Crop Category and Crop	No. of Samples	% Total samples	No. of Diagnoses	% Total Diagnoses
Agronomic				
Corn	56	2.3	89	2.9
Forages	46	1.9	68	2.2
Hemp	19	0.8	24	0.8
Small grains	41	1.7	71	2.3
Soybeans	78	3.2	115	3.7
Tobacco	258	10.5	307	10.0
Fruit				
Small fruit	113	4.6	141	4.6
Tree fruit	126	5.1	168	5.5
Herbs	8	0.3	8	0.3
Identifications	19	0.7	19	0.2
Ornamentals				
Herbaceous and Houseplants	170	6.9	219	7.1
Turfgrass	68	2.8	96	3.1
Woody (sod/pwne)	941	38.3	1108	36.0
Vegetables	505	20.6	634	20.6
Miscellaneous	8	0.3	8	0.3
Total	2456	100	3075	100

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

Crop Group	Grower Type							
	Commercial		Homeowner		Research		Institution	
	Ext ^a	NE ^b	Ext ^a	NE ^b	Ext ^a	NE ^b	Ext ^a	NE ^b
Agronomic								
Corn	33	15	0	0	6	2	0	0
Forages	36	6	0	0	0	4	0	0
Hemp	11	2	0	0	0	6	0	0
Small grains	28	10	0	0	0	3	0	0
Soybeans	61	6	0	0	3	8	0	0
Tobacco	232	20	0	0	1	5	0	0
Fruit								
Small Fruit	66	0	44	2	1	0	0	0
Tree Fruit	21	1	99	1	1	2	1	0
Herbs	3	0	1	0	1	3	0	
Identifications	2	1	14	2	0	0	0	0
Ornamental								
Herbaceous/ Houseplants	85	14	55	3	1	10	2	0
Turfgrass	7	9	42	0	1	2	1	6
Woody	108	158	467	37	7	4	10	150
Vegetable	279	31	174	2	12	7	0	0
Miscellaneous	1	0	4	0	0	2	0	1
Total	973	273	900	47	34	58	14	157
Total/Grower Type	1246		947		92		171	
Total No. of routine samples received = 2456								

^aExt = Extension samples submitted via County Extension Agents or Extension Specialists.

^bNE = 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

Department, Facility or Outside Agency	Total
Agdia, Inc.	19
Entomology Department	90
Horticulture Department	58
Plant & Soil Sciences Department	121
South Dakota State University	6
Total	294
Total no. of routine plant specimens	2456
Percentage of specimens referred outside Diagnostic Lab for diagnosis	12.0

**Table 6. SPECIAL LABORATORY TESTS^a PERFORMED BY PLANT DISEASE
DIAGNOSTIC LABORATORY**

Test	No. of Tests
Biochemical/Lab Test	4
Culture	61
Incubation	359
Microscope	1779
Molecular (PCR)	20
Nematode extraction	14 ^b
Serological (ELISA)	411 ^c
Soil tests	234
Visual examination	1449
Total	4331

a: Many samples require more than one test and all tests performed in 2016 are recorded above.

b: Includes 12 PWNE samples.

c: Includes 144 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^a	TOBACCO	FRUIT	ORNAMENTAL	VEGETABLE	OTHER
ADAIR	18	10	1	3	3	1	0
ALLEN	33	3	3	4	2	21	0
ANDERSON	14	2	1	3	4	4	0
BALLARD	12	9	1	1	1	0	0
BARREN	24	0	2	0	11	11	0
BATH	18	1	6	0	7	3	1
BELL	6	0	0	3	2	1	0
BOONE	116	0	0	4	98	9	5
BOURBON	25	8	7	0	7	3	0
BOYD	14	0	0	0	10	4	0
BOYLE	12	1	2	2	7	0	0
BRACKEN	4	0	3	0	1	0	0
BREATHITT	13	0	0	0	3	9	1
BRECKINRIDGE	64	9	19	11	13	12	0
BULLITT	4	0	0	0	1	2	1
BUTLER	13	8	0	1	1	3	0
CALDWELL							
(+UKREC)	38	7	1	8	11	10	1
CALLOWAY	26	0	11	2	11	2	0
CAMPBELL	28	1	0	3	14	10	0
CARLISLE	3	1	0	1	0	0	1
CARROLL	7	0	0	3	2	2	0
CARTER	10	0	0	1	7	2	0
CASEY	22	0	3	0	5	14	0
CHRISTIAN	79	10	7	6	32	24	0
CLARK	13	0	2	1	10	0	0
CLAY	2	0	1	1	0	0	0
CLINTON	12	1	3	1	4	3	0
CRITTENDEN	29	3	1	7	15	3	0
CUMBERLAND	4	0	1	0	3	0	0
DAVISS	107	10	14	12	50	20	1
EDMONSON	4	0	0	0	1	3	0
ELLIOTT	7	0	0	0	0	7	0
ESTILL	3	0	0	2	0	1	0

COUNTY	TOTAL	AGRONOMIC	TOBACCO	FRUIT	ORNAMENTAL	VEGETABLE	OTHER
FAYETTE (+LEX. CAMPUS)	355	29	14	6	282	18	6
FLEMING	37	1	14	5	11	6	0
FLOYD	0	0	0	0	0	0	0
FRANKLIN	34	1	2	2	18	8	3
FULTON	5	3	0	1	1	0	0
GALLATIN	9	2	2	0	5	0	0
GARRARD	6	1	0	0	4	1	0
GRANT	15	0	2	2	3	8	0
GRAVES	30	2	8	3	10	6	1
GRAYSON	15	0	1	1	10	3	0
GREEN	13	0	12	0	1	0	0
GREENUP	10	1	0	0	7	2	0
HANCOCK	13	1	1	4	4	2	1
HARDIN	7	3	1	1	2	0	0
HARLAN	5	0	0	1	3	1	0
HARRISON	29	5	7	6	8	2	1
HART	13	1	3	0	2	7	0
HENDERSON	26	6	1	2	11	6	0
HENRY	24	1	8	1	9	5	0
HICKMAN	1	0	0	1	0	0	0
HOPKINS	33	4	0	5	19	4	1
JACKSON	5	3	0	1	1	0	0
JEFFERSON	51	0	0	1	49	1	0
JESSAMINE	31	2	1	0	18	10	0
JOHNSON	0	0	0	0	0	0	0
KENTON	18	0	0	2	14	2	0
KNOTT	1	0	0	0	1	0	0
KNOX	6	0	0	1	1	4	0
LARUE	2	0	0	0	0	2	0
LAUREL	26	1	2	4	12	6	1
LAWRENCE	1	0	0	1	0	0	0
LEE	0	0	0	0	0	0	0
LESLIE	0	0	0	0	0	0	0
LETCHER	8	0	0	1	2	5	0
LEWIS	19	1	5	4	8	1	0
LINCOLN	24	3	0	5	7	9	0
LIVINGSTON	10	7	0	0	2	1	0
LOGAN	15	4	5	1	1	3	1
LYON	20	9	0	2	4	5	0
McCCRACKEN	26	1	0	4	16	4	1
McCREARY	0	0	0	0	0	0	0
McLEAN	11	6	4	0	0	1	0
MADISON	18	1	4	1	7	5	0
MAGOFFIN	8	0	0	2	3	3	0
MARION	25	7	1	0	1	14	2
MARSHALL	37	0	1	4	18	14	0
MARTIN	0	0	0	0	0	0	0
MASON	16	0	4	1	11	0	0
MEADE	24	1	0	2	14	7	0
MENIFEE	5	0	0	0	2	3	0
MERCER	9	2	1	1	4	1	0
METCALFE	24	1	8	4	7	4	0
MONROE	7	1	1	1	3	1	0
MONTGOMERY	26	0	0	0	18	8	0
MORGAN	11	1	1	3	0	6	0
MUHLENBERG	35	2	2	4	9	18	0
NELSON	23	1	0	1	20	1	0
NICHOLAS	17	0	10	3	4	0	0
OHIO	2	0	0	1	0	1	0
OLDHAM	26	1	0	4	18	2	1
OWEN	14	1	0	3	5	5	0
OWSLEY	0	0	0	0	0	0	0
PENDELTON	9	0	3	3	1	2	0

COUNTY	TOTAL	AGRONOMIC	TOBACCO	FRUIT	ORNAMENTAL	VEGETABLE	OTHER
PERRY	2	0	0	0	1	1	0
PIKE	11	0	0	0	8	3	0
POWELL	3	0	0	1	2	0	0
PULASKI	40	5	4	2	17	12	0
ROBERTSON	0	0	0	0	0	0	0
ROCKCASTLE	6	0	0	3	0	3	0
ROWAN	11	1	1	4	4	1	0
RUSSELL	10	1	0	5	2	0	2
SCOTT	42	1	5	3	29	4	0
SHELBY	11	0	3	0	5	3	0
SIMPSON	9	3	0	0	4	2	0
SPENCER	9	1	2	1	4	1	0
TAYLOR	29	2	4	1	12	10	0
TODD	44	8	7	5	12	12	0
TRIGG	31	1	3	6	9	12	0
TRIMBLE	6	1	0	1	1	3	0
UNION	8	5	0	0	2	1	0
WARREN	26	4	0	8	13	1	0
WASHINGTON	10	0	1	0	9	0	0
WAYNE	10	0	1	0	2	7	0
WEBSTER	11	4	0	2	3	2	0
WHITLEY	9	0	0	0	0	9	0
WOLFE	0	0	0	0	0	0	0
WOODFORD	38	1	7	11	14	5	0
OUT-OF-STATE	6	2	3	0	0	1	0
TOTALS	2456	240	258	239	1167	505	35

^aAgronomic crops include corn, soybeans, forages, and small grains.

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

Specialists, Researchers, Diagnosticians	Department	Consultations
Bailey, WA	Plant & Soil Sciences	31
Becker, DW	Horticulture	9
Berberich, SG	Horticulture	5
Bessin, RT	Entomology	28
Bradley, CA	Plant Pathology	33
Dunwell, WC	Horticulture	13
Dutton, SR	Horticulture	1
Fountain, WM	Horticulture	3
Gaskill, C	Veterinary Diagnostic Lab	1
Gauthier, NW	Plant Pathology	25
Green, JD	Plant & Soil Sciences	27
Knott, CA	Plant & Soil Sciences	5
Lee, CD	Plant & Soil Sciences	1
Martin, JR	Plant & Soil Sciences	18
Murdock, LW	Plant & Soil Sciences	4
Pearce, RC	Plant & Soil Sciences	22
Pfeufer, EE	Plant Pathology	57
Philips, TD	Plant & Soil Sciences	1
Ritchey, EL	Plant & Soil Sciences	7
Saha, SK	Horticulture	13
Smith, SR	Plant & Soil Sciences	5
Strang, JG	Horticulture	11
Townsend, LH	Entomology	59
Villaneuva, R	Entomology	3
Vincelli, P	Plant Pathology	2
Wilson, P	Horticulture	1
Wright, S	Horticulture	2

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

Corn		
1	Anthracnose	<i>Colletotrichum graminicola</i>
2	Anthracnose Stalk Rot	<i>Colletotrichum graminicola</i>
1	Ascochyta Leaf Spot	<i>Ascochyta sp./spp.</i>
1	Bacterial Stalk Rot	<i>Erwinia sp./spp.</i>
3	Common Corn Rust	<i>Puccinia sorghi</i>
15	Corn Gray Leaf Spot	<i>Cercospora zea-maydis</i>
1	Diplodia Ear Rot	<i>Stenocarpella (Diplodia) maydis</i>
5	Diplodia Leaf Streak	<i>Stenocarpella (Diplodia) macrospora</i>
2	Diplodia Stalk Rot	<i>Stenocarpella (Diplodia) maydis</i>
1	Environmental Stress; Problem	Abiotic Disorder
1	Fusarium Ear Rot	<i>Fusarium sp./spp.</i>
1	Fusarium Seed Rot (Decay)	<i>Fusarium sp./spp.</i>
1	Fusarium Stem Rot	<i>Fusarium sp./spp.</i>
1	Herbicide Injury Suspected	Chemical
1	High Soil Moisture	Abiotic Disorder
4	Insufficient Sample; INAD	Undetermined
1	Leaf Rust	<i>Puccinia sp./spp.</i>
1	Leaf Scorch	Abiotic Disorder
1	Nitrogen Deficiency	Nutritional Disorder
5	No Pathogen Found	Undetermined
2	Northern Corn Leaf Blight; Leaf Spot	<i>Setosphaeria turcica (Exserohilum turcicum)</i>
1	Penicillium Seed Rot; Seedling Rot	<i>Penicillium sp./spp.</i>
1	Planting Too Shallow	Abiotic Disorder
1	Poor pollination	Abiotic Disorder
1	Potassium Deficiency	Nutritional Disorder
2	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Root Rot	Unidentified Agent
1	Soil Compaction	Abiotic Disorder
19	Southern Corn Rust	<i>Puccinia polysora</i>
6	Stink Bug Damage	Unidentified Stink Bug
4	Thrips Damage	Unidentified Thrips
1	Trichoderma Ear Rot	<i>Trichoderma viride</i>
89	Total for Corn	

