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PLANT DISEASES
in
KENTUCKY

Plant Disease Diagnostic Laboratory Summary

· 1987 ·

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INTRODUCTION

The Plant Disease Diagnostic Lab (Lexington and Princeton) handled 3094 plant specimens and 1424 nematode soil samples during 1987. Samples with more than one problem numbered 403, bringing the total number of actual diagnoses to 4921. Specimens coming through the County Extension system accounted for 94 percent of the total, while the remainder came directly from non-Extension clients. The Lexington Lab diagnosed 2148 specimens. The Princeton Diagnostic Lab's specimen load totaled 2370. Of this number 946 were plant samples and 1424 were soil samples submitted for soybean cyst nematode analysis. A total of 1288 of these were submitted by researchers and 136 were submitted by commercial growers.

These numbers are summarized as follows:

The Plant Disease Diagnostic Lab, total samples	4518
Samples with more than 1 diagnosis	403
Total diagnoses	4921
Plant samples	3094
Nematode samples	1424
Lexington Lab, total (plant) samples	2148
Princeton Lab, total samples	2370
Plant samples	946
Nematode samples	1424
Percent of samples through Extension System	94(%)

HIGHLIGHTS

SCLEROTINIA CROWN AND STEM ROT caused considerable damage in a number of alfalfa and clover fields in Kentucky. A total of 39 plant samples with Sclerotinia were diagnosed in 1987, as compared with 3 in 1986.

As in 1986, a number of **RHIZOCTONIA DISEASES** were frequently encountered. We commonly observed this organism causing root and stem rots of various bedding plants (e.g. begonia, celosia, dusty miller, impatiens and others). Rhizoctonia was also a problem on a number of vegetables, including: snap bean (root and stem rot), cabbage (wire stem, bottom rot), cucumber (belly rot) and pea (root rot). The number of tobacco samples with Rhizoctonia sore shin, as the primary diagnosis, was somewhat higher in 1987 (21 samples) compared to 1986 (17 samples). Other Rhizoctonia diseases observed included: brown patch, damping-off, leaf spot (all on turfgrass) and stem canker (alfalfa).

BACTERIAL SCORCH of pin oak was identified for the first time in Kentucky. This is also the first report of this disease within an inland state. All other occurrences have been in states along the Pacific, Atlantic and Gulf Coasts. Bacterial scorch is caused by the fastidious xylem inhabiting bacterium, Xylemella fastidiosum.

CUCURBIT VIRUSES posed a serious problem to some commercial squash and pumpkin growers in Central Kentucky. Samples from a Clark county field of squash (zucchini and other summer squashes) and pumpkin were confirmed as having Watermelon Mosaic Virus-2 (WMV-2). We appreciate the kind cooperation of Dr. Steve Nameth and the Ohio State University Diagnostic Lab for running the necessary laboratory tests to confirm the presence of this virus. Symptoms of WMV-2 were also present in a commercial watermelon field in Trimble County. This later case was never confirmed through lab tests.

EXPLANATORY REMARKS

As you examine the main body of this report, you will notice three columns of numbers following the diagnosis and causal agent sections. The first column indicates the number of primary diagnoses, the second column the number of secondary diagnoses and the third column is the total of the previous two. The primary diagnosis is the main, or frequently, the only problem observed on a plant sample. If a second problem of equal or lesser importance was observed, it was entered as the secondary diagnosis. Occasionally, a problem may have only been diagnosed as a secondary problem, and never as a primary problem (e.g. Lophodermium needlecast on Pine). In these cases, a zero (0) will appear in the primary diagnosis column to indicate the absence of samples with that particular problem.

No disease: This indicates that no pathogen was observed on the specimen submitted, and that based on the sample and information provided, we were unable to pinpoint an exact abiotic or biotic cause of the problem.

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 the weed control specialist or by the crop specialist in the Agronomy or Horticulture Departments. On a number of occasions we also consulted with crop specialists in other departments to diagnose or verify abiotic problems.

Root problems: Samples designated as having a "root problem" had above ground symptoms suggestive of root disfunction and/or evidence of root degeneration, however, a specific biotic or abiotic cause could not be determined.

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We would also like to thank the College of Agriculture Extension Specialists and researchers who served as consultants to the Diagnostic Labs in 1987. Their services ranged from making actual diagnoses to providing answers to plant or pesticide questions. These individuals are too numerous to mention here (see Table 9) but we are grateful nonetheless to each for their valuable assistance.

Table 1. Summary of diagnoses¹ by crop category and causal agent type.

Crop Category	Abiotic Problems	Biotic ² Problems	Chemical Injury	Inadequate Specimen	Insect Injury	Other ³	Total Diagnoses
<u>Agronomic</u>							
Corn	39	50	2	13	20	18	142
Forages	23	98	2	12	13	1	149
Small grains	12	30	2	3	0	12	59
Soybeans	48	1546	26	9	1	20	1650
Tobacco	288	295	56	27	43	56	765
<u>Fruit</u>							
Small fruit	27	58	1	9	3	24	122
Tree fruit	35	144	8	10	35	23	255
<u>Herbs</u>							
	0	17	0	3	1	2	23
<u>Identification</u>							
	0	17	0	3	1	2	23
<u>Ornamentals</u>							
Herbaceous and Houseplants	65	80	1	7	21	35	209
Turfgrass	12	48	0	7	0	16	83
Woody	300	258	40	148	105	215	1066
<u>Vegetables</u>							
	68	176	23	20	22	48	357
<u>Miscellaneous</u>							
	6	0	0	2	0	10	18
<u>Total</u>							
	923	2817	161	273	265	482	4921

¹ All counts and totals include primary diagnoses plus secondary diagnoses.

² Refer to Table 2 for a further breakdown of this category.

³ "Other" includes the causal agent categories: No disease, Unknown and None (non-applicable).

Table 2. Summary of biotic problems by crop category.

Crop Category	Bacterial	Fungal	Nematode	Virus	Other ¹
<u>Agronomic</u>					
Corn	5	41	0	4	0
Forages	1	97	0	0	0
Small grains	0	21	0	9	0
Soybeans	0	64	1482	0	0
Tobacco	59	191	1	43	1
<u>Fruit</u>					
Small fruit	3	53	0	2	0
Tree fruit	60	84	0	0	0
<u>Herbs</u>					
	0	17	0	0	0
<u>Identification</u>					
	0	11	0	0	6
<u>Ornamentals</u>					
Herbaceous and Houseplants	13	66	0	1	0
Turfgrass	0	48	0	0	0
Woody	12	235	2	2	7
<u>Vegetables</u>					
	41	108	5	21	1
<u>Miscellaneous</u>					
	0	0	0	0	0
<u>Total</u>	194	1036	1490	82	15

¹ Other includes these categories: Animal (rodent and bird damage), Plant (plant identifications), and Algae.

Table 3. Summary of specimens by crop category, expressed as percentages.

Crop Category	Number of Specimens	Percentage of Total Specimens
Agronomic	2000	40.6
Tobacco	765	15.5
Fruit	377	7.6
Herbs	23	.5
Identifications	23	.5
Ornamentals	1358	27.6
Vegetables	357	7.3
Miscellaneous	18	.4
Total Specimens	4921	100.0

Table 4. Summary of diagnoses by crop and crop category.

Crop Category and Crop	Number of Primary Diagnoses ¹	Number of Secondary Diagnoses ²	Total Diagnoses
<u>Agronomic</u>			
Corn	123	19	142
Forages	123	26	149
Small grains	54	5	59
Soybeans	1615	35	1650
Tobacco	672	93	765
<u>Fruit</u>			
Small fruit	111	11	122
Tree fruit	223	32	255
<u>Herbs</u>	21	2	23
<u>Identification</u>	23	0	23
<u>Ornamentals</u>			
Herbaceous and Houseplants	199	10	209
Turfgrass	76	7	83
Woody	943	123	1066
<u>Vegetables</u>	317	40	357
<u>Miscellaneous</u>	18	0	18
<u>Total</u>	4518	403	4921

¹ The number of primary diagnoses corresponds to the number of different specimens examined.

² If a second problem was evident on the plant specimen it was considered the secondary diagnosis. See "Explanatory Remarks."

³ Total diagnoses equals the number of primary plus the number of secondary diagnoses.

Table 5. Summary of samples received by grower type and crop group.

Crop Group	Number of Samples							
	Commercial		Homeowner		Research		Institution	
	Ext ¹	Non-Ext ²	Ext ¹	Non-Ext ²	Ext ¹	Non-Ext ²	Ext ¹	Non-Ext ²
Agronomic								
Tobacco	641	27	0	0	0	1	3	0
Other ³	600	11	2	0	1289	9	4	0
Fruit	113	2	190	18	4	0	7	0
Ornamental	131	37	905	107	3	3	21	11
Vegetable	98	6	198	6	2	6	1	0
Other ⁴	19	8	30	3	0	1	1	0
Total	1602	91	1325	134	1298	20	37	11
Grand Total	1693		1459		1318		48	

¹ Ext = Extension samples submitted via County Extension Agents or Extension Specialists.

² Non-Ext = Non-extension samples submitted directly by the grower or other non-extension clients.

³ Other includes: Corn, Forages, Small Grains, and Soybeans.

⁴ Other includes: Herbs, Identifications and Miscellaneous

Table 6. Number of referrals and/or consultations made with other departments or Uk lab facilities (1987).

Department or Facility	Agronomic Crops	Fruit Crops	Ornamental Crops	Vegetable Crops	Other	Total
Agronomy Department	100	1	6	4	0	111
Entomology Department	32	27	134	15	2	210
Horticulture Department	1	9	37	10	1	58
Regulatory Services	0	0	1	2	1	4
Nematode Lab	0	0	0	0	1	1
Herbarium	0	0	3	0	5	8
Ohio State Univ.	0	0	0	2	0	2
Breathitt Vet. Lab	1	0	0	0	0	1

Table 7. Special laboratory tests performed.