FORAGES

Alfalfa		
5	Anthracnose	<i>Colletotrichum trifolii</i>
1	Aphanomyces root rot	<i>Aphanomyces euteiches</i>
1	Charcoal Rot	<i>Macrophomina sp./spp.</i>

2	Chemical Injury Suspected	Chemical
5	Common leaf spot	<i>Pseudopeziza medicaginis</i>
1	Green Cloverworm	<i>Plathypena scabra</i>
1	Insufficient Sample	Undetermined
5	Leptosphaerulina Leaf Spot; Blight	<i>Leptosphaerulina trifolii</i>
1	Low pH Damage	Nutritional Disorder
1	No Pathogen Found	Undetermined
1	Nutrient Imbalance	Nutritional Disorder
1	Phosphorus Deficiency	Nutritional Disorder
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
3	Rhizoctonia Foliar/ Aerial/ Web Blight	<i>Rhizoctonia solani</i>
2	Rhizoctonia Root; Crown Rot	<i>Rhizoctonia sp./spp.</i>
3	Spring Black Stem	<i>Phoma medicaginis</i>
10	Summer Black Stem; Leaf Spot	<i>Cercospora medicaginis</i>
2	Unknown Abiotic Disorder	Abiotic Disorder
46	Total for Alfalfa	

Clover		
1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	Chemical Injury Suspected	Chemical
1	No Pathogen Found	Undetermined
1	Poor Growing Conditions	Abiotic Disorder
1	Powdery mildew	<i>Erysiphe betae (polygona)</i>
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
6	Total for Clover	

Fescue		
1	Anthrachnose	<i>Colletotrichum graminicola</i>
2	Leaf Rust; rust	<i>Puccinia sp./spp.</i>
1	Soil Compaction	Abiotic Disorder
4	Total for Fescue	

Foxtail; Millet		
1	Gray Leaf Spot	<i>Pyricularia grisea</i>
1	Total for Foxtail; Millet	

Orchardgrass		
2	Anthrachnose	<i>Colletotrichum graminicola</i>
1	Ascochyta Blight	<i>Ascochyta sp./spp.</i>
1	Barley Yellow Dwarf	Barley Yellow Dwarf Virus (BYDV)
1	High Soil Moisture	Abiotic Disorder
1	Leaf Rust	<i>Puccinia sp./spp.</i>

2	Leaf Streak	<i>Cercosporidium sp./spp.</i>
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia Blight	<i>Rhizoctonia solani</i>
1	Unknown Abiotic Disorder	Abiotic Disorder
11	Total for Orchardgrass	

HEMP

Hemp		
3	Abnormal Plant Growth	Abiotic Disorder
1	Aerial blight	<i>Rhizoctonia sp./spp.</i>
1	Bacterial Soft Rot	Unidentified Bacterium
1	Botrytis Blight	<i>Botrytis sp./spp.</i>
1	Canker- Unidentified Fungus	Unidentified Fungus
2	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	Cultural/Environmental Problem	Abiotic Disorder
1	Foliar Distortion	Unidentified Agent
1	Fungus gnat	<i>Mycetophila sp./spp.</i>
1	Fusarium Flower Blight	<i>Fusarium sp./spp.</i>
1	Fusarium Wilt	<i>Fusarium oxysporum</i>
1	Leaf Spot	Unidentified Fungus
2	No Pathogen Found	Undetermined
5	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia Stem Rot	<i>Rhizoctonia sp./spp.</i>
1	Root Rot	Unidentified Agent
24	Total for Hemp	

SOYBEAN

Soybean		
7	Charcoal Rot	<i>Macrophomina sp./spp.</i>
1	Chemical Injury Suspected	Chemical
1	Diaporthe Stem Rot	<i>Diaporthe (Phomopsis) sp./spp.</i>
1	Environmental Stress; Problem	Abiotic Disorder
1	Excessive Water	Abiotic Disorder
1	Frogeye Leaf Spot; Seed Infection	<i>Cercospora soja</i>
2	Growth Regulator Effect Suspected	Chemical
1	Herbicide Injury Suspected	Chemical
1	High Soil Moisture	Abiotic Disorder
1	Insufficient Sample; INAD	Undetermined
1	Iron Deficiency	Nutritional Disorder
5	No Pathogen Found	Undetermined

2	Poor Nodulation	Abiotic Disorder
6	Potassium Deficiency	Nutritional Disorder
1	Purple Seed-stain; Leaf Blight	<i>Cercospora kikuchii</i>
3	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia Foliar/ Aerial/ Web Blight	<i>Rhizoctonia solani</i>
2	Rhizoctonia Root Rot	<i>Rhizoctonia sp./spp.</i>
12	Soil Compaction	Abiotic Disorder
11	Soybean Anthracnose	<i>Glomerella glycines</i>
2	Soybean Brown Spot	<i>Septoria glycines</i>
5	Soybean Cyst Nematode (SCN)	<i>Heterodera glycines</i>
14	Soybean Frogeye Leaf Spot	<i>Cercospora sojae</i>
1	Soybean Green Stem Syndrome	Unidentified Agent
2	Soybean Phytophthora Root and Stem Rot	<i>Phytophthora sojae</i>
3	Soybean Pod and Stem Blight	<i>Diaporthe (Phomopsis) phaseolorum</i>
3	Soybean Rust	<i>Phakopsora pachyrhizi</i>
2	Soybean Stem Borer	<i>Dectes texanus</i>
8	Soybean Stem Canker	<i>Diaporthe phaseolorum</i>
10	Soybean Sudden Death Syndrome	<i>Fusarium virguliforme</i>
1	Thrips Damage	Unidentified Thrips
1	Trochanter Mealybug	<i>Pseudococcus sorghiellus</i>
2	Undetermined Injury	Undetermined
115	Total for Soybean	

SMALL GRAINS

Barley		
1	Barley Leaf Rust	<i>Puccinia hordei</i>
1	Tan Spot; Yellow Leaf Spot	<i>Pyrenophora (ana. Drechslera) tritici-repentis</i>
2	Total for Barley	
Oats		
1	Cereal Yellow Dwarf	Cereal Yellow Dwarf Virus (CYDV)
1	Insufficient Sample; INAD	Undetermined
2	Total for Oats	
Rape; Canola		
1	White Leaf Spot; Gray Stem	<i>Pseudocercospora capsellae</i>
1	Total for Rape; Canola	
Rye		
1	Anthracnose Basal Rot; Crown Rot	<i>Colletotrichum sp./spp.</i>
1	Total for Rye	

Sorghum		
1	Anthracnose; Colletotrichum Leaf Spot	<i>Colletotrichum sp./spp.</i>
1	Fusarium Stem Rot	<i>Fusarium sp./spp.</i>
1	Phoma Leaf Spot	<i>Phoma sp./spp.</i>
3	Rough Leaf Spot	<i>Ascochyta sorghina</i>
1	Slime Mold	Class <i>Myxomycetes</i> ; <i>Myxomycota</i>
1	Sooty Stripe	<i>Ramulispora sorghi</i>
2	Sugarcane Aphid	<i>Melanaphis sacchari</i>
2	Zonate Leaf Spot	<i>Gloeocercospora sorghi</i>
12	Total for Sorghum	
Spelt		
1	Barley Yellow Dwarf	Barley Yellow Dwarf Virus (BYDV)
1	Cereal Yellow Dwarf	Cereal Yellow Dwarf Virus (CYDV)
1	Wheat Spindle Streak Mosaic	Wheat Spindle Streak Mosaic Virus (WSSMV)
3	Total for Spelt	
Wheat		
1	Bacterial Mosaic	<i>Clavibacter michiganensis tessellarius (Cmt)</i>
3	Barley Yellow Dwarf	Barley Yellow Dwarf Virus (BYDV)
7	Barley Yellow Dwarf	Barley Yellow Dwarf Virus (BYDV-PAV)
4	Cereal Yellow Dwarf	Cereal Yellow Dwarf Virus (CYDV)
1	Chemical Injury Suspected	Chemical
1	Cold Injury	Abiotic Disorder
1	Glume Blotch	<i>Stagonospora nodorum</i>
2	Head Blight	<i>Fusarium graminearum</i>
2	No Pathogen Found	Undetermined
1	Nutritional Deficiency	Nutritional Disorder
1	Root Rot	Various Fungi
2	Sooty Mold	Unidentified Fungus
8	Speckled Leaf Blotch	<i>Septoria tritici</i>
2	Stagonospora Leaf Blotch	<i>Stagonospora nodorum</i>
6	Stripe Rust; Yellow Rust	<i>Puccinia striiformis var. striiformis</i>
1	Tan Spot; Yellow Leaf Spot	<i>Pyrenophora (ana. Drechslera) tritici-repentis</i>
1	Undetermined Injury or Wound	Undetermined
1	Unidentified Virus	Unidentified Virus
3	Wheat Powdery Mildew	<i>Erysiphe graminis f.sp. tritici</i>
2	Wheat Streak Mosaic	Wheat Streak Mosaic Virus (WSMV)
50	Total for Wheat	

TOBACCO

Tobacco

2	Abnormal Plant Growth	Abiotic Disorder
16	Angular Leaf Spot	<i>Pseudomonas syringae</i> pv. <i>tabaci</i>
1	Bacterial Leaf Spot	Unidentified Bacteria
2	Bacterial Soft Rot	<i>Erwinia</i> sp./spp.
95	Black Shank	<i>Phytophthora nicotianae</i>
1	Botrytis Blight	<i>Botrytis</i> sp./spp.
3	Brown Spot	<i>Alternaria alternata</i>
2	Chemical Injury Suspected	Chemical
2	Cold injury	Abiotic Disorder
1	Collar Rot	<i>Sclerotinia sclerotiorum</i>
1	Fertilizer Injury	Nutritional Disorder
4	Frenching/ High Soil Moisture	Abiotic Disorder
36	Frogeye Leaf Spot	<i>Cercospora nicotianae</i>
4	Fusarium wilt	<i>Fusarium oxysporum</i>
1	Growth Regulator Effect Suspected	Chemical
1	Hail Damage	Abiotic Disorder
1	Heat Stress	Abiotic Disorder
2	Herbicide Injury; Exposure Suspected	Chemical
2	High Soluble Salt	Nutritional Disorder
1	High Temperature Damage	Abiotic Disorder
2	Insect Damage	Unidentified Insect
2	Insufficient Sample	Undetermined
2	Leaf Mold	<i>Botryosporium pulchrum</i>
2	Leaf Spot- Abiotic	Abiotic Disorder
5	Low pH Damage	Nutritional Disorder
3	Manganese Toxicity	Nutritional Disorder
17	No Pathogen Found	Undetermined
1	Nutritional Deficiency	Nutritional Disorder
2	Poor Growing Conditions	Abiotic Disorder
4	Potassium Deficiency	Nutritional Disorder
1	Powdery Mildew	Unidentified Fungus
1	Pythium Blight; Cottony Blight	<i>Pythium</i> sp./spp.
27	Pythium Root and/or Crown Rot	<i>Pythium</i> sp./spp.
1	Rhizoctonia Damping Off	<i>Rhizoctonia</i> sp./spp.
4	Rhizoctonia Root Rot	<i>Rhizoctonia</i> sp./spp.
4	Scald; Scorch	Abiotic Disorder
6	Soil Compaction	Abiotic Disorder
12	Soreshin (Rhizoctonia Stem Rot)	<i>Rhizoctonia</i> sp./spp.
1	Sunscald	Abiotic Disorder
10	Target Spot	<i>Rhizoctonia</i> sp./spp.
1	Tobacco Flea Beetle	<i>Epitrix hirtipennis</i>

2	Tobacco Hollow Stalk	<i>Erwinia carotovora carotovora</i>
5	Tomato spotted wilt	Tomato Spotted Wilt Virus (TSWV)
8	Transplant Shock; Stress	Abiotic Disorder
5	Undetermined Injury	Undetermined
1	Water Damage	Abiotic Disorder
307	Total for Tobacco	

SMALL FRUIT

Blackberry		
1	Anthraxnose	<i>Elsinoe veneta</i>
2	Cane and Leaf Rust	<i>Kuehneola uredinis</i>
5	Cane Blight; Canker	<i>Coniothyrium fuckelii</i>
1	Cold Injury	Abiotic Disorder
1	Insufficient Sample	Undetermined
4	No Pathogen Found	Undetermined
2	Nutritional Deficiency	Nutritional Disorder
1	Rednecked Cane Borer	<i>Agrilus ruficollis</i>
1	Septoria Leaf and Cane Spot	<i>Sphaerulina westendorpii</i>
1	Unspecified Viral Disease	Unspecified Viral Disease
1	White Drupelet Disorder	Abiotic Disorder
20	Total for Blackberry	

Blueberry		
1	Anthraxnose Fruit Rot	<i>Colletotrichum gloeosporioides</i>
1	Bagworm	<i>Thyridopteryx ephemeraeformis</i>
1	Canker; Dieback; Leaf Blight	<i>Fusicoccum sp./spp.</i>
1	Cold Injury	Abiotic Disorder
1	Crown Gall	<i>Agrobacterium sp./spp.</i>
7	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Dieback	Unidentified Fungus
2	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
1	Fungal Canker	Various Fungi
2	High pH Damage	Nutritional Disorder
1	Insufficient Sample; INAD	Undetermined
1	Iron Deficiency	Nutritional Disorder
1	Leaf Spot	Unidentified Fungus
2	Low pH Damage	Nutritional Disorder
1	Low pH; High Soluble Salt Damage	Nutritional Disorder
1	Nitrogen Deficiency	Nutritional Disorder
3	No Pathogen Found	Undetermined
2	Nutritional Deficiency	Nutritional Disorder

3	Phomopsis Canker and Twig Blight	<i>Diaporthe (Phomopsis) vaccinii</i>
1	Praying Mantids	Family <i>Mantidae</i>
1	Scorch	Abiotic Disorder
1	Transplant Shock; Stress	Abiotic Disorder
1	Undetermined Injury or Wound	Undetermined
37	Total for Blueberry	

Grape		
1	Bitter Rot	<i>Greeneria uvicola</i>
12	Black Rot	<i>Guignardia bidwellii</i>
1	Chemical Injury Suspected	Chemical
1	Dieback	Unidentified Fungus
4	Grape Anthracnose; Birds-eye Rot	<i>Elsinoe ampelina</i>
2	Grape Downy Mildew	<i>Plasmopara viticola</i>
1	Grape Phylloxera	<i>Daktulosphaira vitifoliae</i>
1	Grape Powdery Mildew	<i>Erysiphe (Uncinula) necator</i>
4	Growth Regulator Effect Suspected	Chemical
2	Insect Damage	Unidentified Insect
2	Insufficient Sample	Undetermined
1	Japanese Beetle	<i>Popillia japonica</i>
4	No Pathogen Found	Undetermined
1	Phomopsis Cane/Leaf Spot/Rachis Rot	<i>Phomopsis viticola</i>
2	Phomopsis Fruit Rot	<i>Phomopsis viticola</i>
1	Ripe Rot	<i>Colletotrichum sp./spp.</i>
1	Wood Decay Fungus	Unidentified Fungus
41	Total for Grape	

Raspberry		
4	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Nitrogen Deficiency	Nutritional Disorder
2	No Pathogen Found	Undetermined
1	Poor Pruning Practice	Abiotic Disorder
1	Rose Scale	<i>Aulacaspis rosae</i>
1	Sphaerulina Leaf Spot	<i>Sphaerulina sp./spp.</i>
1	Unknown Abiotic Disorder	Abiotic Disorder
11	Total for Raspberry	

Strawberry		
2	Anthracnose Basal Rot; Crown Rot	<i>Colletotrichum acutatum; sp./spp.</i>
5	Anthracnose Fruit Rot	<i>Colletotrichum gloeosporioides; sp./spp.</i>
2	Botrytis Fruit Rot	<i>Botrytis sp./spp.</i>
1	Cold Injury	Abiotic Disorder

1	Cyclamen Mite	<i>Phytonemus (Steneotarsonemus) pallidus</i>
3	Freeze; Frost; Cold Damage	Abiotic Disorder
2	High pH	Nutritional Disorder
3	Insufficient Sample	Undetermined
2	Leaf Spot; Blight	<i>Mycosphaerella fragariae</i>
1	No Pathogen Found	Undetermined
1	Nutritional Deficiency	Nutritional Disorder
6	Phomopsis Leaf Blight	<i>Phomopsis obscurans</i>
2	Spider Mite	<i>Tetranychus sp./spp.</i>
1	Strawberry Black Root Rot Complex	Various Fungi
32	Total for Strawberry	

TREE FRUIT

Apple		
1	Anthraxnose	<i>Glomerella sp./spp.</i>
1	Armillaria Root Rot	<i>Armillaria sp./spp.</i>
6	Bitter Rot	<i>Colletotrichum sp./spp.</i>
21	Cedar-apple Rust	<i>Gymnosporangium juniperi-virginianae</i>
1	Cicada Egg-laying Injury	Unidentified Cicada
1	Cold Injury	Abiotic Disorder
2	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
16	Fire Blight	<i>Erwinia amylovora</i>
14	Frogeye Leaf Spot	<i>Botryosphaeria obtusa</i>
1	Hail Damage	Abiotic Disorder
1	Insufficient Sample	Undetermined
1	Leaf Scorch	Abiotic Disorder
1	Leaf Spot	Unknown cause
1	No Pathogen Found	Undetermined
2	Phoma Leaf Spot	<i>Phoma sp./spp.</i>
1	Phomopsis Canker; Rough Bark	<i>Diaporthe pernicioso (ana. Phomopsis mali)</i>
5	Plum Curculio	<i>Conotrachelus nenuphar</i>
5	Sooty Blotch Flyspeck Complex	Various Fungi
1	Stink Bug Damage	Unidentified Stink Bug
1	Thread Blight	<i>Ceratobasidium ochroleucum (Corticium stevensii)</i>
1	Undetermined Injury	Abiotic Disorder
1	Unknown Abiotic Disorder	Abiotic Disorder
1	Unidentified Caterpillar	Unidentified Caterpillar
1	White Rot	<i>Botryosphaeria dothidea</i>
87	Total for Apple	

Apricot

1	Anthracnose Fruit Rot	<i>Colletotrichum sp./spp.</i>
1	Stonefruit Bacterial Spot	<i>Xanthomonas campestris pv. pruni</i>
2	Total for Apricot	

Cherry		
2	Leaf Spot; Shothole	<i>Blumeriella jaapii</i>
1	No Pathogen Found	Undetermined
1	Stonefruit Bacterial Spot	<i>Xanthomonas campestris pv. pruni</i>
4	Total for Cherry	

Nectarine		
2	Brown Rot; Blossom and Twig Blight	<i>Monilinia fructicola</i>
1	Plum Curculio	<i>Conotrachelus nenuphar</i>
3	Total for Nectarine	

Peach		
1	Anthracnose (fruit)	<i>Colletotrichum sp./spp.</i>
5	Brown Rot; Blossom and Twig Blight	<i>Monilinia fructicola</i>
1	Cicada Egg-laying Injury	Unidentified Cicada
1	Environmental Stress; Problem	Abiotic Disorder
1	Fungal Canker	Various Fungi
1	Hail Damage	Abiotic Disorder
2	Insufficient Information	Undetermined
2	Insufficient Sample	Undetermined
1	Iron Deficiency	Nutritional Disorder
1	Japanese Beetle	<i>Popillia japonica</i>
3	Leucostoma canker	<i>Leucostoma sp./spp.</i>
3	Nitrogen Deficiency	Nutritional Disorder
4	No Pathogen Found	Undetermined
1	Nutritional Deficiency	Nutritional Disorder
1	Oriental Fruit Moth (OFM)	<i>Grapholita molesta</i>
1	Plum Curculio	<i>Conotrachelus nenuphar</i>
5	Scab	<i>Fusicladium carpophilum</i>
1	Spider Mite Injury	Unidentified Spider Mite
7	Stonefruit Bacterial Spot	<i>Xanthomonas campestris pv. pruni</i>
1	Tarnished Plant Bug	<i>Lygus lineolaris</i>
2	Transplant Shock; Stress	Abiotic Disorder
45	Total for Peach	

Pear		
1	High Soil Moisture	Abiotic Disorder
2	Pearleaf Blister Mite	<i>Eriophyes pyri</i>

3	Total for Pear	
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Pecan		
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1	Lichens	Lichens
3	No Pathogen Found	Undetermined
3	Pecan Anthracnose	<i>Colletotrichum gloeosporioides</i>
1	Pecan Phylloxera	<i>Phylloxera devastatrix</i>
3	Pecan; Hickory Scab	<i>Cladosporium caryigenum</i>
1	Sooty Mold	Unidentified Fungus
1	Spider Mite	<i>Tetranychus sp./spp.</i>
1	Stink Bug Damage	Unidentified Stink Bug
1	Transplant Shock; Stress	Abiotic Disorder

15	Total for Pecan	
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Plum		
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3	Black Knot	<i>Apiosporina morbosa</i>
1	Insect Damage	Unidentified Insect
2	Japanese Beetle	<i>Popillia japonica</i>
1	Transplant Shock; Stress	Abiotic Disorder

7	Total for Plum	
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Stone Fruit		
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2	No Pathogen Found	Undetermined
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2	Total for Stone Fruit	
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HERBS

Basil		
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3	Downy Mildew	<i>Peronospora belbahrii</i>
1	Unknown Abiotic Disorder	Abiotic Disorder

4	Total for Basil	
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Fennel		
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1	White Mold	<i>Sclerotinia sp./spp.</i>
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1	Total for Fennel	
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Hops		
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1	Spider Mite Injury	Unidentified Spider Mite
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1	Total for Hops	
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Lavender		
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1	High Soil Moisture	Abiotic Disorder
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1	Total for Lavender	
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Oregano		
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1	Fourlined Plant Bug	<i>Poecilocapsus lineatus</i>
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1	Total for Oregano	
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IDENTIFICATIONS

Fungus Id Request		
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1	Basidiomycete	Unidentified Basidiomycete
1	No Pest Found	Undetermined
1	Slime Mold	Class <i>Myxomycetes</i> ; <i>Myxomycota</i>
1	Sooty Mold	Unidentified Fungus
1	Unidentified Fungus	Unidentified Fungus

5	Total for Fungus Id Request	
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Mushroom		
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1	Dryad's Saddle; Pheasant's Back	<i>Polyporus squamosus</i>
1	Green-spored Parasol	<i>Chlorophyllum molybdites</i>
3	Insufficient Sample	Undetermined
1	Jack O'Lantern Mushroom	<i>Omphalotus olearius</i>
1	Unidentified Fungus	Unidentified Fungus
1	Wood Rot Fungus	<i>Ganoderma sp./spp.</i>

8	Total for Mushroom	
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Plant Id Request		
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1	Algae	General
1	Canada bluegrass	<i>Poa compressa</i>
1	Fescue	<i>Festuca sp./spp.</i>
1	Goosegrass	<i>Eleusine indica</i>
2	Nostoc	<i>Nostoc sp./spp.</i>

6	Total for Plant Id Request	
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MISCELLANEOUS

Adenocarpus		
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1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
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1	Total for Not Found On List	
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Kenaf; Indian Hemp		
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1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
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1	Total for Kenaf; Indian Hemp	
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Nicotiana benthamiana		
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2	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
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2	Total for Nicotiana benthamiana	
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Panicum		
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1	Unidentified Fungus	Unidentified Fungus
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1	Total for Panicum	
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Potting Soil; Growing Media		
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1	High Soluble Salt	Nutritional Disorder
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1	Slime Mold	Class <i>Myxomycetes</i> ; <i>Myxomycota</i>
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2	Total for Potting Soil; Growing Media	
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Soil		
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1	No Pathogen Found	Undetermined
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1	Total for Soil	
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Unknown Weeds; Unknown Plants		
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1	No Pathogen Found	Undetermined
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1	Total for Unknown Weeds; Unknown Plants	
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HERBACEOUS ORNAMENTALS

Angel Flower		
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2	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
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1	Undetermined Injury	Undetermined
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3	Total for Angel Flower	
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Aster		
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2	Rust	<i>Coleosporium sp./spp.</i>
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1	Yellowstriped Armyworm	<i>Spodoptera ornithogalli</i>
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3	Total for Aster	
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Astilbe		
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1	Black Root Rot	<i>Thielaviopsis basicola</i>
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1	Total for Astilbe	
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Beebalm		
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1	Insufficient Sample	Undetermined
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1	No Pathogen Found	Undetermined
1	Powdery Mildew	Unidentified Fungus
1	Pythium Damping Off	<i>Pythium sp./spp.</i>
4	Total for Beebalm	

Begonia		
1	Botrytis Blight	<i>Botrytis sp./spp.</i>
1	Rhizoctonia Root Rot	<i>Rhizoctonia sp./spp.</i>
1	Undetermined Injury	Undetermined
3	Total for Begonia	