Test	Number of Cases
Culturing	122
Incubation	103
Nematode extraction (total = 1436)	
Pinewood nematode	11
Soybean cyst nematode	1424
Other	1
Virus assays (total = 10)	
(Electron Microscope)	1
ELISA	4
Indicator plants	5
Soil tests (total = 238)	
pH	231
Soluble salts	4
pH/SS	1
Saturated Media Extract (SME)	2
Miscellaneous tests (total = 26)	
Quick nitrate test (tobacco)	26

Table 8. Number of specimens received by county (KY and out-of-state sources) and crop category.

COUNTY	Total	Agronomic ¹	Tobacco	Fruit	Ornamentl	Vegetab	Other
ADAIR	1	1	0	0	0	0	0
ALLEN	19	0	10	2	2	5	0
ANDERSON	10	0	3	2	5	0	0
BALLARD	40	8	18	5	4	4	1
BARREN	20	3	8	0	7	1	1
BATH	38	4	12	4	11	7	0
BELL	20	1	0	5	10	3	1
BOONE	32	0	9	0	20	2	1
BOURBON	44	7	7	6	18	5	1
BOYD	13	0	0	1	12	0	0
BOYLE	28	3	4	2	16	3	0
BRACKEN	8	1	2	1	2	1	1
BREATHITT	15	1	3	3	4	4	0
BRECKINRIDGE	17	5	7	0	3	2	0
BULLITT	17	1	2	4	8	0	2
BUTLER	10	1	4	1	2	2	0
CALDWELL	49	5	9	12	11	9	3
CALLOWAY	56	4	21	8	14	9	0
CAMPBELL	4	0	0	0	2	2	0
CARLISLE	13	7	1	1	2	1	1
CARROLL	8	3	4	1	0	0	0
CARTER	25	2	16	0	4	3	0
CASEY	20	2	6	4	2	4	2
CHRISTIAN	59	6	21	5	21	6	0
CLARK	21	1	9	0	5	6	0
CLAY	2	0	0	0	0	2	0
CLINTON	14	2	3	3	3	2	1
CRITTENDEN	12	0	1	0	6	5	0
CUMBERLAND	4	2	1	0	0	1	0
DAVISS	181	72	28	8	58	14	1
EDMONSON	0	0	0	0	0	0	0
ELLIOTT	6	0	1	2	3	0	0
ESTILL	17	1	3	4	4	5	0
FAYETTE	450	18	18	42	345	22	5
FLEMING	18	8	4	0	5	1	0
FLOYD	9	0	0	1	8	0	0
FRANKLIN	69	1	12	11	39	4	2
FULTON	20	10	0	3	5	2	0
GALLATIN	9	1	5	0	3	0	0
GARRARD	16	7	5	0	1	3	0
GRANT	21	0	11	3	5	2	0
GRAVES	60	20	21	1	11	6	1
GRAYSON	1	1	0	0	0	0	0
GREEN	8	1	5	1	1	0	0
GREENUP	7	0	0	1	4	1	1
HANCOCK	8	5	1	2	0	0	0
HARDIN	45	1	5	6	23	9	1
HARLAN	3	0	0	1	1	1	0

COUNTY	Total	Agronomic ¹	Tobacco	Fruit	Ornamentl	Vegetab	Other
HARRISON	22	0	11	4	3	1	3
HART	27	3	7	4	9	4	0
HENDERSON	21	11	3	1	4	2	0
HENRY	24	6	8	1	9	0	0
HICKMAN	9	3	0	1	5	0	0
HOPKINS	62	22	2	17	14	4	3
JACKSON	12	1	3	1	3	2	2
JEFFERSON	62	7	2	6	46	1	0
JESSAMINE	18	2	7	5	4	0	0
JOHNSON	12	1	3	2	5	1	0
KENTON	16	0	2	4	9	1	0
KNOTT	7	0	0	1	2	4	0
KNOX	12	1	2	1	8	0	0
LARUE	13	3	3	1	1	1	4
LAUREL	10	1	3	0	5	1	0
LAWRENCE	22	1	4	0	12	5	0
LEE	3	0	0	0	3	0	0
LESLIE	3	0	0	1	1	1	0
LETCHER	15	0	0	1	14	0	0
LEWIS	17	2	12	3	0	0	0
LINCOLN	14	3	2	1	7	0	1
LIVINGSTON	11	5	0	1	2	3	0
LOGAN	72	15	18	6	25	7	1
LYON	6	1	3	0	1	1	0
McCRACKEN	40	8	4	2	19	7	0
McCREARY	4	0	0	0	4	0	0
McLEAN	6	3	1	0	1	1	0
MADISON	63	4	24	11	23	0	1
MAGOFFIN	2	0	1	0	1	0	0
MARION	16	1	2	2	9	1	1
MARSHALL	35	2	6	3	12	12	0
MARTIN	0	0	0	0	0	0	0
MASON	17	6	4	3	3	0	1
MEADE	22	1	2	8	5	6	0
MENIFEE	4	0	2	1	0	1	0
MERCER	11	0	1	0	7	2	1
METCALFE	8	1	4	0	1	2	0
MONROE	8	1	2	1	1	3	0
MONTGOMERY	33	5	8	3	12	2	3
MORGAN	19	1	10	2	1	4	1
MUHLENBERG	17	8	6	0	3	0	0
NELSON	36	8	10	3	9	5	1
NICHOLAS	3	0	1	1	1	0	0
OHIO	9	5	3	0	0	1	0
OLDHAM	49	5	3	4	30	4	3
OWEN	19	6	7	2	4	0	0
OWSLEY	10	0	3	3	3	1	0
PENDELTON	17	1	6	3	5	2	0
PERRY	4	0	2	1	0	1	0
PIKE	0	0	0	0	0	0	0

COUNTY	Total	Agronomic ¹	Tobacco	Fruit	Ornamentl	Vegetab	Other
POWELL	9	1	1	2	4	1	0
PULASKI	27	3	6	3	13	2	0
ROBERTSON	8	3	3	1	0	1	0
ROCKCASTLE	10	1	5	3	1	0	0
ROWAN	16	0	1	5	8	2	0
RUSSELL	25	3	1	4	7	10	0
SCOTT	18	0	6	1	9	1	1
SHELBY	52	12	19	4	14	3	0
SIMPSON	21	3	3	0	14	0	1
SPENCER	7	1	0	3	2	1	0
TAYLOR	17	5	5	2	1	3	1
TODD	62	16	11	11	15	9	0
TRIGG	18	1	6	3	6	2	0
TRIMBLE	24	7	12	0	1	4	0
UNION	33	26	0	1	4	1	1
WARREN	50	6	6	8	20	10	0
WASHINGTON	20	1	4	2	12	0	1
WAYNE	32	7	16	0	4	4	1
WEBSTER	28	15	3	2	4	2	2
WHITLEY	9	1	2	1	1	4	0
WOLFE	4	0	4	0	0	0	0
WOODFORD	58	5	22	7	20	4	0
Out-of-State	36	4	29	0	2	0	1
Unknown	1	0	0	0	0	0	1
TOTALS	3094	491	672	334	1218	317	62

¹ Agronomic crops include corn, soybeans, forages and small grains but in this particular case, it excludes tobacco.

Table 9. The number of cases in which Extension Specialists, diagnosticians or other experts were involved in making a primary diagnosis and the number of cases in which they served as consultants.

SPECIALIST & DIAGNOSTICIANS	DEPARTMENT	NUMBER OF CASES	
		PRIMARY * DIAGNOSIS	CONSULTATIONS **
LEXINGTON			
Anderson, RG	Horticulture	1	18
Bale, S	Horticulture	0	1
Bitzer, MJ	Agronomy	9	5
Christensen, CM	Entomology	1	5
Clinton, WP	Plant Pathology	2	2
Evans, JK	Agronomy	1	2
Fountain, WF	Horticulture	2	9
Green, JD	Agronomy	16	3
Haragan, PD	Agronomy	4	4
Hartman, JR	Plant Pathology	261	41
Kaiser, CA (Diagnostician)	Plant Pathology	1472	12
McNiell, RE	Horticulture	3	8
Nesmith, WC	Plant Pathology	68	23
Palmer, GK	Agronomy	23	6
Pirone, TP	Plant Pathology	1	0
Powell, AJ	Agronomy	2	0
Roberts, CR	Horticulture	10	4
Scheibner, RA	Entomology	131	35
Smiley, JH	Agronomy	64	5
Strang, JG	Horticulture	8	7
Stuckey, RE	Plant Pathology	21	0
Thom, WO	Agronomy	0	1
Townsend, LH	Entomology	42	8
Wells, KL	Agronomy	7	2
Witt, ML	Horticulture	0	1
PRINCETON			
Bachi, PR (Diagnostician)	Plant Pathology	907	4
Brown, GR	Horticulture	0	5
Dunwell, WC	Horticulture	0	20
Herbek, JH	Agronomy	0	5
Hershman, DE	Plant Pathology	24	15
Johnson, DJ	Entomology	0	16
Lacefield, GD	Agronomy	0	8
Legg, PD	Agronomy	0	4
Martin, JR	Agronomy	1	69
Murdock, LW	Agronomy	2	15

* The specialist or diagnostician signing the Plant Diagnostic Form was considered the primary diagnoser.

** In some cases more than one specialist was consulted, however, only one name could be entered into the computer database. Therefore, these numbers may indicate fewer consultations than were actually performed.