Bleeding Heart		
1	Insufficient Sample	Undetermined
1	Total for Bleeding Heart	

Chrysanthemum		
1	Bacterial Leaf Spot	<i>Pseudomonas cichorii</i>
1	Celery (Greenhouse) Leafminer	<i>Udea rubigalis</i>
2	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	Chrysanthemum Leafminer	<i>Chromatomyia syngenesiae</i>
7	Fusarium Wilt	<i>Fusarium oxysporum f.sp. chrysanthemi</i>
1	Insufficient Sample	Undetermined
3	Leafminer	<i>Phyllonorycter sp./spp.</i>
1	No Pathogen Found	Undetermined
1	Nutritional Problem Suspected	Nutritional Disorder
17	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
7	Rhizoctonia Foliar/ Aerial/ Web Blight	<i>Rhizoctonia solani</i>
4	Rhizoctonia Root Rot	<i>Rhizoctonia sp./spp.</i>
2	Rodent Damage	Abiotic Disorder
1	Southern Blight	<i>Sclerotium rolfsii</i>
2	Unidentified Caterpillar	Unidentified Caterpillar
51	Total for Chrysanthemum	

Clematis		
2	Anthraco nose	<i>Glomerella sp./spp.</i>
2	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
4	Total for Clematis	

Cockscomb		
1	No Pathogen Found	Undetermined
1	Total for Cockscomb	

Coneflower		
1	Aster Yellows Phytoplasma	<i>Candidatus Phytoplasma asteris</i>
1	Insufficient Information	Undetermined
2	Total for Coneflower	
Creeping Jenny		
1	Insufficient Sample	Undetermined
1	Total for Creeping Jenny	
Crowfoot Or Buttercup (Orna.)		
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Total for Crowfoot Or Buttercup (Orna.)	
Daffodil		
1	Cold Injury	Abiotic Disorder
1	Total for Daffodil	
Dahlia		
1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	European Corn Borer	<i>Ostrinia nubilalis</i>
1	Southern Blight	<i>Sclerotium rolfsii</i>
3	Total for Dahlia	
Daisy		
1	Bacterial Blight	Unidentified Bacteria
1	Insufficient Sample	Undetermined
1	Unidentified Caterpillar	Unidentified Caterpillar
3	Total for Daisy	
Daylily		
1	Anthrachnose; Colletotrichum Leaf Spot	<i>Colletotrichum sp./spp.</i>
2	Daylily Leaf Streak	<i>Collecephalus hemerocallidis</i>
1	Potassium Deficiency	Nutritional Disorder
4	Total for Daylily	
False Indigo		
1	Insect Damage	Unidentified Insect
1	No Pathogen Found	Undetermined
2	Total for False Indigo	
False Queen Anne's Lace		

1	Unidentified Caterpillar	Unidentified Caterpillar
1	Total for False Queen Anne's Lace	
Foamflower		
1	Black Root Rot	<i>Thielaviopsis basicola</i>
1	Total for Foamflower	
Geranium		
1	Leaf Spot- Unknown cause	Unknown cause
1	Nutritional Deficiency	Nutritional Disorder
1	Oedema; Edema	Abiotic Disorder
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Root Problems	Abiotic Disorder
1	Root-knot Nematode	<i>Meloidogyne sp./spp.</i>
1	Scorch	Abiotic Disorder
1	Spider Mite Injury	Unidentified Spider Mite
8	Total for Geranium	
Gerber Daisy		
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Total for Gerber Daisy	
Goldenrod		
1	Rust	Unidentified Fungus
1	Total for Goldenrod	
Grasses		
1	High Soil Moisture	Abiotic Disorder
1	Total for Grasses	
Heliopsis		
1	No Pathogen Found	Undetermined
1	Total for Heliopsis, Venus	
Hellebore		
1	White Mold	<i>Sclerotinia sp./spp.</i>
1	Total for Hellebore	
Heuchera; Coral Bells		
1	Aphids	Family <i>Aphididae</i>
1	Nutritional Deficiency	Nutritional Disorder
2	Total for Heuchera; Coral Bells	

Hollyhock		
1	Mallow Rust; Hollyhock Rust	<i>Puccinia malvacearum</i>
1	Total for Hollyhock	

Hosta		
1	Cold Injury	Abiotic Disorder
2	Leaf Scorch	Abiotic Disorder
2	Sunscald	Abiotic Disorder
5	Total for Hosta	

Impatiens		
1	Chemical Injury Suspected	Chemical
2	Downy Mildew	<i>Plasmopara obducens</i>
3	Total for Impatiens	

Iris		
1	Anthraco-nose; Colletotrichum Leaf Spot	<i>Colletotrichum sp./spp.</i>
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
2	Total for Iris	

Lily		
1	Low pH; High Soluble Salt Damage	Nutritional Disorder
1	Total for Lily	

Lilyturf		
1	Anthraco-nose; Colletotrichum Leaf Spot	<i>Colletotrichum sp./spp.</i>
2	Anthraco-nose Basal Rot; Crown Rot	<i>Colletotrichum sp./spp.</i>
1	Scorch	Abiotic Disorder
4	Total for Lilyturf	

Lisianthus		
1	Alternaria Leaf Spot	<i>Alternaria sp./spp.</i>
1	Leaf Spot- Abiotic	Abiotic Disorder
1	No Pathogen Found	Undetermined
1	Phomopsis Leaf Spot	<i>Phomopsis sp./spp.</i>
4	Total for Lisianthus	

Lobelia		
1	Crown Gall	<i>Agrobacterium sp./spp.</i>
1	Total for Lobelia	

Madagascar Periwinkle		
1	Botrytis Blight	<i>Botrytis sp./spp.</i>
1	High Soluble Salt	Nutritional Disorder
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
3	Total for Madagascar Periwinkle	
Marigold		
1	High Soluble Salt	Nutritional Disorder
1	Rhizoctonia Stem and Root Rot	<i>Rhizoctonia sp./spp.</i>
2	Total for Marigold	
Mazus		
1	Rhizoctonia Stem and Root Rot	<i>Rhizoctonia sp./spp.</i>
1	Thrips Damage	Unidentified Thrips
2	Total for Mazus	
Million Bells		
1	Black Root Rot	<i>Thielaviopsis basicola</i>
1	No Pathogen Found	Undetermined
1	Powdery Mildew	<i>Podosphaera sp./spp.</i>
3	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
6	Total for Million Bells	
New Guinea Impatiens		
1	Cyclamen Mite	<i>Phytonemus (Steneotarsonemus) pallidus</i>
1	Total for New Guinea Impatiens	
Ostrich Fern		
1	Leaf Spot- Abiotic	Abiotic Disorder
1	Total for Ostrich Fern	
Pachysandra		
4	Leaf and Stem Blight	<i>Volutella pachysandrae</i>
1	Oystershell Scale	<i>Lepidosaphes ulmi</i>
5	Total for Pachysandra	
Pansy		
1	Botrytis Blight	<i>Botrytis sp./spp.</i>
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
2	Total for Pansy	
Peony		

1	Bacterial Blight	Unidentified Bacteria
1	Bacterial Leaf Spot	Unidentified Bacteria
1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
2	Peony Leaf Blotch	<i>Cladosporium paeoniae</i>
1	Phytophthora Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
2	Powdery Mildew	<i>Erysiphe sp./spp.</i>
1	Root Damage	Abiotic Disorder
9	Total for Peony	

Periwinkle		
1	Insufficient Sample	Undetermined
1	Oedema; Edema	Abiotic Disorder
2	Phoma Blight; Dieback; Rot	<i>Phoma sp./spp.</i>
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
5	Total for Periwinkle	

Petunia		
1	Botrytis Blight	<i>Botrytis sp./spp.</i>
2	Chemical Injury Suspected	Chemical
1	No Pathogen Found	Undetermined
2	Nutritional Deficiency	Nutritional Disorder
1	pH Induced Pathology	Nutritional Disorder
5	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
2	Rhizoctonia Root Rot	<i>Rhizoctonia sp./spp.</i>
1	Rhizoctonia Stem and Root Rot	<i>Rhizoctonia sp./spp.</i>
2	Tobacco Mosaic	Tobacco Mosaic Virus (TMV)
1	White Mold (Stem Rot)	<i>Sclerotinia sclerotiorum</i>
18	Total for Petunia	

Phlox		
1	Anthraco nose Basal Rot; Crown Rot	<i>Colletotrichum sp./spp.</i>
1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
2	No Pathogen Found	Undetermined
2	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
6	Total for Phlox	

Pitcher Plant		
1	Crown Rot	<i>Rhizoctonia sp./spp.</i>
1	Total for Pitcher Plant	

Poinsettia		
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1	Botrytis Blight	<i>Botrytis sp./spp.</i>
1	Undetermined Injury	Undetermined
2	Total for Poinsettia	

Rudbeckia		
1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	Downy Mildew	<i>Plasmopara halstedii</i>
1	Insect Damage	Unidentified Insect
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia Root Rot	<i>Rhizoctonia sp./spp.</i>
1	Unidentified Caterpillar	Unidentified Caterpillar
6	Total for Rudbeckia	

Snapdragon		
1	Growth Regulator Effect Suspected	Chemical
1	Rhizoctonia Stem and Root Rot	<i>Rhizoctonia sp./spp.</i>
1	Root-knot Nematodes	<i>Meloidogyne sp./spp.</i>
3	Total for Snapdragon	

Statice		
1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	Slug Damage	Unidentified Slug
2	Total for Statice	

Zinnia		
1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	Rhizoctonia Stem Rot	<i>Rhizoctonia sp./spp.</i>
2	Total for Zinnia	

INDOOR PLANTS

African Violet		
1	No Pathogen Found	Undetermined
1	Total for African Violet	

Camellia		
1	Winter Injury	Abiotic Disorder
1	Total for Camellia	

Gardenia		
1	Cultural/Environmental Problem	Abiotic Disorder
1	Total for Gardenia	

Lemon		
1	Nutritional Deficiency	Nutritional Disorder
1	Soft Scales	Family <i>Coccidae</i>
2	Total for Lemon	

Mandarin		
1	Insect Damage	Unidentified Insect
1	Total for Mandarin	

Mandevilla		
1	Insufficient Sample	Undetermined
1	Leaf Spot	Unidentified Fungus
1	Spider Mite Injury	Unidentified Spider Mite
3	Total for Mandevilla	

Philodendron		
1	Scale Insects	Order <i>Homoptera</i>
1	Total for Philodendron	

Sweet Bay; Bay Laurel		
1	Nutrient Imbalance	Nutritional Disorder
1	Total for Sweet Bay; Bay Laurel	

TURFGRASS

Bentgrass		
1	Algae	General
2	Anthrachnose; Basal Rot; Crown Rot	<i>Colletotrichum graminicola</i>
1	Black Layer of Turfgrass	Abiotic Disorder
1	Cultural/Environmental Problem	Abiotic Disorder
4	Dense Thatch Layer	Abiotic Disorder
2	Dollar Spot	<i>Sclerotinia homeocarpa</i>
2	Excessive Water	Abiotic Disorder
1	No Pathogen Found	Undetermined
4	Pythium blight; Cottony blight	<i>Pythium sp./spp.</i>
9	Pythium root dysfunction	<i>Pythium sp./spp.</i>
5	Take-all	<i>Gaeumannomyces graminis var avenae</i>
32	Total for Bentgrass	

Bermudagrass		
1	Large Patch	<i>Rhizoctonia solani</i>

1	Total for Bermudagrass	
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Bluegrass		
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1	Anthracnose Basal Rot; Crown Rot	<i>Colletotrichum graminicola</i>
1	Brown Patch	<i>Rhizoctonia sp./spp.</i>
1	Dense Thatch Layer	Abiotic Disorder
1	Excessive Water	Abiotic Disorder
1	Leaf Rust; Rust	<i>Puccinia sp./spp.</i>
1	Moisture Stress	Abiotic Disorder
4	Powdery Mildew	<i>Blumeria graminis</i>
1	Red Thread	<i>Laetisaria fuciformis</i>
6	Summer Patch	<i>Magnaporthe poae</i>
1	White Grubs (Scarab Beetles)	Family <i>Scarabaeidae</i>

18	Total for Bluegrass	
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Fescue		
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1	Animal Urine Damage	Abiotic Disorder
4	Anthracnose	<i>Colletotrichum graminicola</i>
1	Ascochyta Blight	<i>Ascochyta sp./spp.</i>
15	Brown Patch	<i>Rhizoctonia sp./spp.</i>
3	Environmental Stress; Problem	Abiotic Disorder
2	Excessive Water	Abiotic Disorder
3	Leaf Rust; Rust	<i>Puccinia sp./spp.</i>
1	Low pH Damage	Nutritional Disorder
1	Pythium Blight; Cottony Blight	<i>Pythium sp./spp.</i>
2	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
2	Red thread	<i>Laetisaria fuciformis</i>
1	Rhizoctonia Root Rot	<i>Rhizoctonia sp./spp.</i>
1	Root Problems	Abiotic Disorder
1	Soil Compaction	Abiotic Disorder