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
AGRONOMIC CROPS					
CORN (Zea)					
	ANTHRACNOSE	- COLLETOTRICHUM	0	1	1
	BACTERIAL STALK ROT	- ERWINIA	5	0	5
	BROWN SPOT	- PHYSODERMA	0	2	2
	CHARCOAL ROT	- MACROPHOMINA	0	1	1
	CHEMICAL INJURY		2	0	2
	EAR/KERNEL ROTS	- ASPERGILLUS	1	0	1
		- DIPLODIA	8	0	8
		- FUSARIUM	1	0	1
		- PENICILLIUM	0	1	1
	ENVIRONMENTAL	DROUGHT	9	1	10
		OTHER STRESSES	5	2	7
	GRAY LEAF SPOT	- CERCOSPORA	16	0	16
	INADEQUATE SPECIMEN, NO DISEASE		30	0	30
	INSECT INJURY		16	4	20
	NORTHERN LEAF BLIGHT	- SETOSPHAERIA	1	1	2
	NORTHERN LEAF SPOT	- COCHLIOBULUS	2	0	2
	NUTRITIONAL	ACID SOIL	8	3	11
		ZN DEFICIENCY	8	1	9
		OTHER	2	0	2
	REFERRAL		1	0	1
	RUST	- PUCCINIA	1	0	1
	SEEDLING BLIGHT	- FUSARIUM	0	1	1
	STALK ROTS	- DIPLODIA	1	0	1
		- GIBBERELLA	2	0	2
		- PYTHIUM	1	0	1
	VIRUS	- COMPLEX	2	1	3
		- MAIZE DWARF MOSAIC	1	0	1
Forages					
ALFALFA (Medicago)					
	ANTHRACNOSE	- COLLETOTRICHUM	3	0	3
	BACTERIAL STEM BLIGHT	- PSEUDOMONAS	1	1	2
	CHEMICAL		2	0	2
	CROWN/ROOT ROT	- FUSARIUM	1	2	3
		- RHIZOCTONIA	1	0	1
	CROWN/STEM ROT	- SCLEROTINIA	34	0	34
	ENVIRONMENTAL STRESSES		10	3	13
	INADEQUATE SPECIMEN		9	0	9
	INSECT		7	6	13
	LEAF SPOT	- FUNGAL	1	0	1
		- CERCOSPORA	0	2	2
		- LEPTOSPHAERULINA	7	6	13
		- PHOMA	0	1	1
		- PSEUDOPEZIZA	3	0	3
		- STEMPHYLIUM	0	1	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
ALFALFA (cont)					
	NUTRITIONAL	- B DEFICIENCY	2	0	2
		- K DEFICIENCY	2	0	2
		- OTHER	3	0	3
	SPRING BLACK STEM	- PHOMA	3	0	3
	STEM CANKER	- RHIZOCTONIA	6	0	6
	SUMMER BLACK STEM	- CERCOSPORA	7	1	8
CLOVER (Trifolium)					
	CROWN/STEM ROT	- SCLEROTINIA	5	0	5
	INADEQUATE SPECIMEN		3	0	3
FESCUE (Festuca)					
	LEAF SPOT	- RHIZOCTONIA	1	0	1
	ROOT/STEM ROT	- RHIZOCTONIA	1	0	1
	STRIPE SMUT	- USTILAGO	1	0	1
HAY (Various)					
	MOLDY	- ASPERGILLUS	2	0	2
		- ALTERNARIA	0	1	1
		- RHIZOCTONIA	0	1	1
MILLET Panicum)					
	LEAF SPOT	- PYRICULARIA	3	0	3
ORCHARDGRASS (Dactylis)					
	ENVIRONMENTAL	- DROUGHT	1	0	1
SIGNALGRASS (Brachiaria)					
	NUTRITIONAL	- N DEFICIENCY	1	0	1
SUDEX (SORGHUM)					
	TARGET SPOT	- BIPOLARIS	1	0	1
VETCH (Vicia)					
	ANTHRACNOSE	- COLLETOTRICHUM	0	1	1
	NUTRITIONAL	- ACID SOIL	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
<u>Soybean</u>					
SOYBEAN (Glycine)					
	ANTHRACNOSE	- COLLETOTRICHUM	5	1	6
	BROWN SPOT	- SEPTORIA	8	5	13
	BROWN STEM ROT	- PHIALOPHORA	1	0	1
	CHARCOAL ROT	- MACROPHOMINA	5	1	6
	CHEMICAL INJURY		23	3	26
	DAMPING-OFF	- PYTHIUM	3	1	4
		- RHIZOCTONIA	1	0	1
	DOWNY MILDEW	- PERONOSPORA	3	0	3
	ENVIRONMENTAL STRESSES		11	4	15
	FROGEYE	- CERCOSPORA	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE, UNKNOWN		28	0	28
	INSECT		0	1	1
	NUTRITIONAL	- ACID SOIL	5	2	7
		- MN DEFICIENCY	6	0	6
		- OTHER	7	2	9
	POD/STEM ROT	- DIAPORTHE	0	1	1
	REFERRAL		1	0	1
	ROOT ROT	- FUNGAL	2	0	2
		- PYTHIUM	1	1	2
		- RHIZOCTONIA	1	1	2
	ROOT/STEM ROT	- PHYTOPHTHORA	4	0	4
		- PYTHIUM	1	0	1
		- RHIZOCTONIA	9	8	17
	SOYBEAN CYST NEMATODE	- on plant samples	54	4	58
	<u>HETERODERA</u>	* in soil samples	1302	0	1302
		* absent in soil samples	122		122
	(*soil submitted to Nematode Lab)				
	SUDDEN DEATH SYNDROME	UNKNOWN	11	0	11
<u>Small Grains</u>					
BARLEY (Hordeum)					
	CHEMICAL INJURY		1	0	1
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
	NO DISEASE		1	0	1
CANOLA (Brassicae)					
	ENVIRONMENTAL	- COLD INJURY	1	0	1
	NO DISEASE		1	0	1
OAT (Avena)					
	CHEMICAL INJURY		1	0	1
	INADEQUATE SPECIMEN		1	0	1
	LEAF SPOT	- PYRICULARIA	1	0	1
RYE (Secale)					
	NO DISEASE		2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
WHEAT (Triticum)					
	ENVIRONMENTAL STRESSES		6	1	7
	EYESPOT	- PSEUDOCERCOSPORELLA	2	0	2
	GLUME BLOTCH	- SEPTORIA	5	0	5
	INADEQUATE SPECIMEN, NO DISEASE		9	0	9
	LEAF BLOTCH	- SEPTORIA	1	1	2
	NUTRITIONAL	- GENERAL	1	1	2
		- N DEFICIENCY	2	0	2
	POWDERY MILDEW	- ERYSIPIHE	2	0	2
	ROOT/FOOT ROT	- FUSARIUM	1	0	1
	ROOT ROT	- RHIZOCTONIA	0	1	1
	RUST/LEAF	- PUCCINIA	1	0	1
	SHARP EYESPOT	- RHIZOCTONIA	2	0	2
	SMUT	- USTILAGO	1	0	1
	SOOTY MOLD		1	1	2
	VIRUS	- BARLEY YELLOW DWARF	2	0	2
		- " ABSENT	2	0	2
		- WHEAT SPINDLE STREAK	7	0	7

Tobacco

TOBACCO (Nicotiana)					
	ALGAE	- BLUE GREEN	0	1	1
	ANGULAR LEAF SPOT	- PSEUDOMONAS	33	5	38
	ANTHRACNOSE	- COLLETOTRICHUM	2	2	4
	BACTERIAL BLACK STALK	- ERWINIA?	0	1	1
	BACTERIAL SOFT ROT	- ERWINIA	3	3	6
	BLACK LEG	- ERWINIA	12	0	12
	BLACK ROOT ROT	- THIELAVIOPSIS	35	3	38
	BLACK SHANK	- PHYTOPHTHORA	89	0	89
	BLUE MOLD	- PERONOSPORA	2	1	3
	BROWN SPOT	- ALTERNARIA	7	0	7
	CHEMICAL INJURY	- GROWTH REGULATOR	29	0	29
		- OTHER HERBICIDES	12	0	12
		- OTHER CHEMICALS	14	1	15
	CULTURAL	- OVERWATERING	1	0	1
	ENVIRONMENTAL	- COLD INJURY	6	1	7
		- DROUGHT	15	2	17
		- LIGHTNING	16	0	16
		- WET FEET	8	0	8
		- WEATHER SCALD	22	3	25
		- OTHER STRESSES	20	4	24
	FALSE BROOMRAPE		4	4	8
	FRENCHING	- METABOLITES	8	0	8
	FROGEYE	- CERCOSPORA	5	0	5
	HOLLOW STALK	- ERWINIA	2	0	2
	IMPROPER CURING		1	0	1
	INADEQUATE SPECIMENS, NO DISEASE, UNKNOWN		79	0	79

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
TOBACCO (cont)					
	INSECT INJURY		31	12	43
	LEAF SCORCH	- DROUGHT	1	0	1
		- PHYSIOLOGICAL	1	0	1
		- UNKNOWN	1	0	1
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
	MUTATION	- GENETIC	1	1	2
	NUTRITIONAL	- ACID SOIL	27	10	37
		- FERTILIZER BURN	32	4	36
		- K DEFICIENCY	8	1	9
		- MN TOXICITY	41	1	42
		- N DEFICIENCY	11	2	13
		- P DEFICIENCY	5	0	5
		- OTHER	3	2	5
	PHYSICAL INJURY	- BRUISING	6	0	6
		- UNKNOWN	0	1	1
	REFERRAL		1		1
	ROOT KNOT NEMATODE	- MELOIDOGYNE	1	0	1
	ROOT PROBLEM		12	1	13
	ROOT ROT	- FUNGAL	1	1	2
		- RHIZOCTONIA	1	3	4
	SOFT ROT	- PYTHIUM	0	1	1
	SORE SHIN	- RHIZOCTONIA	21	10	31
	SOOTY MOLD		0	2	2
	STEM ROT	- PYTHIUM	1	0	1
	STORAGE MOLD	- ASPERGILLUS	2	0	2
	STUNT	- MYCORRHIZAE	1	1	2
	VARIEGATION	- GENETIC	1	0	1
	VIRUS	- ALFALFA MOSAIC	1	0	1
		- COMPLEX	21	4	25
		- TOBACCO ETCH	4	1	5
		- TOBACCO RINGSPOT	1	0	1
		- TOBACCO STREAK	2	0	2
		- TOMATO SPOTTED WILT	6	1	7
		- TOBACCO VEIN MOTTILING	1	1	2
		- UNKNOWN	0	1	1
	WEATHER FLECK	- OZONE	0	1	0