38	Total for Fescue	
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Ryegrass		
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1	Gray Leaf Spot	<i>Pyricularia grisea</i>
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1	Total for Ryegrass	
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Turfgrass		
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2	Brown Patch	<i>Rhizoctonia sp./spp.</i>
1	Excessive Water	Abiotic Disorder
1	Poor Growing Conditions	Abiotic Disorder
1	Powdery Mildew	<i>Blumeria graminis</i>
1	Red Thread	<i>Laetisaria fuciformis</i>

6	Total for Turfgrass	
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WOODY ORNAMENTALS

Almond		
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1	No Pathogen Found	Undetermined
1	Total for Almond	

Arborvitae		
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1	Abnormal Plant Growth	Abiotic Disorder
2	Bagworm	<i>Thyridopteryx ephemeraeformis</i>
3	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Cultural/Environmental Problem	Abiotic Disorder
8	Decline; Dieback	Abiotic Disorder
1	Juniper Scale	<i>Carulaspis juniperi</i>
1	Macrophoma Blight; Dieback	<i>Macrophoma sp./spp.</i>
1	Mechanical Damage	Abiotic Disorder
2	Mites	Order <i>Acari</i>
5	No Pathogen Found	Undetermined
1	Phomopsis Dieback; Tip Blight; Canker	<i>Phomopsis sp./spp.</i>
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Root Rot	Unidentified Agent
5	Spider Mite Injury	Unidentified Spider Mite
2	Transplant Shock; Stress	Abiotic Disorder
1	Undetermined Injury	Undetermined
4	Winter Injury	Abiotic Disorder
40	Total for Arborvitae	

Ash		
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3	Ash Anthracnose	<i>Plagiostoma fraxinii</i>
1	Chemical Injury Suspected	Chemical
1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
1	Insect Damage	Unidentified Insect
1	Lichens	Lichenes
1	Mycosphaerella Leaf Spot	<i>Mycosphaerella effigurata</i>
1	No Pathogen Found	Undetermined
9	Total for Ash	

Azalea		
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1	Azalea Lace Bug	<i>Stephanitis pyrioides</i>
2	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Iron Deficiency	Nutritional Disorder

1	Leaf Spot	Unidentified Fungus
1	No Pathogen Found	Undetermined
6	Total for Azalea	

Baldcypress

1	Transplant Shock; Stress	Abiotic Disorder
1	Total for Baldcypress	

Bamboo

1	Winter Injury	Abiotic Disorder
1	Total for Bamboo	

Barberry

1	Transplant Shock; Stress	Abiotic Disorder
1	Total for Barberry	

Basswood; Linden

1	Environmental Stress; Problem	Abiotic Disorder
1	Total for Basswood; Linden	

Beech

1	No Pathogen Found	Undetermined
1	Total for Beech	

Birch

1	Anthrachnose	<i>Discula sp./spp.</i>
1	Aphids	Family Aphididae
1	Insufficient Sample	Undetermined
1	No Pathogen Found	Undetermined
4	Total for Birch	

Boxwood

1	Anthrachnose; Colletotrichum Leaf Spot	<i>Colletotrichum sp./spp.</i>
1	Artillery Fungus	<i>Sphaerobolus stellatus</i>
1	Black Root Rot	<i>Thielaviopsis basicola</i>
2	Boxwood Blight; Leaf and Stem Blight	<i>Cylindrocladium pseudonaviculatum</i>
13	Boxwood Leafminer	<i>Monarthropalpus flavus (buxi)</i>
1	Boxwood Mite	<i>Eurytetranychus buxi</i>
1	Boxwood Psyllid	<i>Psylla buxi</i>
30	Boxwood Volutella Blight; Canker	<i>Volutella buxi</i>
2	Decline; Dieback	Abiotic Disorder
1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>

1	Environmental Stress; Problem	Abiotic Disorder
1	Freeze; Frost; Cold Damage	Abiotic Disorder
1	High pH	Nutritional Disorder
1	High Soluble Salt	Nutritional Disorder
1	Leaf Spot- Abiotic	Abiotic Disorder
3	Low pH Damage	Nutritional Disorder
9	Macrophoma Blight; Dieback	<i>Macrophoma sp./spp.</i>
1	Mite Damage	Unidentified Mite
2	Phytophthora Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
4	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia Root Rot	<i>Rhizoctonia sp./spp.</i>
4	Spider Mite Injury	Unidentified Spider Mite
2	Undetermined Injury	Undetermined
1	Unidentified Caterpillar	Unidentified Caterpillar
1	Unidentified Fungus	Unidentified Fungus
7	Winter Injury	Abiotic Disorder
93	Total for Boxwood	

Butterfly Bush		
1	Chemical Injury Suspected	Chemical
1	Decline; Dieback	Abiotic Disorder
1	No Pathogen Found	Undetermined
3	Total for Butterfly Bush	

Butternut		
1	Eriophyid Mites	Family <i>Eriophyidae</i>
1	Total for Butternut	

Cedar		
1	No Pathogen Found	Undetermined
1	Spider Mite Injury	Unidentified Spider Mite
2	Transplant Shock; Stress	Abiotic Disorder
4	Total for Cedar	

Cherry		
1	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Insect Damage	Unidentified Insect
1	Leaf Spot	Unidentified Fungus
1	Leaf Spot- Unknown cause	Unknown Cause
1	Mechanical Damage	Abiotic Disorder
1	Mycosphaerella Leaf Spot	<i>Mycosphaerella sp./spp.</i>

4	No Pathogen Found	Undetermined
1	Phomopsis Dieback; Tip Blight; Canker	<i>Phomopsis sp./spp.</i>
1	Phyllosticta Leaf Spot	<i>Phyllosticta sp./spp.</i>
2	Stonefruit Bacterial Spot	<i>Xanthomonas campestris pv. Pruni</i>
1	Transplant Shock; Stress	Abiotic Disorder
1	White Peach Scale	<i>Pseudaulacaspis pentagona</i>
1	Wood rot; White Rot	<i>Irpex lacteus</i>
17	Total for Cherry	

Cherrylaurel		
1	Bacterial Leaf Spot	<i>Xanthomonas campestris pv. pruni</i>
1	Cultural/Environmental Problem	Abiotic Disorder
2	No Pathogen Found	Undetermined
1	Soil Compaction	Abiotic Disorder
1	Transplant Shock; Stress	Abiotic Disorder
1	Wood Boring Insect Damage	Unidentified Insect
7	Total for Cherrylaurel	

Chestnut		
1	Sooty Mold	Unidentified Fungus
1	Total for Chestnut	

Crabapple		
2	Animal Damage	Abiotic Disorder
1	Apple Scab	<i>Venturia inaequalis (Spilocaea pomi)</i>
1	Fire Blight	<i>Erwinia amylovora</i>
3	Frogeye Leaf Spot; Black Rot	<i>Botryosphaeria obtusa</i>
1	Leaf Spot	<i>Elsinoe sp./spp.</i>
8	Total for Crabapple	

Crape Myrtle		
1	Crapemyrtle Aphid	<i>Sarucallis (Tinocallis) kahawaluokalani</i>
1	Total for Crape Myrtle	

Cryptomeria		
1	No Pathogen Found	Undetermined
1	Total for Cryptomeria	

Cypress		
2	Cypress (Seiridium) Canker	<i>Lepteutypa cupressi</i>
1	Spider Mite Injury	Unidentified Spider Mite
3	Total for Cypress	

Dawn Redwood		
1	Japanese Beetle	<i>Popillia japonica</i>
1	Total for Dawn Redwood	

Deutzia		
1	Transplant Shock; Stress	Abiotic Disorder
1	Total for Deutzia	

Dogwood		
1	Calico Scale	<i>Eulecanium cerasorum</i>
1	Cicada Egg-laying Injury	Unidentified Cicada
1	Cytospora Canker; Dieback	<i>Cytospora sp./spp.</i>
1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
1	Dogwood Anthracnose	<i>Discula destructiva</i>
3	Dogwood Leaf Spot	<i>Septoria cornicola</i>
4	Dogwood Powdery Mildew	<i>Erysiphe pulchra</i>
1	Growth Regulator Effect Suspected	Chemical
2	Leaf Scorch	Abiotic Disorder
4	No Pathogen Found	Undetermined
1	Phyllosticta Leaf Spot	<i>Phyllosticta sp./spp.</i>
4	Spot Anthracnose	<i>Elsinoe corni</i>
5	Transplant Shock; Stress	Abiotic Disorder
29	Total for Dogwood	

Douglas-fir		
1	No Pathogen Found	Undetermined
1	Total for Douglas-fir	

Elderberry		
1	Insect Damage	Unidentified Insect
1	Total for Elderberry	

Elm		
1	Anthracnose	<i>Asteroma inspicuum</i>
1	Elm Cockscombgall Aphid	<i>Colopha ulmicola</i>
1	Elm Yellows; Elm Phloem Necrosis	<i>Candidatus Phytoplasma ulmi</i>
3	No Pathogen Found	Undetermined
6	Total for Elm	

Eucalyptus		
1	Leaf Spot- Abiotic	Abiotic Disorder

1	Total for Eucalyptus	
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Euonymus		
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1	Anthracnose; Colletotrichum Leaf Spot	<i>Colletotrichum sp./spp.</i>
1	Euonymus Powdery Mildew	<i>Erysiphe (Oidium) euonymi-japonici</i>
1	Growth Regulator Effect Suspected	Chemical
1	No Pathogen Found	Undetermined
1	Oedema; Edema	Abiotic Disorder
1	Spider Mite Injury	Unidentified Spider Mite
1	Transplant Shock; Stress	Abiotic Disorder
1	Undetermined Injury	Undetermined
1	Winter Injury	Abiotic Disorder

9	Total for Euonymus	
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Falsecypress		
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1	Decline; Dieback	Abiotic Disorder
3	Environmental Stress; Problem	Abiotic Disorder
1	Natural Senescence	Abiotic Disorder
2	No Pathogen Found	Undetermined
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia Root Rot	<i>Rhizoctonia sp./spp.</i>
1	Transplant Shock; Stress	Abiotic Disorder

10	Total for Falsecypress	
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Filbert		
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1	Eastern Filbert Blight	<i>Cryptosporrella anomala</i>
1	No Pathogen Found	Undetermined

2	Total for Filbert	
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Firethorn		
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1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
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1	Total for Firethorn	
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Forsythia		
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1	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
1	Mechanical Damage	Abiotic Disorder
1	No Pathogen Found	Undetermined

4	Total for Forsythia	
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Fothergilla		
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1	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
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1	Total for Fothergilla	
Ginkgo		
1	No Pathogen Found	Undetermined
1	Total for Ginkgo	
Goldenrain Tree		
1	No Pathogen Found	Undetermined
1	Total for Goldenrain Tree	
Hawthorn		
1	Cedar-Quince Rust	<i>Gymnosporangium clavipes</i>
1	Cicada Egg-laying Injury	Unidentified Cicada
2	Total for Hawthorn	
Hemlock		
1	Elongate Hemlock Scale	<i>Fiorinia externa</i>
1	Environmental Stress; Problem	Abiotic Disorder
2	Hemlock Decline; Dieback	Abiotic Disorder
2	No Pathogen Found	Undetermined
1	Rosellinia Blight	<i>Rosellinia herpotrichoides</i>
2	Spider Mite Injury	Unidentified Spider Mite
9	Total for Hemlock	
Hickory		
1	Anthrachnose; Colletotrichum Leaf Spot	<i>Colletotrichum sp./spp.</i>
1	Chemical Injury Suspected	Chemical
1	Solitary Wasp	<i>Passaloecus sp./spp.</i>
1	Spider Mites	Family <i>Tetranychidae</i>
4	Total for Hickory	
Holly		
1	Anthrachnose; Colletotrichum Leaf Spot	<i>Colletotrichum sp./spp.</i>
2	Armored Scales	Family <i>Diaspididae</i>
7	Black Root Rot	<i>Thielaviopsis basicola</i>
3	Cottony Camellia Scale	<i>Pulvinaria floccifera</i>
3	Decline; Dieback	Abiotic Disorder
1	Environmental Stress; Problem	Abiotic Disorder
1	Excessive Water	Abiotic Disorder
1	Foliar Distortion	Unidentified Agent
1	Glyphosate Injury Suspected	Chemical
1	Insect Damage	Unidentified Insect

2	Insufficient Sample	Undetermined
1	Japanese Maple Scale	<i>Lopholeucaspis japonica</i>
1	Latania Scale	<i>Hemiberlesia lataniae</i>
1	Low pH Damage	Nutritional Disorder
3	No Pathogen Found	Undetermined
2	Nutritional Deficiency	Nutritional Disorder
1	Phomopsis Dieback; Tip Blight; Canker	<i>Phomopsis 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	Scale Insects	Order <i>Homoptera</i>
2	Sooty Mold	Unidentified Fungus
3	Spider Mite Injury	Unidentified Spider Mite
3	Transplant Shock; Stress	Abiotic Disorder
1	Unidentified Caterpillar	Unidentified Caterpillar
1	Undetermined Injury	Undetermined
3	Winter Injury	Abiotic Disorder
48	Total for Holly	
Honeylocust		
1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	No Pathogen Found	Undetermined
2	Unidentified Fungus	Unidentified Fungus
4	Total for Honeylocust	
Honeysuckle		
2	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
1	Freeze; Frost; Cold Damage	Abiotic Disorder
1	Leaf Scorch	Abiotic Disorder
5	Total for Honeysuckle	
Hydrangea		
1	Anthracnose; Colletotrichum Leaf Spot	<i>Colletotrichum sp./spp.</i>
3	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Iron Deficiency	Nutritional Disorder
2	Leaf Spot- Unknown cause	Unknown cause
2	No Pathogen Found	Undetermined
1	Spider Mite Injury	Unidentified Spider Mite
1	Transplant Shock; Stress	Abiotic Disorder
11	Total for Hydrangea	
Juniper		

1	Cedar-apple Rust	<i>Gymnosporangium juniperi-virginianae</i>
2	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
2	Environmental Stress; Problem	Abiotic Disorder
1	High Soil Moisture	Abiotic Disorder
3	Insufficient Sample	Undetermined
1	Juniper Scale	<i>Carulaspis juniperi</i>
6	No Pathogen Found	Undetermined
1	Pestalotiopsis Needle Blight; Tip Blight	<i>Pestalotiopsis sp./spp.</i>
5	Spider Mite Injury	Unidentified Spider Mite
2	Transplant Shock; Stress	Abiotic Disorder
25	Total for Juniper	

Kentucky Coffee Tree		
1	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Poor Growing Conditions	Abiotic Disorder
2	Total for Kentucky Coffee Tree	

Korean Mountain Ash		
1	Decline; Dieback	Abiotic Disorder
1	Total for Korean Mountain Ash	

Leyland Cypress		
1	Dieback; Canker	<i>Seiridium sp./spp.</i>
1	Transplant Shock; Stress	Abiotic Disorder
1	Winter Injury	Abiotic Disorder
3	Total for Leyland Cypress	

Lilac		
3	Decline; Dieback	Abiotic Disorder
2	Insufficient Sample	Undetermined
1	Leaf Scorch	Abiotic Disorder
1	Lichens	Lichens
1	Mycosphaerella Leaf Spot	<i>Phloeospora maculans</i>
1	No Pathogen Found	Undetermined
1	Powdery Mildew	<i>Oidium sp./spp.</i>
1	Transplant Shock; Stress	Abiotic Disorder
11	Total for Lilac	

Linden		
3	Spot Anthracnose	<i>Elsinoe sp./spp.</i>
3	Total for Linden	

Locust		
1	Spider Mite Injury	Unidentified Spider Mite
1	Total for Locust	

Magnolia		
1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
1	Insufficient Information	Undetermined
1	Leaf Spot- Unknown cause	Unknown cause
1	Magnolia Leafminer	<i>Phyllocnistis magnoliella</i>
5	No Pathogen Found	Undetermined
1	Transplant Shock; Stress	Abiotic Disorder
4	Winter Injury	Abiotic Disorder
14	Total for Magnolia	

Maple		
1	Ambrosia Beetle	<i>Euplatypus compositus</i>
3	Anthrachnose (Monostichella Leaf Spot)	<i>Monostichella hysteroidea</i>
1	Armillaria Root Rot	<i>Armillaria sp./spp.</i>
2	Bacterial Leaf Scorch	<i>Xylella fastidiosa</i>
1	Bagworm	<i>Thyridopteryx ephemeraeformis</i>
1	Canker; Coral Spot; Blight; Dieback	<i>Nectria cinnabarina</i>
2	Chemical Injury Suspected	Chemical
1	Cicada Egg-laying Injury	Unidentified Cicada
2	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
1	Growth Regulator Effect Suspected	Chemical
3	Insect Damage	Unidentified Insect
1	Iron Deficiency	Nutritional Disorder
1	Japanese Maple Scale	<i>Lopholeucaspis japonica</i>
1	Leaf Scorch	Abiotic Disorder
1	Leaf Spot	<i>Phloeospora sp./spp.</i>
16	Maple Anthracnose	<i>Aureobasidium apocryptum</i>
18	Maple Decline	Complex
3	Maple Leaf Spot	<i>Phyllosticta minima</i>
8	No Pathogen Found	Undetermined
1	Phomopsis Leaf Spot	<i>Phomopsis sp./spp.</i>
3	Potato Leafhopper	<i>Empoasca fabae</i>
1	Soft Scales	Family <i>Coccidae</i>
1	Transplant Shock; Stress	Abiotic Disorder
1	Undetermined Injury or Wound	Undetermined
1	Unidentified Spider	Unidentified Spider
1	Verticillium Wilt	<i>Verticillium sp./spp.</i>

76	Total for Maple	
Mimosa		
1	Mimosa Wilt	<i>Fusarium oxysporum perniciosum</i>
1	Total for Mimosa	
Mockorange		
1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	Total for Mockorange	
Mountain Laurel		
1	Armored Scales	Family <i>Diaspididae</i>
1	Cytospora Canker; Dieback	<i>Cytospora sp./spp.</i>
1	Insect Damage	Unidentified Insect
1	Valsa Canker	<i>Valsa sp./spp.</i>
4	Total for Mountain Laurel	
Mulberry		
1	Chemical Injury Suspected	Chemical
1	Popcorn Disease	<i>Ciboria carunculoides</i>
2	Total for Mulberry	
Northern Bayberry; Wax Myrtle		
1	Transplant Shock; Stress	Abiotic Disorder
1	Total for Northern Bayberry; Wax Myrtle	
Oak		
22	Actinopelte Leaf Spot	<i>Tubakia dryina</i>
25	Anthrachnose	<i>Apiognomonina sp./spp.</i>
1	Armillaria Root Rot	<i>Armillaria sp./spp.</i>
26	Bacterial Leaf Scorch	<i>Xylella fastidiosa</i>
1	Canker- Unidentified Agent	Unidentified Agent
2	Chemical Injury Suspected	Chemical
2	Cicada Egg-laying Injury	Unidentified Cicada
1	Decline; Dieback	Abiotic Disorder
1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
1	Gall	Unidentified Agent
1	Gouty Oak Gall Wasp	<i>Callirhytis quercus</i>
4	Growth Regulator Effect Suspected	Chemical
6	Horned Oak Gall Wasp	<i>Callirhytis cornigera</i>
5	Insect Damage	Unidentified Insect
5	Insect Gall	Insect Gall

1	Insufficient Information	Undetermined
1	Iron Deficiency	Nutritional Disorder
1	Japanese Beetle	<i>Popillia japonica</i>
5	Jumping Oak Gall Wasp	<i>Neuroterus saltatorius</i>
2	Lace Bugs	Family <i>Tingidae</i>
1	No Insect Found	Undetermined
8	No Pathogen Found	Undetermined
1	Oak Lecanium	<i>Parthenolecanium quercifex</i>
10	Oak Powdery Mildew	<i>Erysiphe (Oidium) alphitoides</i>
2	Oak Vein Pocket Gallmaker	<i>Macrodiplosis quercusoruca</i>
1	Obscure Scale	<i>Melanaspis obscura</i>
1	Spider Mite Injury	Unidentified Spider Mite
2	Undetermined Injury	Undetermined
139	Total for Oak	

Paulownia		
1	Unidentified Caterpillar	Unidentified Caterpillar
1	Total for Paulownia	

Pear		
1	Bitter Rot	<i>Colletotrichum sp./spp.</i>
4	Fire Blight	<i>Erwinia amylovora</i>
2	Growth Regulator Effect Suspected	Chemical
1	Insect Damage	Unidentified Insect
9	Pear Decline	Abiotic Disorder
2	No Pathogen Found	Undetermined
1	Undetermined Injury	Undetermined
20	Total for Pear	

Photinia		
1	No Pathogen Found	Undetermined
1	Powdery Mildew	Unidentified Fungus
2	Total for Photinia	

Pine		
1	Brown Spot; Needle Blight	<i>Mycosphaerella dearnessii</i>
1	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
5	Diplodia Tip Blight; Canker	<i>Diplodia sapinea</i>
7	Dothistroma Needle Blight	<i>Dothistroma pini</i>
1	Environmental Stress; Problem	Abiotic Disorder
1	Natural Senescence	Abiotic Disorder
1	Needle Cast	<i>Ploioderma (Hypoderma) sp./spp.</i>

5	No Pathogen Found	Undetermined
3	Ozone Damage	Abiotic Disorder
1	Pine Bark Adelgid	<i>Pineus strobi</i>
1	Pine Needle Rust	<i>Coleosporium tussilaginis</i>
2	Pine Needle Scale	<i>Chionaspis pinifoliae</i>
3	Pine Sawflies	Family <i>Diprionidae</i>
1	Pine Wilt Nematode	<i>Bursaphelenchus xylophilus</i>
1	Poor Growing Conditions	Abiotic Disorder
1	Scorch	Abiotic Disorder
1	Sooty Mold	Unidentified Fungus
1	Transplant Shock; Stress	Abiotic Disorder
5	White Pine Decline	Abiotic Disorder
42	Total for Pine	

Plum		
1	Black Knot	<i>Apiosporina morbosa</i>
1	Total for Plum	

Poplar		
1	Decline; Dieback	Abiotic Disorder
1	Insect Damage	Unidentified Insect
1	Leaf Spot	Unidentified Fungus
3	Total for Poplar	

Privet		
1	Leaf Spot	Unidentified Fungus
1	Total for Privet	

Prunus		
1	Black Knot	<i>Apiosporina morbosa</i>
1	Total for Prunus	

Redbud		
1	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Environmental Stress; Problem	Abiotic Disorder
1	Growth Regulator Effect Suspected	Chemical
1	Insufficient Sample	Undetermined
2	No Pathogen Found	Undetermined
2	Phyllosticta Leaf Spot	<i>Phyllosticta sp./spp.</i>
1	Poor Growing Conditions	Abiotic Disorder
1	Spider Mite Injury	Unidentified Spider Mite
3	Transplant Shock; Stress	Abiotic Disorder

13	Total for Redbud	
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Rhododendron		
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1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
1	Lace Bug	<i>Stephanitis sp./spp.</i>
3	No Pathogen Found	Undetermined
1	Pestalotiopsis Canker/ Dieback	<i>Pestalotiopsis sp./spp.</i>
1	Phomopsis Dieback; Tip Blight; Canker	<i>Phomopsis sp./spp.</i>
1	Poor Growing Conditions	Abiotic Disorder

8	Total for Rhododendron	
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Rose		
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1	2-4-D Injury Suspected	Chemical
3	Black Spot (Rose)	<i>Diplocarpon (Marssonina) rosae</i>
1	Botrytis Blight	<i>Botrytis sp./spp.</i>
1	Canker; Coral Spot; Blight; Dieback	<i>Nectria cinnabarina</i>
3	Chemical Injury Suspected	Chemical
1	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Decline; Dieback	Abiotic Disorder
1	Insect Damage	Unidentified Insect
1	Insufficient Sample	Undetermined
1	Leaf Scorch	Abiotic Disorder
1	Leaf Spot	<i>Cercospora rosicola</i>
1	No Pathogen Found	Undetermined
3	Powdery Mildew	<i>Sphaerotheca sp./spp.</i>
1	Root-knot Nematodes	<i>Meloidogyne sp./spp.</i>
2	Rose Canker	<i>Coniothyrium sp./spp.</i>
4	Rose Rosette Disease	Rose Rosette-associated Virus
2	Rose rust	<i>Phragmidium sp./spp.</i>
6	Roseslug	<i>Endelomyia sp./spp.</i>
2	Spider Mite Injury	Unidentified Spider Mite
1	Thread Blight	<i>Ceratobasidium ochroleucum (Corticium stevensii)</i>
1	Twospotted Spider Mite	<i>Tetranychus urticae</i>
1	Unidentified Caterpillar	Unidentified Caterpillar
1	Undetermined Injury	Undetermined