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
FRUIT CROPS					
<u>Small Fruits</u>					
BLUEBERRY (Vaccinium)					
	CULTURAL	- OVERWATERING	0	1	1
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	NUTRITIONAL	- FERTILIZER BURN	1	0	1
		- pH HIGH	1	0	1
	ROOT ROT	- PHYTOPHTHORA	1	0	1
	TWIG BLIGHT	- FUSICOCUM	1	0	1
BRAMBLES - Blackberry and Raspberry (Rubus)					
	ANTHRACNOSE	- ELSINOE	1	0	1
	CANE BLIGHT	- LEPTOSPHERA	2	0	2
	CANE CANCKER	- BOTRYSPHERA	0	1	1
	CROWN GALL	- AGROBACTERIUM	1	0	1
	ENVIRONMENTAL	- DROUGHT	1	0	1
	FRUIT SPOT	- UNKNOWN	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		11	0	11
	LEAF SCORCH	- DROUGHT	1	0	1
	LEAF SPOT	- SEPTORIA	1	0	1
	ROOT PROBLEM	- UNKNOWN	3	0	3
	ROOT/CROWN ROT	- FUNGAL	1	0	1
	ROOT ROT	- PYTHIUM	1	1	2
		- THIELAVIOPSIS	1	0	1
	SOOTY MOLD		1	0	1
	VIRUS	- STERILITY	2	0	2
GRAPE (Vitis)					
	ANTHRACNOSE	- ELSINOE	1	0	1
	BLACK ROT	- GUIGNARDIA	7	0	7
	CANE BLIGHT	- PHOMOPSIS	1	0	1
	CANKER	- UNKNOWN	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	CROWN GALL	- AGROBACTERIUM	2	0	2
	ENVIRONMENTAL STRESS		2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		8	0	8
	INSECT		1	0	1
	LEAF SCORCH	- UNKNOWN	1	0	1
	NUTRITIONAL	- FERTILIZER BURN	1	0	1
	ROOT ROT	- FUNGAL	1	0	1
	UNEVEN RIPE	- PHYSIOLOGICAL	1	0	1
STRAWBERRY (Fragaria)					
	BLACK ROOT	- COMPLEX	4	0	4
		- FUSARIUM	6	2	8
		- RHIZOCTONIA	7	1	8
	CROWN ROT	- PHYTOPHTHORA	3	1	4
		- UNKNOWN	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
STRAWBERRY (cont)					
	ENVIRONMENTAL	- DROUGHT	4	1	5
		- OTHER STRESSES	4	1	5
	INADEQUATE SPECIMEN, NO DISEASE		6	0	6
	INSECT INJURY		0	1	1
	LEAF BLIGHT	- PHOMOPSIS	1	0	1
	LEAF BLOTCH	- GNOMONIA	2	0	2
	LEAF SCORCH	- DIPLOCARPON	0	1	1
	LEAF SPOT	- MYCOSPHAERELLA	4	0	4
	LEATHER ROT	- PHYTOPHTHORA	1	0	1
	NUTRITIONAL	- ACID SOIL	1	0	1
		- FERTILIZER BURN	1	0	1
	ROOT ROT	- PYTHIUM	1	0	1
	TRANSPLANT SHOCK		1	0	1
<u>Tree Fruits</u>					
APPLE (Malus)					
	BITTER PIT	- CA DEFICIENCY	1	1	2
	BITTER ROT	- GLOMERELLA	8	0	8
	BLACK ROT	- PHYSALOSPORA	3	1	4
	BLOTCH	- PHYLLOSTICTA	2	0	2
	CEDAR APPLE RUST	- GYMNOSPORANGIUM	11	1	12
	CANKER	- UNKNOWN	1	0	1
	CANKER/ROT	- BOTRYOSPHAERIA	1	0	1
	CHEMICAL INJURY		4	0	4
	COLLAR ROT	- PHYTOPHTHORA	1	0	1
	CORK SPOT	- CA DEFICIENCY	3	0	3
	ENVIRONMENTAL STRESSES		5	1	6
	FIRE BLIGHT	- ERWINIA	46	3	49
	FLYSPECK	- SCHIZOTHYRIUM	1	3	4
	FROGEYE	- PHYSALOSPORA	6	4	10
	INADEQUATE SPECIMEN, NO DISEASE		18	0	18
	INSECT INJURY		11	9	20
	PHYSICAL INJURY	- UNKNOWN	1	0	1
	POWDERY MILDEW	- PODOSPHAERA	6	1	7
	REFERRAL		1	0	1
	ROOT/BUTT ROT	- BASIDIOMYCETE	1	0	1
	RUSSET	- GENETIC	1	0	1
		- UNKNOWN	1	0	1
	SCAB	- VENTURIA	2	0	2
	SOOTY BLOTCH	- GLOEODES	3	3	6
	SOOTY MOLD		1	0	1
	TRANSPLANT SHOCK		2	0	2
	WALNUT WILT	- JUGLONE	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
PEACH and NECTARINE (Prunus)					
	BACTERIAL SPOT	- XANTHOMONAS	1	0	1
	BROWN ROT	- MONILINIA	2	0	2
	CANKER	- BOTRYOSPHAERIA	0	1	1
		- CYTOSPORA	2	0	2
	CHEMICAL INJURY		1	0	1
	ENVIRONMENTAL STRESSES		2	1	3
	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	INSECT INJURY		4	2	6
	LEAF CURL	- TAPHRINA	2	0	2
	NUTRITIONAL	- K DEFICIENCY	1	0	1
	PHYSICAL INJURY	- ICE	1	0	1
		- UNKNOWN	1	0	1
	POWDERY MILDEW	- PODOSPHAERA	1	0	1
	SCAB	- CLADOSPORIUM	5	0	5
	SOOTY BLOTCH	- GLOEODES	0	1	0
	TRANSPLANT SHOCK		2	0	2
	WOOD DECAY	- UNKNOWN	1	0	1
PEAR (Pyrus)					
	BLACK ROT	- PHYSALOSPORA	1	0	1
	CHEMICAL INJURY		2	0	2
	ENVIRONMENTAL STRESSES		2	0	2
	FIRE BLIGHT	- ERWINIA	11	0	11
	INSECT INJURY		2	0	2
	NO DISEASE		3	0	3
	NUTRITIONAL	- FERTILIZER BURN	1	0	1
	PHYSICAL INJURY	- UNKNOWN	1	0	1
	ROOT PROBLEM	- RESTRICTION	1	0	1
	ROOT ROT	- FUNGAL	1	0	1
	SOOTY MOLD		1	0	1
	TRANSPLANT SHOCK		1	0	1
PECAN (Carya)					
	CHEMICAL INJURY		1	0	1
	INSECT INJURY		1	0	1
	INTERNAL BREAKDOWN		2	0	2
PLUM (Prunus)					
	BLACK KNOT	- DIBOTRYON	3	0	3
	BROWN ROT	- MONILINIA	1	0	1
	CHEMICAL INJURY		1	0	1
	ENVIRONMENTAL STRESS		1	0	1
	GUMMOSIS	- UNKNOWN	1	0	1
	INSECT INJURY		5	0	5
	NO DISEASE, UNKNOWN		4	0	4