40	Total for Rose	
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Rose-of-Sharon		
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1	Mechanical Damage	Abiotic Disorder
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1	Total for Rose-of-Sharon	
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Sassafras		
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1	Dieback; Canker	<i>Diplodia sp./spp.</i>
1	Total for Sassafras	
Serviceberry		
1	Environmental Stress; Problem	Abiotic Disorder
2	Lace Bugs	Family <i>Tingidae</i>
1	Leaf Scorch	Abiotic Disorder
1	Leaf Spot	Unidentified Fungus
1	No Pathogen Found	Undetermined
1	Powdery Mildew	<i>Erysiphe sp./spp.</i>
7	Total for Serviceberry	
Smoke Tree		
1	Insect Damage	Unidentified Insect
1	Verticillium Wilt	<i>Verticillium sp./spp.</i>
2	Total for Smoke Tree	
Spirea		
1	No Pathogen Found	Undetermined
1	Total for Spirea	
Spruce		
1	Bagworm	<i>Thyridopteryx ephemeraeformis</i>
2	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Decline; Dieback	Abiotic Disorder
3	Dothistroma Needle Blight	<i>Dothistroma sp./spp.</i>
1	Fasciation	Abiotic Disorder
1	Insufficient Sample	Undetermined
1	Isthmiella Needle Blight	<i>Isthmiella sp./spp.</i>
1	Lichens	Lichens
3	Magnesium Deficiency	Nutritional Disorder
1	Needle Burn (Leaf Scorch)	Abiotic Disorder
16	No Pathogen Found	Undetermined
2	Phomopsis Dieback; Tip Blight; Canker	<i>Phomopsis sp./spp.</i>
1	Poor Growing Conditions	Abiotic Disorder
34	Rhizosphaera Needle Cast	<i>Rhizosphaera kalkhoffii</i>
1	Soil Compaction	Abiotic Disorder
1	Spider Mite	<i>Tetranychus sp./spp.</i>
4	Spider Mite Injury	Unidentified Spider Mite
17	Stigmina Needle Blight	<i>Stigmina lautii</i>
7	Transplant Shock; Stress	Abiotic Disorder
1	Unknown Abiotic Disorder	Abiotic Disorder

1	Web-spinning Sawfly	<i>Cephalcia sp./spp.</i>
100	Total for Spruce	
Stewartia		
1	No Pathogen Found	Undetermined
1	Total for Stewartia	
Sumac		
1	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Dieback; Canker; Twig Blight	<i>Botryosphaeria sp./spp.</i>
1	Verticillium Wilt	<i>Verticillium sp./spp.</i>
3	Total for Sumac	
Sweetgum		
1	No Pathogen Found	Undetermined
1	Oystershell Scale	<i>Lepidosaphes ulmi</i>
2	Total for Sweetgum	
Sweetshrub; Carolina Allspice		
2	No Pathogen Found	Undetermined
2	Total for Sweetshrub; Carolina Allspice	
Sycamore		
1	Bacterial Leaf Scorch	<i>Xylella fastidiosa</i>
1	Iron Deficiency	Nutritional Disorder
1	No Pathogen Found	Undetermined
1	Sycamore Anthracnose	<i>Apiognomonina veneta</i>
4	Total for Sycamore	
Taxus		
6	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Elongate Hemlock Scale	<i>Fiorinia externa</i>
1	Environmental Stress; Problem	Abiotic Disorder
1	Lichens	Lichens
4	No Pathogen Found	Undetermined
1	Spider Mite	<i>Tetranychus sp./spp.</i>
1	Taxus Decline; Dieback	Abiotic Disorder
1	Undetermined Injury	Undetermined
1	Unknown Abiotic Disorder	Abiotic Disorder
1	Winter Injury	Abiotic Disorder
18	Total for Taxus	

Tree Of Heaven		
1	No Pathogen Found	Undetermined
1	Total for Tree Of Heaven	
Trumpet creeper		
1	No Pathogen Found	Undetermined
1	Total for Trumpet creeper	
Tulip Tree		
1	Anthraxnose	<i>Gloeosporium sp./spp.</i>
1	Decline; Dieback	Abiotic Disorder
3	No Pathogen Found	Undetermined
1	Powdery Mildew	<i>Oidium sp./spp.</i>
1	Sooty Mold	Unidentified Fungus
1	Transplant Shock; Stress	Abiotic Disorder
1	Tuliptree Scale	<i>Toumeyella liriodendri</i>
9	Total for Tulip Tree	
Viburnum		
1	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	No Pathogen Found	Undetermined
1	Powdery Mildew	<i>Oidium sp./spp.</i>
1	Spider Mite Injury	Unidentified Spider Mite
1	Thread Blight	<i>Ceratobasidium ochroleucum (Corticium stevensii)</i>
2	Transplant Shock; Stress	Abiotic Disorder
7	Total for Viburnum	
Walnut		
2	Walnut Leaf Spot	<i>Cylindrosporium juglandis</i>
2	Total for Walnut	
Willow		
3	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	Insect Damage	Unidentified Insect
1	No Pathogen Found	Undetermined
1	Phomopsis Leaf Spot	<i>Phomopsis sp./spp.</i>
4	Poplar; Willow Cytospora Canker	<i>Valsa sordida (Cytospora chrysosperma)</i>
1	Rust	<i>Melampsora sp./spp.</i>
1	Spider Mite Injury	Unidentified Spider Mite
1	Willow Leaf Blight; Scab	<i>Venturia saliciperda</i>
13	Total for Willow	

Wisteria		
1	Leaf Spot	Unidentified Fungus
1	Mushroom	Unidentified Fungus
1	Unidentified Caterpillar	Unidentified Caterpillar
3	Total for Wisteria	

Witchhazel		
2	No Pathogen Found	Undetermined
2	Total for Witchhazel	

Yellowwood		
1	Transplant Shock; Stress	Abiotic Disorder
1	Verticillium Wilt	<i>Verticillium sp./spp.</i>
2	Total for Yellowwood	

PINWOOD NEMATODE EXTRACTION

Juniper		
12	PWNE-No Pathogen Found	Undetermined
12	Total for Juniper	

P. RAMORUM NURSERY SURVEY

Azalea		
2	No Pathogen Found	Undetermined
2	Total for Azalea	

Camellia		
4	No Pathogen Found	Undetermined
4	Total for Camellia	

Pieris		
14	No Pathogen Found	Undetermined
4	Phytophthora Dieback; Blight	<i>Phytophthora sp./spp.</i>
18	Total for Pieris	

Rhododendron		
70	No Pathogen Found	Undetermined
21	Phytophthora Dieback; Blight	<i>Phytophthora sp./spp.</i>
91	Total for Rhododendron	

Viburnum		
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28	No Pathogen Found	Undetermined
1	Phytophthora Dieback; Blight	<i>Phytophthora sp./spp.</i>
29	Total for Viburnum	

VEGETABLES

Asparagus		
1	Asparagus Fusarium Crown Rot	<i>Fusarium oxysporum f.sp. asparagi</i>
2	Cercospora Blight	<i>Cercospora asparagi</i>
1	Decline; Dieback	Abiotic Disorder
4	Total for Asparagus	

Bean		
1	Ashy Stem Blight	<i>Macrophomina phaseolina</i>
2	Bean Angular Leaf Spot	<i>Phaeoisariopsis griseola</i>
2	Bean Anthracnose	<i>Colletotrichum lindemuthianum</i>
1	Black Root Rot	<i>Thielaviopsis basicola</i>
2	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	Environmental Stress; Problem	Abiotic Disorder
1	Fusarium Root Rot	<i>Fusarium sp./spp.</i>
1	Fusarium Stem Rot	<i>Fusarium sp./spp.</i>
1	Growth Regulator Effect Suspected	Chemical
2	Insect Damage	Unidentified Insect
4	Insufficient Sample	Undetermined
1	Nitrogen Deficiency	Nutritional Disorder
4	No Pathogen Found	Undetermined
1	Phytotoxicity	Chemical
1	Potyvirus Group	Potyvirus Group
2	Pythium Blight; Cottony Blight	<i>Pythium sp./spp.</i>
4	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
5	Rhizoctonia Stem and/or Root rot	<i>Rhizoctonia sp./spp.</i>
1	Seedcorn Maggot	<i>Delia (Hylemya) platura</i>
1	Southern Blight	<i>Sclerotium rolfsii</i>
2	Spider Mite	<i>Tetranychus sp./spp.</i>
1	Thrips Damage	Unidentified Thrips
1	White Mold (Stem Rot)	<i>Sclerotinia sclerotiorum</i>
42	Total for Bean	

Broccoli		
1	Black Spot	<i>Alternaria brassicae</i>
1	Fusarium Stem Rot	<i>Fusarium sp./spp.</i>
1	High pH Damage	Nutritional Disorder

2	High Soluble Salt	Nutritional Disorder
1	Nutritional Deficiency	Nutritional Disorder
1	Undetermined Injury	Undetermined
7	Total for Broccoli	

Brussels-Sprouts		
1	Black Spot	<i>Alternaria brassicae</i>
1	Crucifer Bacterial Black Rot	<i>Xanthomonas campestris</i>
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia Stem and Root Rot	<i>Rhizoctonia sp./spp.</i>
4	Total for Brussels-Sprouts	

Cabbage		
1	Boron Deficiency	Nutritional Disorder
1	High Soluble Salt	Nutritional Disorder
1	Rhizoctonia Stem and Root Rot	<i>Rhizoctonia sp./spp.</i>
2	Undetermined Injury	Undetermined
5	Total for Cabbage	

Cantaloupe		
1	Alternaria Leaf Blight and Spot	<i>Alternaria cucumerina</i>
1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
1	Powdery Mildew	<i>Podosphaera sp./spp.</i>
3	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia Stem and Root Rot	<i>Rhizoctonia sp./spp.</i>
7	Total for Cantaloupe	

Carrot		
1	Root-knot Nematodes	<i>Meloidogyne sp./spp.</i>
1	Sclerotinia Rot	<i>Sclerotinia sp./spp.</i>
2	Total for Carrot	

Cauliflower		
1	Black Leaf Spot	<i>Alternaria brassicicola</i>
1	Total for Cauliflower	

Cole Crops		
1	White Mold (Stem Rot)	<i>Sclerotinia sclerotiorum</i>
1	Total for Cole Crops	

Collards		
1	White Leaf Spot; Gray Stem	<i>Pseudocercospora capsellae</i>

1	Total for Collards	
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Corn (Sweet)		
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1	Corn Gray Leaf Spot	<i>Cercospora zeae-maydis</i>
1	Fusarium Stalk Rot	<i>Fusarium subglutinans</i>
1	Heat and Water Stress	Abiotic Disorder
2	Insufficient Sample; INAD	Undetermined
1	Leaf Spot	Unidentified Fungus
1	Low pH Damage	Nutritional Disorder
3	No Pathogen Found	Undetermined
1	Potassium Deficiency	Nutritional Disorder
2	Southern Corn Rust	<i>Puccinia polysora</i>
1	Zinc Deficiency	Nutritional Disorder

14	Total for Corn (Sweet)	
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Cucumber		
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1	Alternaria Leaf Blight and Spot	<i>Alternaria cucumerina</i>
3	Anthraxnose	<i>Colletotrichum orbiculare</i>
2	Aphids (Plant Lice)	Family <i>Aphididae</i>
1	Broad Mite	<i>Polyphagotarsonemus latus</i>
3	Cercospora Leaf Spot	<i>Cercospora citrullina</i>
3	Cucurbit Bacterial Wilt	<i>Erwinia tracheiphila</i>
1	Cucurbit Gummy Stem Blight	<i>Didymella (Ascochyta) bryoniae (cucumis)</i>
1	Insufficient Sample	Undetermined
1	Hail Damage	Abiotic Disorder
2	No Pathogen Found	Undetermined
1	Ozone Damage	Abiotic Disorder
1	Poor pollination	Abiotic Disorder
1	Powdery Mildew	<i>Podosphaera sp./spp.</i>
1	Scorch	Abiotic Disorder
1	Stink Bug Damage	Unidentified Stink Bug
1	Sunscald	Abiotic Disorder
1	Tatters	Abiotic Disorder
1	Thrips Damage	Unidentified Thrips
1	Twospotted Spider Mite	<i>Tetranychus urticae</i>
1	Undetermined Injury	Undetermined

28	Total for Cucumber	
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Eggplant		
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1	Phomopsis Blight; Fruit Rot	<i>Diaporthe (Phomopsis) vexans</i>
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1	Total for Eggplant	
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Garlic		
1	Bacterial Soft Rot	Unidentified Bacterium
1	Total for Garlic	

Kale		
1	Crucifer Bacterial Black Rot	<i>Xanthomonas campestris</i>
1	Greenhouse Whitefly	<i>Trialeurodes vaporariorum</i>
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Silverleaf (Sweetpotato) Whitefly	<i>Bemisia argentifolii</i>
1	Unidentified Caterpillar	Unidentified Caterpillar
1	Unspecified Viral Disease	Unspecified Viral Disease
1	White Mold (Stem Rot)	<i>Sclerotinia sclerotiorum</i>
7	Total for Kale	