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
HERBS					
GINSENG (Panax)					
	BLIGHT	- ALTERNARIA	7	1	8
	DAMPING-OFF	- PYTHIACEOUS	1	0	1
		- RHIZOCTONIA	0	1	1
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	MILDEW/ROOT ROT	- PHYTOPHTHORA	4	0	4
LAVENDER (Lavandula)					
	ROOT ROT	- ARMILLARIA	1	0	1
MINT (Mentha)					
	INSECT INJURY		1	0	1
ROSEMARY (Rosmarinus)					
	POWDERY MILDEW	- OIDIUM	1	0	1
SAGE (Salvia)					
	INADEQUATE SPECIMEN		1	0	1
	ROOT/STEM ROT	- RHIZOCTONIA	1	0	1
IDENTIFICATIONS					
FUNGAL IDENTIFICATION					
	BASIDIOMYCETE	- MUSHROOM	2	0	2
	CHLOROPHYLLUM	- MOLYBDITES	1	0	1
	COPRINUS	- MICACEUS	1	0	1
	FUNGUS	- UNKNOWN	2	0	2
	GANODERMA	- Species	1	0	1
	INADEQUATE SPECIMEN		2	0	2
	POLYPORUS	- Species	1	0	1
	SLIME MOLD	- Species	3	0	3
INSECT IDENTIFICATION					
	PIOPHILID	- Species	1	0	1
PLANT IDENTIFICATION					
	AMBROSIA	- BIDENTATA	1	0	1
	FRAXINUS	- TOMENTOSA	1	0	1
	INADEQUATE SPECIMEN		1	0	1
	LIGUSTRUM	- AMURENSE	1	0	1
	LINDERA	- BENZOIN	1	0	1
	PYRUS	- Species	1	0	1
	REFERRAL	- HERBARIUM	3	0	3
	TRIFOLIUM	- INCARNATUM	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
MISCELLANEOUS					
SOIL	INADEQUATE SPECIMEN, NO DISEASE		10	0	10
	NUTRITIONAL	ACID SOIL	6	0	6
	REFERRAL	REGULATORY SERVICES	1	0	1
OTHER	NO DISEASE		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
ORNAMENTALS					
<u>Herbaceous ornamentals and indoor plants</u>					
AFRICAN VIOLET (Saintpaulia)					
	CULTURAL	- OVERWATERING	1	0	1
	INSECT INJURY		1	0	1
	NUTRITIONAL	- FERTILIZER BURN	0	1	1
AGERATUM (Ageratum)					
	INSECT INJURY		1	0	1
AGLAONEMA (Aglaonema)					
	CULTURAL	- GENERAL	1	0	1
		- OVERWATERING	1	0	1
AJUGA (Ajuga)					
	CROWN ROT	- SCLEROTIUM	5	0	5
AMARYLLIS (Amaryllis)					
	NO DISEASE		1	0	1
ARTEMISIA (Artemisia)					
	NO DISEASE		1	0	1
ASPIDISTRA (Aspidistra)					
	NO DISEASE		1	0	1
AVOCADO (Persea)					
	CULTURAL	- OVERWATERING	1	0	1
BABYSBREATH (Gypsophila)					
	INSECT INJURY		1	0	1
BANANA TREE (Michelia)					
	CULTURAL	- UNKNOWN	1	0	1
BEGONIA (Begonia)					
	ENVIRONMENTAL	- WET FEET	1	0	1
	ROOT PROBLEM	- UNKNOWN	2	0	2
	ROOT ROT	- RHIZOCTONIA	0	1	1
	ROOT/STEM ROT	- FUNGAL	1	0	1
	SLIME MOLD		1	0	1
	STEM ROT	- RHIZOCTONIA	1	0	1
BISHOPWEED (Ptilimnium)					
	ROOT ROT	- RHIZOCTONIA	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
BROMELIA (Bromelia)	NO DISEASE		1	0	1
CALADIUM (Caladium)	TUBER ROT	- FUSARIUM	1	0	1
CELOSISA (Celosisa)	STEM ROT	- RHIZOCTONIA	1	0	1
CHRYSANTHEMUM (Chrysanthemum)	NUTRITIONAL ROOT ROT	- SOLUBLE SALTS - PYTHIUM - RHIZOCTONIA	1 1 0	0 0 1	1 1 1
	WILT	- FUSARIUM - VERTICILLIUM	1 1	0 0	1 1
CIRSIUM (Cirsium)	ROOT ROT	- RHIZOCTONIA	1	0	1
CLEMATIS (Clematis)	INADEQUATE SPECIMEN		1	0	1
COLEUS (Coleus)	NO DISEASE		2	0	2
COLOCASIA (Colocasia)	BACTERIAL SOFT ROT	- ERWINIA	1	0	1
COLUMBINE (Aquilegia)	INSECT INJURY		1	0	1
CORALBELLS (Heuchera)	NO DISEASE		1	0	1
CROTON (Codiaeum)	ROOT ROT	- PYTHIUM	1	0	1
CYCLAMEN (Cyclamen)	TUBER ROT	- ERWINIA	1	0	1
DAHLIA (Dahlia)	CHEMICAL INJURY INSECT INJURY ROOT ROT		1 2 1	0 0 0	1 2 1
DELPHINIUM (Delphinium)	INSECT INJURY		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
DIANTHUS (Dianthus)	ENVIRONMENTAL	- DROUGHT	1	0	1
DIEFFENBACHIA (Dieffenbachia)	ANTHRACNOSE	COLLETOTRICHUM	1	0	1
DRACAENA (Dracaena)	CULTURAL	- GENERAL	3	0	3
	INSECT INJURY		1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
DUSTY MILLER (Centaurea)	ROOT ROT	- RHIZOCTONIA	1	0	1
FERN (Various)	CULTURAL	- GENERAL	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
FIG (Ficus)	CULTURAL	- GENERAL	1	0	1
	ENVIRONMENTAL STRESS		1	0	1
	NO DISEASE		1	0	1
GARDENIA (Gardenia)	CULTURAL	- COLD INJURY	1	0	1
		- OVERWATERING	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
GERANIUM (Pelargonium)	BACTERIAL BLIGHT	- XANTHOMONAS	4	0	4
	BLACK LEG	- PYTHIUM	2	0	2
	CHEMICAL	- GROWTH REGULATOR	0	1	1
	CULTURAL	- OEDEMA	2	0	2
	GRAY MOLD	- BOTRYTIS	2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	NUTRITIONAL	- GENERAL	5	0	5
	PHYSICAL INJURY	- UNKNOWN	1	0	1
	ROOT ROT	- PYTHIUM	1	0	1
	TRANSPLANT SHOCK	- CULTURAL	1	0	1
	VIRUS	- RINGSPOT	0	1	1
GLADIOLUS (Gladiolus)	CORM ROT	- FUNGAL	1	0	1
	INSECT INJURY		2	0	2
	LEAF SPOT	- ALTERNARIA	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
GRAPEFRUIT (Citrus)	SOOTY MOLD		1	0	1
IMPATIENS (Impatiens)	CULTURAL	- OVERWATERING, WET FEET	2	0	2
	INADEQUATE, NO DISEASE		7	0	7
	ROOT PROBLEM	- UNKNOWN	1	0	1
	ROOT ROT	- PYTHIUM	1	0	1
	ROOT/STEM ROT	- RHIZOCTONIA	3	0	3
IRIS (Iris)	INSECT INJURY		2	0	2
IVY (Various)	BACTERIAL SPOT	- XANTHOMONAS	5	0	5
	INSECT INJURY		1	0	1
	SLIME MOLD	- STEMONITIS	1	0	1
JADE PLANT (Crassula)	CULTURAL	- OVERWATERING	1	0	1
		- COMPACTION	0	1	1
	ROOT ROT	- RHIZOCTONIA	1	0	1
LAMIUM (Lamium)	INSECT INJURY		1	0	1
	LEAF SPOT	- UNKNOWN	0	1	1
LEMON (Citrus)	INSECT INJURY		1	0	1
LILY (Lilium)	NO DISEASE		1	0	1
	PHYSICAL INJURY	- UNKNOWN	1	0	1
	ROOT ROT	- RHIZOCTONIA	1	0	1
LIRIOPE (Liriope)	ROOT ROT	- PYTHIUM	1	0	1
		- FUSARIUM	0	1	1
LUPINE (Lupinus)	CULTURAL	- GENERAL	1	0	1
MARIGOLD (Tagetes)	INSECT INJURY		1	0	1
	LEAF SPOT	- ALTERNARIA	1	0	1
	NO DISEASE		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
NASTURTIUM (Nasturtium)					
	PHYSICAL INJURY	- UNKNOWN	1	0	1
	ROOT/STEM ROT	- RHIZOCTONIA	1	0	1
NORFOLK ISLAND PINE (Araucaria)					
	CULTURAL	- GENERAL	2	0	2
ORANGE (Citrus)					
	INSECT INJURY		1	0	1
ORCHID (Various species)					
	CULTURAL	- IMPROPER LIGHT	1	0	1
PACHYSANDRA (Pachysandra)					
	ENVIRONMENTAL STRESS		1	0	1
	LEAF/STEM BLIGHT	- VOLUTELLA	1	0	1
PALM (Various species)					
	CULTURAL	- OEDEMA	1	0	1
		- OVERWATERING	1	0	1
	INSECT INJURY		1	0	1
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
	NO DISEASE		1	0	1
PEONY (Paeonia)					
	LEAF BLOTCH	- CLADOSPORIUM	1	0	1
	LEAF SPOT	- ALTERNARIA	3	0	3
	NO DISEASE		2	0	2
	RED SPOT	- CLADOSPORIUM	0	1	1
PETUNIA (Petunia)					
	NO DISEASE		2	0	2
	ROOT ROT	- PYTHIUM	1	0	1
PHILODENDRON (Philodendron)					
	CULTURAL	- IMPROPER LIGHT	1	0	1
	NO DISEASE		1	0	1
	NUTRITIONAL	- N DEFICIENCY	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
PHLOX (Phlox)					
	ENVIRONMENTAL	- DROUGHT	1	0	1
	NO DISEASE		1	0	1
POCKET BOOK PLANT (Calceolaria)					
	ROOT ROT	- PYTHIUM	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
POINSETTIA (Euphorbia)					
	CUTTING ROT	- ERWINIA	1	0	1
	NO DISEASE		2	0	2
	NUTRITIONAL	- GENERAL	1	0	1
		- MG DEFICIENCY	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
PORTULACA (Portulaca)					
	ENVIRONMENTAL	- DROUGHT	1	0	1
POTHOS (Epipremnum)					
	CULTURAL	- GENERAL	1	0	1
RUBBER PLANT (Ficus)					
	CULTURAL	- OEDEMA	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
RUDBECKIA (Rudbeckia)					
	LEAF SCORCH	- UNKNOWN	1	0	1
SANSEVIERIA (Sansevieria)					
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
SCHEFFLERA (Brassaia)					
	CULTURAL	- OEDEMA	1	0	1
	INSECT INJURY		2	0	2
	LEAF SPOT	- PHYSIOLOGICAL	2	0	2
	NO DISEASE		1	0	1
	NUTRITIONAL	- GENERAL	1	0	1
	STEM ROT	- RHIZOCTONIA	1	0	1
SNAPDRAGON (Antirrhinum)					
	CROWN/STEM ROT	- MYROTHECIUM	1	0	1
	DAMPING-OFF	- FUSARIUM	1	0	1
	ROOT ROT	- RHIZOCTONIA	2	0	2
SPATHIPHYLLUM (Spathiphyllum)					
	CULTURAL	- COLD INJURY	1	0	1
STRAWFLOWER (Helichrysum)					
	ROOT ROT	- RHIZOCTONIA	1	0	1
SWEET WILLIAM (Dianthus)					
	ROOT/STEM ROT	- PYTHIUM	1	0	1
THRIFT (Armeria)					
	ROOT PROBLEM	- UNKNOWN	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
TOLMIEA (<i>Tolmiea</i>)	CULTURAL	- OVERWATERING	1	0	1
TULIP (<i>Tulipa</i>)	NO DISEASE		1	0	1
VINCA (<i>Vinca</i>)	CANKER/DIEBACK	- PHOMA	4	0	4
	INSECT INJURY		1	0	1
	NO DISEASE		1	0	1
	ROOT/STEM ROT	- RHIZOCTONIA	3	1	4
	SOUTHERN BLIGHT	- SCLEROTIUM	2	0	2
VIOLET (<i>Viola</i>)	CULTURAL	UNKNOWN	1	0	1
WATER LILY (<i>Nymphaea</i>)	NO DISEASE		1	0	1
YUCCA (<i>Yucca</i>)	CULTURAL	- OVERWATERING	1	0	1
	NO DISEASE		2	0	2
ZINNIA (<i>Zinnia</i>)	BACTERIAL LEAF SPOT	- XANTHOMONAS	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
<u>Turfgrass</u>					
BENTGRASS (Agrostis)					
	BLIGHT	- PYTHIUM	1	0	1
	BROWN PATCH	- RHIZOCTONIA	1	0	1
	ENVIRONMENTAL	- WET FEET	1	0	1
	NO DISEASE		1	0	1
	REFERRAL		1	0	1
BERMUDAGRASS (Cynodon)					
	BROWN PATCH	- RHIZOCTONIA	1	0	1
	ENVIRONMENTAL	- DROUGHT	1	0	1
	FADING-OUT	- CURLULARIA	0	1	1
BLUEGRASS (Poa)					
	BLIGHT	- FUSARIUM	1	0	1
		- PYTHIUM	1	0	1
	BROWN PATCH	- RHIZOCTONIA	5	0	5
	CROWN ROT	- FUSARIUM	1	0	1
	CULTURAL	- HEAVY THATCH	1	0	1
	DOLLAR SPOT	- LANZIA./MOELL.	1	0	1
	ENVIRONMENTAL STRESS		1	1	2
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	LEAF SPOT	- DRECHSLERA	1	0	1
	MELTING-OUT	- DRECHSLERA	0	1	1
	NECROTIC RING SPOT	- LEPTOSPHAERIA	1	0	1
	RUST	- PUCCINIA	1	0	1
	SEEDLING BLIGHT	- PYTHIUM	1	0	1
	SUMMER PATCH	- PHIALOPHORA	4	1	5
FESCUE (Festuca)					
	BROWN PATCH	- RHIZOCTONIA	6	0	6
	DAMPING-OFF	- RHIZOCTONIA	1	0	1
	DOLLAR SPOT	- LANZIA./MOELL.	1	0	1
	ENVIRONMENTAL STRESS		0	1	1
	FADING-OUT	- CURVULARIA	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		6	0	6
	LEAF BLIGHT	- ASCOCHYTA	1	0	1
	LEAF SPOT	- RHIZOCTONIA	3	0	3
	STRIPE SMUT	- USTILAGO	0	1	1
RYEGRASS (Lolium)					
	BROWN PATCH	- RHIZOCTONIA	1	0	1
	ENVIRONMENTAL STRESS		1	0	1
	NO DISEASE		2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
TURF (Various)					
	BROWN PATCH	- RHIZOCTONIA	2	0	2
	CULTURAL	- HEAVY THATCH	2	1	3
	ENVIRONMENTAL	- COMPACTION	1	0	1
	FADING-OUT	- CURVULARIA	1	0	1
	FAIRY RING	- BASIDIOMYCETE	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		10	0	10
	LEAF SPOT	- RHIZOCTONIA	2	0	2
	MELTING-OUT	- DRECHSLERA	1	0	1
	NUTRITIONAL	- GENERAL	1	0	1
	RED THREAD	- LAETISARIA	1	0	1
	SLIME MOLD	- PHYSARUM	1	0	1
	SUMMER PATCH	- PHIALOPHORA	1	0	1
<u>Woody Ornamentals</u>					
ALMOND (Prunus)					
	ENVIRONMENTAL	- STRESS	1	0	1
ARBORVITAE (Thuja)					
	ENVIRONMENTAL STRESSES		3	0	3
	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	NEEDLE DROP	- NORMAL	3	0	3
	TRANSPLANT SHOCK	- CULTURAL	1	0	1
	TWIG BLIGHT	- PESTALOTIA	1	0	1
		- PHOMOPSIS	0	1	1
ASH (Fraxinus)					
	CANKER	- BOTRYOSPHAERIA	1	0	1
	DIEBACK	- UNKNOWN	0	1	1
	INADEQUATE SPECIMEN		1	0	1
	INSECT INJURY		3	0	3
	LEAF SCORCH	- UNKNOWN	0	1	1
	LEAF SPOT	- FUNGAL	1	0	1
ASPEN (Populus)					
	NO DISEASE		1	0	1
AUCUBA (Aucuba)					
	ANTHRACNOSE	- COLLETOTRICHUM	1	0	1
AZALEA - See Rhododendron					