Kohlrabi		
1	Oedema; Edema	Abiotic Disorder
1	Total for Kohlrabi	

Lettuce		
1	Bacterial Soft Rot	Unidentified Bacterium
1	Botrytis Blight	<i>Botrytis sp./spp.</i>
1	Cercospora Leaf Spot	<i>Cercospora sp./spp.</i>
2	Drop (Sclerotinia Rot)	<i>Sclerotinia sp./spp.</i>
1	Insect Damage	Unidentified Insect
1	Leaf Spot- Abiotic	Abiotic Disorder
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
8	Total for Lettuce	

Melon		
1	Anthrachnose	<i>Colletotrichum orbiculare</i>
1	Cercospora Leaf Spot	<i>Cercospora citrullina</i>
1	Cucurbit Bacterial Wilt	<i>Erwinia tracheiphila</i>
1	Insect Damage	Unidentified Insect
1	Leaf Scorch	Abiotic Disorder
1	Scorch	Abiotic Disorder
1	Unknown Abiotic Disorder	Abiotic Disorder
7	Total for Melon	

Muskmelon		
1	Alternaria Leaf Blight and Spot	<i>Alternaria cucumerina</i>
1	Hail Damage	Abiotic Disorder
2	Total for Muskmelon	

Okra		
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Stink Bug Damage	Unidentified Stink Bug
2	Total for Okra	
Onion		
1	Bacterial Blight	<i>Xanthomonas axonopodis</i>
1	Phytophthora Blight; Root Rot	<i>Phytophthora capsici</i>
1	Stemphylium Leaf Blight	<i>Stemphylium vesicarium</i>
3	Total for Onion	
Pea		
1	Chemical Injury Suspected	Chemical
1	Excessive Water	Abiotic Disorder
1	Growth Regulator Effect Suspected	Chemical
1	No Pathogen Found	Undetermined
1	Pythium Blight; Cottony Blight	<i>Pythium sp./spp.</i>
1	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
6	Total for Pea	
Pepper		
1	Alfalfa Mosaic	Alfalfa Mosaic Virus (AMV)
1	Aphids	Family <i>Aphididae</i>
1	Blossom End Rot	Abiotic Disorder
1	Broad Mite	<i>Polyphagotarsonemus latus</i>
1	Chemical Injury Suspected	Chemical
1	Chimera	Abiotic Disorder
1	Freeze; Frost; Cold Damage	Abiotic Disorder
1	Fusarium Crown Rot	<i>Fusarium sp./spp.</i>
2	High pH Damage	Nutritional Disorder
4	High Soluble Salt	Nutritional Disorder
1	High Temperature Damage	Abiotic Disorder
1	Leaf Spot- Abiotic	Abiotic Disorder
1	Mite Damage	Unidentified Mite
5	No Pathogen Found	Undetermined
13	Pepper Bacterial Spot	<i>Xanthomonas campestris pv. vesicatoria</i>
7	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
2	Rhizoctonia Stem and/or Root Rot	<i>Rhizoctonia sp./spp.</i>
4	Southern Blight	<i>Sclerotium rolfsii</i>
2	Sunscald	Abiotic Disorder
3	Thrips	Order <i>thysanoptera</i>

1	Unknown Abiotic Disorder	Abiotic Disorder
54	Total for Pepper	

Potato		
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1	Bacterial Soft Rot	Unidentified Bacterium
1	Chemical Injury Suspected	Chemical
1	Early Blight; Leaf Spot	<i>Alternaria solani</i>
3	Flea Beetles	Subfamily <i>Alticinae</i>
1	Fusarium Root Rot	<i>Fusarium sp./spp.</i>
1	Growth Regulator Effect Suspected	Chemical
1	Insect Damage	Unidentified Insect
1	Lesion Nematodes	<i>Pratylenchus sp./spp.</i>
3	Potato Black Dot	<i>Colletotrichum coccodes</i>
1	Potato Black Leg	<i>Erwinia (Pectobacterium) carotovora</i>
4	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
3	Rhizoctonia Root Rot	<i>Rhizoctonia sp./spp.</i>
1	Root Rot	Unidentified Agent
3	Scab	<i>Streptomyces sp./spp.</i>
1	Sunscald	Abiotic Disorder
26	Total for Potato	

Pumpkin		
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1	Aphids	Family <i>Aphididae</i>
2	Anthracnose	<i>Colletotrichum orbiculare</i>
1	Cercospora Leaf Spot	<i>Cercospora citrullina</i>
4	Cucurbit Angular Leaf Spot	<i>Pseudomonas syringae pv. lachrymans</i>
2	Cucurbit Downy Mildew	<i>Pseudoperonospora cubensis</i>
1	Cucurbit Gummy Stem Blight	<i>Didymella bryoniae</i>
1	Fusarium Fruit Rot	<i>Fusarium sp./spp.</i>
1	Herbicide Injury; Exposure Suspected	Chemical
1	Insufficient Sample	Undetermined
1	Leaf Scorch	Abiotic Disorder
5	Microdochium Blight	<i>Plectosphaerella cucumerina</i>
2	Powdery Mildew	<i>Podosphaera sp./spp.</i>
2	Phytophthora Fruit Rot; Blight	<i>Phytophthora capsici</i>
1	Phytotoxicity	Chemical
1	Pythium Blight; Cottony Blight	<i>Pythium sp./spp.</i>
1	Root-knot Nematodes	<i>Meloidogyne sp./spp.</i>
1	Spider Mite	<i>Tetranychus sp./spp.</i>
2	Squash Vine Borer	<i>Melittia cucurbitae</i>
30	Total for Pumpkin	

Rhubarb		
3	Crown Rot; Root Rot; Stem Rot	<i>Phytophthora sp./spp.</i>
1	Nutritional Deficiency	Nutritional Disorder
4	Total for Rhubarb	

Spinach		
1	Cladosporium Leaf Spot	<i>Cladosporium sp./spp.</i>
1	Fungus Gnats	<i>Mycetophilidae fam.</i>
1	Root Rot and Web Blight	<i>Rhizoctonia sp./spp.</i>
3	Total for Spinach	

Squash		
1	Anthraxnose	<i>Colletotrichum orbiculare</i>
1	Bacterial Soft Rot	Unidentified Bacterium
2	Cercospora Leaf Spot	<i>Cercospora citrullina</i>
5	Cucurbit Angular Leaf Spot	<i>Pseudomonas syringae pv. lachrymans</i>
4	Cucurbit Downy Mildew	<i>Pseudoperonospora cubensis</i>
3	Insufficient Sample; INAD	Undetermined
2	No Pathogen Found	Undetermined
1	Poor Growing Conditions	Abiotic Disorder
2	Poor pollination	Abiotic Disorder
1	Powdery Mildew	<i>Golovinomyces cichoracearum</i>
5	Powdery Mildew	<i>Podosphaera sp./spp.</i>
1	Squash Vine Borer	<i>Melittia cucurbitae</i>
1	Thrips Damage	Unidentified Thrips
1	Unidentified Bacteria	Unidentified Bacteria
3	Unknown Abiotic Disorder	Abiotic Disorder
1	Watermelon Mosaic	<i>Watermelon Mosaic Virus (WMV)</i>
1	Wet Rot; Fruit Rot	<i>Choanephora cucurbitarum</i>
35	Total for Squash	

Sweetpotato		
1	Bacterial Soft Rot	Unidentified Bacterium
1	Cold Injury	Abiotic Disorder
1	No Pathogen Found	Undetermined
3	Sweetpotato Scurf	<i>Monilochaetes infuscans</i>
6	Total for Sweetpotato	

Tomatillo		
1	Glyphosate Injury	Chemical
1	Total for Tomatillo	

Tomato

1	2-4-D Injury Suspected	Chemical
1	Abnormal Fruit Development	Abiotic Disorder
3	Anthracoze Fruit Rot (Ripe Rot)	<i>Colletotrichum sp./spp.</i>
1	Anthracoze; Colletotrichum Leaf Spot	<i>Colletotrichum sp./spp.</i>
3	Aphids (Plant Lice)	Family <i>Aphididae</i>
2	Bacterial Canker	<i>Clavibacter michiganensis</i>
1	Bacterial Soft Rot	Unidentified Bacterium
2	Bacterial Speck	<i>Pseudomonas syringae pv. tomato</i>
5	Blossom End Rot	Abiotic Disorder
6	Botrytis Blight	<i>Botrytis sp./spp.</i>
2	Botrytis Fruit Rot	<i>Botrytis sp./spp.</i>
2	Broad Mite	<i>Polyphagotarsonemus latus</i>
2	Canker- Unidentified Agent	Unidentified Agent
3	Catface	Abiotic Disorder
1	Cercospora Leaf Spot	<i>Pseudocercospora fuligena</i>
4	Chemical Injury Suspected	Chemical
1	Cultural/Environmental Problem	Abiotic Disorder
19	Early Blight; Leaf Spot	<i>Alternaria solani</i>
2	Ethylene Exposure	Abiotic Disorder
1	Fertilizer Injury	Nutritional Disorder
1	Foliar Distortion	Unidentified Agent
1	Freeze; Frost; Cold Damage	Abiotic Disorder
1	Fusarium Fruit Rot	<i>Fusarium sp./spp.</i>
5	Fusarium Wilt	<i>Fusarium oxysporum</i>
2	Glyphosate Injury Suspected	Chemical
20	Growth Regulator Effect Suspected	Chemical
2	High pH	Nutritional Disorder
2	High Soil Moisture	Abiotic Disorder
6	High Soluble Salt	Nutritional Disorder
1	Insect Damage	Unidentified Insect
8	Insufficient Sample	Undetermined
15	Leaf Mold	<i>Fulvia fulva</i>
3	Leaf Scorch	Abiotic Disorder
1	Mechanical Damage	Abiotic Disorder
2	Nitrogen Deficiency	Nutritional Disorder
19	No Pathogen Found	Undetermined
1	Nutrient Imbalance	Nutritional Disorder
4	Nutritional Deficiency	Nutritional Disorder
2	Phosphorus Deficiency	Nutritional Disorder
2	Physiological Leaf Roll	Abiotic Disorder
1	Physiological Responses	Abiotic Disorder
2	Potassium Deficiency	Nutritional Disorder

2	Powdery Mildew	<i>Oidium sp./spp.</i>
1	Pythium Damping Off	<i>Pythium sp./spp.</i>
27	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>
1	Rhizoctonia Foliar/ Aerial/ Web Blight	<i>Rhizoctonia solani</i>
1	Rhizoctonia Fruit Rot	<i>Rhizoctonia sp./spp.</i>
1	Rhizoctonia Root Rot	<i>Rhizoctonia sp./spp.</i>
5	Rhizoctonia Stem and Root Rot	<i>Rhizoctonia sp./spp.</i>
1	Root Rot	Unidentified Fungus
1	Seedcorn Maggot	<i>Delia (Hylemya) platura</i>
28	Septoria Leaf Spot	<i>Septoria lycopersici</i>
1	Soil Compaction	Abiotic Disorder
7	Southern Blight	<i>Sclerotium rolfsii</i>
1	Spider Mite	<i>Tetranychus sp./spp.</i>
2	Spider Mite Injury	Unidentified Spider Mite
3	Stink Bug Damage	Unidentified Stink Bug
2	Temperature Induced Pathology	Abiotic Disorder
1	Thrips Damage	Unidentified Thrips
5	Tobacco Flea Beetle	<i>Epitrix hirtipennis</i>
3	Tobacco Mosaic Virus	Tobacco Mosaic Virus (TMV)
14	Tomato Bacterial Spot	<i>Xanthomonas sp./spp.</i>
1	Tomato Russett Mite	<i>Aculops lycopersici</i>
8	Tomato Spotted Wilt	Tomato Spotted Wilt Virus (TSWV)
1	Tomato Yellow Leaf Curl	Tomato Yellow Leaf Curl Virus (TYLCV)
3	Undetermined Injury	Undetermined
1	Unidentified Bacteria	Unidentified Bacteria
2	Unidentified Caterpillar	Unidentified Caterpillar
6	White Mold (Stem Rot); Timber Rot	<i>Sclerotinia sclerotiorum</i>

292	Total for Tomato	
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Turnip		
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1	Low Soil Moisture	Abiotic Disorder
1	No Pathogen Found	Undetermined

2	Total for Turnip	
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Watermelon		
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3	Anthrachnose	<i>Colletotrichum orbiculare</i>
3	Cercospora Leaf Spot	<i>Cercospora citrullina</i>
5	Cucurbit Gummy Stem Blight	<i>Didymella bryoniae</i>
2	No Pathogen Found	Undetermined
2	Nutritional Deficiency	Nutritional Disorder
3	Powdery Mildew	<i>Podosphaera sp./spp.</i>
5	Pythium Root and/or Crown Rot	<i>Pythium sp./spp.</i>

1	Rhizoctonia Root Rot	<i>Rhizoctonia sp./spp.</i>
1	Scab	<i>Cladosporium sp./spp.</i>
1	Scorch	Abiotic Disorder
1	Spider Mites	Family <i>Tetranychidae</i>
27	Total for Watermelon	