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
BARBERRY (Berberis)					
	NO DISEASE		1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
BASSWOOD (Tilia)					
	LEAF SCORCH	- DROUGHT	1	0	1
BEECH (Fagus)					
	INSECT INJURY		1	1	2
	LEAF SPOT	- FUNGAL	1	0	1
	NUTRITIONAL	- GENERAL	1	0	1
BIRCH (Betula)					
	CANKER	- BOTRYOSPHAERIA	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	INSECT INJURY		2	0	2
	LEAF SCORCH		1	0	1
	LEAF SPOT	- GLOEOSPORIUM	1	0	1
		- SEPTORIA	2	0	2
BLACKGUM (Nyssa)					
	INADEQUATE SPECIMEN		1	0	1
	LEAF SPOT	- MYCOSPHAERELLA	1	0	1
BOXWOOD (Buxus)					
	CANKER	- PSEUDONECTRIA	3	0	3
	ENVIRONMENTAL STRESSES		0	3	3
	INADEQUATE SPECIMEN		1	0	1
	INSECT INJURY		4	1	5
	LEAF SPOT	- MACROPHOMA	1	0	1
		- PHYLLOSTICTA	1	0	1
	ROOT ROT	- PYTHIACEOUS	1	0	1
	TRANSPLANT SHOCK		1	0	1
CATALPA (Catalpa)					
	NO DISEASE		1	0	1
CHAMAECYPARIS (Chamaecyparis)					
	NO DISEASE		1	0	1
CHERRY (Prunus)					
	CHEMICAL INJURY	- STERILANT	1	0	1
		- UNKNOWN	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE, UNKNOWN		9	0	9
	INSECT		1	0	1
	LEAF SCORCH		1	0	1
	LEAF SPOT	- COCCOMYCES	1	0	1
	TRANSPLANT SHOCK		2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
CHESTNUT (<i>Castanea</i>)					
	ENVIRONMENTAL	- STRESS	1	0	1
	INADEQUATE SPECIMEN		1	0	1
CLEMATIS (<i>Clematis</i>)					
	ROOT PROBLEM		1	0	1
COTONEASTER (<i>Cotoneaster</i>)					
	INADEQUATE SPECIMEN		1	0	1
	ROOT ROT	- PHYTOPHTHORA	1	0	1
COTTONWOOD (<i>Populus</i>)					
	INSECT INJURY		1	0	1
CRABAPPLE (<i>Malus</i>)					
	ENVIRONMENTAL STRESS		1	0	1
	FIRE BLIGHT	- ERWINIA	4	0	4
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	INSECT INJURY		1	0	1
	ROOT/BUTT ROT	- GANODERMA	1	0	1
	SCAB	- VENTURIA	5	0	5
DOGWOOD (<i>Cornus</i>)					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
		- INSECTICIDE	1	0	1
	ENVIRONMENTAL STRESS		13	2	15
	INADEQUATE SPECIMEN		2	0	2
	INSECT INJURY		1	0	1
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
		- SEPTORIA	1	0	1
	NUTRITIONAL		1	0	1
	PHYSICAL INJURY	- MOWER	0	2	2
	REFERRAL		1	0	1
	TRANSPLANT SHOCK	- CULTURAL	2	1	3
	WOOD DECAY	- PELLICULARIA	1	0	1
DOUGLAS FIR (<i>Pseudotsuga</i>)					
	DIEBACK	- SPHAEROPSIS	1	0	1
ELDER (<i>Sambucus</i>)					
	ROOT PROBLEM		1	0	1
ELM (<i>ULMUS</i>)					
	CANKER	- PHOMOPSIS	1	0	1
		- TUBERCULARIA	1	0	1
	DUTCH ELM DISEASE	- CERATOCYSTIS	6	0	6
	INADEQUATE SPECIMEN, NO DISEASE		6	0	6
	INSECT INJURY		9	0	9
	PHYSICAL INJURY		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
EUONYMUS (Euonymus)					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	CROWN GALL	- AGROBACTERIUM	1	0	1
	ENVIRONMENTAL STRESSES		2	0	2
	INSECT INJURY		7	0	7
	LEAF SPOT	- CERCOSPORA	1	0	1
	NO DISEASE		4	0	4
	NUTRITIONAL	- ACID SOIL	1	0	1
	ROOT PROBLEM		2	0	2
	TRANSPLANT SHOCK		0	1	1
FIR (Abies)					
	ENVIRONMENTAL STRESS		1	0	1
	NO DISEASE		3	0	3
FORSYTHIA (Forsythia)					
	LEAF SPOT	- ALTERNARIA	1	0	1
	NO DISEASE		1	0	1
FOTHERGILLA (Fothergilla)					
	INSECT INJURY		1	0	1
	NO DISEASE		1	0	1
GINGKO (Gingko)					
	LEAF SCORCH		1	0	1
	NO DISEASE		1	0	1
GOLDENRAINTREE (Koelreuteria)					
	WILT	- VERTICILLIUM	1	0	1
HACKBERRY (Celtis)					
	INSECT INJURY		1	0	1
	NO DISEASE		1	0	1
	PHYSICAL INJURY	- RODENT	2	0	2
HAWTHORN (Crataegus)					
	CEDAR-HAWTHORN RUST	- GYMNOSPORANGIUM	1	0	1
	CEDAR-QUINCE RUST	- GYMNOSPORANGIUM	3	0	3
	FIRE BLIGHT	- ERWINIA	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		2	1	3
	LEAF BLIGHT	- ENTOMOSPORIUM	1	0	1
	POWDERY MILDEW	- PODOSPHAERA	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
HEMLOCK (Tsuga)					
	ENVIRONMENTAL STRESSES		2	0	2
	INSECT INJURY		1	0	1
	NO DISEASE		3	0	3
	ROOT ROT	- ARMILLARIA	1	0	1
	TRANSPLANT SHOCK		2	0	2
HIBISCUS (Hibiscus)					
	NO DISEASE		1	0	1
	ROOT ROT	- PYTHIUM	1	0	1
HICKORY (Carya)					
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		1	0	1
HOLLY (Ilex)					
	ANTHRACNOSE	- GLOEOSPORIUM	1	0	1
	BLACK ROOT ROT	- THIELAVIOPSIS	11	0	11
	BLACK SPECK	- MICROTHYRIELLA	0	1	1
	CANKER	- BOTRYOSPHAERIA	1	0	1
	ENVIRONMENTAL STRESSES		2	3	5
	INADEQUATE SPECIMEN, NO DISEASE		18	0	18
	INSECT INJURY		4	0	4
	LEAF SPOTS	- PHYLLOSTICTA	1	0	1
		- PHYSIOLOGICAL	1	0	1
		- FUNGAL	2	0	2
		- SEPTORIA	1	0	1
	NUTRITIONAL	- IRON DEFICENCY	2	0	2
		- OTHER	0	3	3
	PHYSICAL INJURY	- RODENT	1	0	1
	PURPLE LEAF BLOTCH	- PHYSIOLOGICAL	1	0	1
	ROOT PROBLEM		7	1	8
	ROOT ROT	- RHIZOCTONIA	1	1	2
		- PYTHIUM	0	1	1
	TRUNK PROBLEM		1	0	1
HONEYLOCUST (Gleditsia)					
	CANKER	- THYRONECTRIA	1	0	1
HONEYSUCKLE (Lonicera)					
	INADEQUATE SPECIMEN		1	0	1
HORNBEAM (Carpinus)					
	CANKER	- FUNGAL	1	0	1
	INSECT INJURY		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
HYDRANGEA (Hydrangea)					
	ENVIRONMENTAL STRESS		1	0	1
	GRAY MOLD	- BOTRYTIS	1	0	1
	INSECT INJURY		1	0	1
JUNIPER (Juniperus)					
	CHEMICAL INJURY		1	0	1
	CULTURAL		0	1	1
	ENVIRONMENTAL STRESSES		2	3	5
	INADEQUATE SPECIMEN, NO DISEASE		10	0	10
	INSECT INJURY		7	0	7
	LEAF SCORCH		1	0	1
	ROOT PROBLEM		7	0	7
	ROOT ROT	- BASIDIOMYCETE	1	0	1
		- PYTHIUM	0	1	1
		- PHYTOPHTHORA	2	0	2
	TRANSPLANT SHOCK		3	0	3
	TWIG BLIGHT	- KABATINA	10	1	11
		- PHOMOPSIS	2	0	2
LEUCOTHOE (Leucothoe)					
	LEAF SPOT	- PHYLLOSTICTA	1	0	1
LILAC (Syringa)					
	WOOD DECAY	- BASIDIOMYCETE	1	0	1
LOCUST (Robinia)					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
MAGNOLIA (Magnolia)					
	CHEMICAL INJURY	- GROWTH REGULATOR	3	0	3
	INSECT INJURY		7	1	8
	LEAF SPOT	- PHYSIOLOGICAL	3	0	3
	NO DISEASE		3	0	3
	POWDERY MILDEW	- Species	1	0	1
	WOOD DECAY	- UNKNOWN	1	0	1
MAPLE (Acer)					
	ANTHRACNOSE	- GLOEOSPORIUM	17	1	18
	CANKER	- CYTOSPORA	1	0	1
		- BOTRYOSPHAERIA	0	1	1
	CHEMICAL INJURY		6	1	7
	DECLINE	- ENVIRONMENTAL	1	0	1
	ENVIRONMENTAL STRESSES		11	5	16
	GIRDLING ROOT		2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		33	0	33
	INSECT INJURY		13	5	18
	LEAF SCORCH		12	0	12

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
MAPLE (cont)					
	LEAF SPOTS	- CRISTULARIELLA	1	0	1
		- FUNGAL	3	0	3
		- PHYLLOSTICTA	2	2	4
	NUTRITIONAL	- N DEFICIENCY	1	0	1
	PHYSICAL INJURY		4	2	6
	POWDERY MILDEW	- Species	1	0	1
	REFERRAL		1	0	1
	TAR SPOT	- RHYTISMA	2	0	2
	TRANSPLANT SHOCK		3	1	4
	WILT	- VERTICILLIUM	4	0	4
	WOOD DECAY	- SCHIZOPHYLLUM	1	0	1
		- BASIDIOMYCETE	0	1	1
		- OTHERS	0	1	1
MOUNTAIN LAUREL (Kalmia)					
	NO DISEASE		1	0	1
MULBERRY (Morus)					
	NO DISEASE		1	0	1
	POPCORN DISEASE	- CIBORIA	1	0	1
OAK (Quercus)					
	ANTHRACNOSE	- GNOMONIA	0	1	1
	BACTERIAL SCORCH	- XYLEMELLA	1	0	1
	CANKER	- BOTRYOSPHERIA	2	0	2
	CHEMICAL INJURY		4	0	4
	DECLINE	ENVIRONMENTAL	1	0	1
	ENVIRONMENTAL STRESSES		4	1	5
	INADEQUATE SPECIMEN, NO DISEASE		9	0	9
	INSECT INJURY		21	5	26
	LEAF SCORCH		4	1	5
	LEAF SPOT	- ACTINOPELTE	1	1	2
	NUTRITIONAL	- ACID SOIL	1	0	1
		- IRON DEFICENCY	2	0	2
	PHYSICAL INJURY	- PRUNING	0	1	1
	POWDERY MILDEW	- Species	0	1	1
	TRANSPLANT SHOCK		1	0	1
	WOOD DECAY	- Species	1	0	1
		- STEREUM	1	0	1
PIERIS (Pieris)					
	LEAF SPOT	- CERCOSPORA	1	0	1
	TRANSPLANT SHOCK		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
PINE (Pinus)					
	AIR POLLUTION	- OZONE	1	0	1
	EASTERN GALL RUST	- CRONARTIUM	1	0	1
	ENVIRONMENTAL STRESSES		15	4	19
	INADEQUATE SPECIMEN, NO DISEASE		34	0	34
	INSECT INJURY		24	8	32
	NEEDLE DROP	- NORMAL	1	0	1
	NEEDLE RUST	- COLEOPSPORIUM	1	0	1
	NUTRITIONAL	- GENERAL	1	0	1
		- N DEFICIENCY	1	0	1
		- pH HIGH	1	0	1
	PHYSICAL INJURY		1	2	3
	PINEWOOD NEMATODE	- BURSAPHELENCUS	2	0	2
	REFERRAL		1	0	1
	ROOT DECAY	- BASIDIOMYCETE	1	0	1
	ROOT PROBLEM		2	0	2
	ROOT ROT	- PHYTOPHTHORA	1	0	1
		- RHIZOCTONIA	1	0	1
	SOOTY MOLD		3	2	5
	TIP BLIGHT	- DIPLODIA	21	0	21
	TRANSPLANT SHOCK		12	1	13
	WHITE PINE DECLINE		4	0	4
POPLAR (Populus)					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	ENVIRONMENTAL		1	0	1
	INADEQUATE SPECIMEN		1	0	1
	PHYSICAL INJURY		0	1	1
	INSECT INJURY		1	0	1
	TRANSPLANT SHOCK		1	0	1
PRIVET (Ligustrum)					
	ANTHRACNOSE	- GLOMERELLA	1	0	1
	ENVIRONMENTAL	- DROUGHT	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
PYRACANTHA (Pyracantha)					
	NO DISEASE		1	0	1
	SCAB	- FUSICLADIUM	2	0	2
REDBUD (Cercis)					
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	LEAF SPOT	- CERCOSPORELLA	1	0	1
		- PHYSIOLOGICAL	1	0	1
	TRANSPLANT SHOCK		1	0	1
	WOOD DECAY	- UNKNOWN	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
REDWOOD (<i>Sequoia</i>)	NO DISEASE		1	0	1
RHODODENDRON and AZALEA (<i>Rhododendron</i>)	CANKER	- FUNGAL	1	0	1
	CULTURAL	- OVERWATERING	1	0	1
	DIEBACK	- BOTRYOSPHAERIA	3	2	5
		- PHYTOPHTHORA	1	0	1
	ENVIRONMENTAL STRESSES		5	4	9
	GRAY BLIGHT	- PESTALOTIA	2	1	3
	INADEQUATE SPECIMEN, NO DISEASE		23	0	23
	INSECT INJURY		3	0	3
	LEAF SCORCH	- DROUGHT	3	0	3
		- UNKNOWN	4	0	4
	LEAF SPOTS	- CERCOSPORA	0	2	2
		- PHYLLOSTICTA	1	0	1
		- FUNGAL	2	0	2
		- SEPTORIA	1	0	1
		- PHYSIOLOGICAL	0	1	1
	NUTRITIONAL	- FE DEFICIENCY	3	1	4
		- GENERAL	1	0	1
		- pH HIGH	0	1	1
	PHYSICAL INJURY		2	0	2
	ROOT PROBLEM		3	0	3
	ROOT ROT	- PHYTOPHTHORA	2	0	2
		- PYTHIUM	0	1	1
		- RHIZOCTONIA	1	0	1
	TRANSPLANT SHOCK		16	3	19
	TWIG BLIGHT	- PESTALOTIA	0	1	1
ROSE (<i>Rosa</i>)	BACTERIAL BLIGHT	- PSEUDOMONAS	1	0	1
	BLACK SPOT	- DIPLOCARPON	2	1	3
	BLIGHT	- BOTRYTIS	1	0	1
	BLIND SHOOT	- UNKNOWN	1	0	1
	CANE CANKER	- FUNGAL	1	0	1
	CHEMICAL INJURY		2	0	2
	COMMON CANKER	- LEPTOSPHAERIA	2	0	2
	CROWN GALL	- AGROBACTERIUM	1	1	2
	ENVIRONMENTAL STRESS		1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		10	0	10
	INSECT INJURY		4	1	5
	MUTATION	- GENETIC	1	0	1
	NUTRITIONAL	- GENERAL	2	0	2
	ROOT PROBLEM		1	0	1
	ROOT ROT	- PYTHIUM	2	0	2
		- BASIDIOMYCETE	0	1	1
	TRANSPLANT SHOCK		2	0	2
	VIRUS	- ROSE MOSAIC	2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
RUSSIAN-OLIVE (<i>Elaeagnus</i>)	INSECT INJURY		1	0	1
SASSAFRAS (<i>Sassafras</i>)	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
SILVERBERRY (<i>Elaeagnus</i>)	INADEQUATE SPECIMEN		1	0	1
SMOKETREE (<i>Cotinus</i>)	POWDERY MILDEW	- OIDIUM	1	0	1
	WILT	- VERTICILLIUM	1	0	1
SOURWOOD (<i>Oxydendrum</i>)	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
SPICEWOOD (<i>Calycanthus</i>)	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
SPIREA (<i>Spiraea</i>)	CHEMICAL INJURY	- WOOD PRESERVATIVE	1	0	1
	NO DISEASE		1	0	1
SPRUCE (<i>Picea</i>)	CANKER	- CYTOSPORA	1	0	1
	CHEMICAL INJURY		2	0	2
	ENVIRONMENTAL STRESSES		8	1	9
	INADEQUATE SPECIMEN, NO DISEASE		14	0	14
	INSECT INJURY		8	2	10
	NEEDLE BLIGHT	- LIRULA	0	1	1
	NEEDLE CAST	- RHIZOSPHAERA	1	0	1
	ROOT PROBLEM		1	0	1
	ROOT ROT	- PHYTOPHTHORA	1	0	1
	TIP BLIGHT	- DIPLODIA	1	0	1
	TRANSPLANT SHOCK		11	0	11
SWEETGUM (<i>Liquidambar</i>)	BLEEDING CANKER	- BOTRYOSPHAERIA	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		1	0	1
	NUTRITIONAL	- IRON DEFICIENCY	1	0	1
		- GENERAL	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
SYCAMORE (Platanus)					
	ANTHRACNOSE	- GNOMONIA	3	0	3
	ENVIRONMENTAL STRESS		1	0	1
	LEAF SCORCH		0	1	1
	INSECT INJURY		2	1	3
	NO DISEASE		1	0	1
	POWDERY MILDEW	- MICROSPHAERA	1	0	1
TAXUS (Taxus)					
	CHEMICAL INJURY	- GROWTH REGULATOR	4	1	5
	CROWN GALL	- AGROBACTERIUM	1	0	1
	ENVIRONMENTAL STRESSES		10	4	14
	INADEQUATE SPECIMEN, NO DISEASE		21	0	21
	INSECT INJURY		2	1	3
	PHYSICAL INJURY		2	0	2
	ROOT PROBLEM		4	0	4
	ROOT ROT	- PHYTOPHTHORA	3	0	3
		- PYTHIUM	0	2	2
	TRANSPLANTSHOCK		4	0	4
TULIPTREE (Liriodendron)					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	2	3
		- OTHER HERBICIDES	2	0	2
	INSECT INJURY		9	1	10
	NO DISEASE		3	0	3
	PHYSICAL INJURY	- RODENT	1	0	1
	WILT	- VERTICILLIUM	1	0	1
VIBURNUM (Viburnum)					
	CULTURAL	- HARD WATER	1	0	1
	ENVIRONMENTAL	- DROUGHT	1	0	1
	INSECT INJURY		1	1	2
	NO DISEASE		4	0	4
	NUTRITIONAL	- GENERAL	2	0	2
	ROOT ROT	- RHIZOCTONIA	1	0	1
		- ARMILLARIA	0	1	1
	THREAD BLIGHT	- CERATOBASIDIUM	1	0	1
	WILT	- VERTICILLIUM	1	0	1
WALNUT (Juglans)					
	CANKER	- FUNGAL	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	INSECT INJURY		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
WILLOW (Salix)					
	CANKER	- CYTOSPORA	2	0	2
		- BOTRYOSPHAERIA	0	1	1
	COLLAR ROT	- PHYTOPHTHORA	1	0	1
	CROWN GALL	- AGROBACTERIUM	1	0	1
	INADEQUATE SPECIMEN		2	0	2
	INSECT INJURY		1	0	1
	WOOD DECAY	- PLEUROTUS	1	0	1
WISTERIA (Wisteria)					
	ENVIRONMENTAL	- COLD INJURY	1	0	1
WITCH-HAZEL (Hamamelis)					
	INADEQUATE SPECIMEN		1	0	1
YELLOWWOOD (Cladrastis)					
	ANTHRACNOSE	- GLOEOSPORIUM	1	0	1
	NO DISEASE		2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
VEGETABLES					
ASPARAGUS (Asparagus)					
	CROWN/ROOT ROT	- FUSARIUM	2	0	2
	INSECT INJURY		2	0	2
BEAN (Phaseolus)					
	CHEMICAL INJURY		3	0	3
	DAMPING-OFF	- FUSARIUM	1	0	1
	ENVIRONMENTAL STRESSES		4	0	4
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	INSECT INJURY		2	1	3
	LEAF SCORCH		1	0	1
	LEAF SPOT	- CERCOSPORA	2	0	2
		- UNKNOWN	0	1	1
	LEAF/POD SPOT	- ALTERNARIA	0	1	1
	NUTRITIONAL	- ACID SOIL	2	0	2
		- SOLUBLE SALTS	1	0	1
	ROOT ROT	- FUSARIUM	1	0	1
	ROOT/STEM ROT	- PYTHIUM	2	0	2
		- RHIZOCTONIA	6	1	7
	RUST	- UROMYCES	3	0	3
	VIRUS	- BYMV	4	2	6
	YEAST SPOT	- NEMATOSPORA	0	1	1
BEEET (Beta)					
	PHYSICAL INJURY		1	0	1
CABBAGE - see listing under CRUCIFERS					
CANTALOUPE - see listing under CUCURBITS					
CAULIFLOWER - see listing under CRUCIFERS					
CORN, sweet (Zea)					
	CHEMICAL INJURY		1	0	1
	INSECT INJURY		1	0	1
	MUTATION	- GENETIC	0	1	1
	NO DISEASE		1	0	1
	NUTRITIONAL	- ZN DEFICIENCY	2	0	2
	SEEDLING BLIGHT	- PENICILLIUM	1	0	1
	SMUT	- USTILAGO	1	0	1
	STALK ROT	- PYTHIUM	1	0	1
	STEWARTS WILT	- ERWINIA	1	2	3
	VIRUS	- MAIZE DWARF MOSAIC	2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
CRUCIFERS - CABBAGE, KALE, MUSTARD, and TURNIP (Brassica)					
	BLACK ROT	- XANTHOMONAS	1	0	1
	BOTTOM ROT	- RHIZOCTONIA	2	0	2
	DROP	- SCLEROTINIA	1	0	1
	ENVIRONMENTAL STRESSES		2	2	4
	INSECT INJURY		2	0	2
	LEAF SPOTS	- ALTERNARIA	1	1	2
		- CERCOSPORA	1	0	1
	NO DISEASE		2	0	2
	NUTRITIONAL	- ACID SOIL	1	0	1
		- N DEFICENCY	1	0	1
	PHYSIOLOGICAL	- OEDEMA	2	0	2
	WIRE STEM	- RHIZOCTONIA	3	2	5
	YELLOW S	- FUSARIUM	1	0	1
CUCURBITS - CANTALOUPE, CUCUMBER (Cucumis), SQUASH, PUMPKIN and ZUCCHINI (Cucurbita) WATERMELON (Citrullis)					
	ANTHRACNOSE	- COLLETOTRICHUM	2	0	2
	BACTERIAL WILT	- ERWINIA	12	0	12
	BELLY ROT	- RHIZOCTONIA	1	0	1
	CHEMICAL INJURY		3	1	4
	ENVIRONMENTAL STRESSES		2	1	3
	FRUIT ROT	- FUSARIUM	1	0	1
		- CHOANEPHORA	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		13	0	13
	INSECT INJURY		4	0	4
	LEAF SPOT	- ALTERNARIA	1	0	1
	NUTRITIONAL	- ACID SOIL	2	0	2
		- MN TOXICITY	1	0	1
		- N DEFICIENCY	1	0	1
	PHYSIOLOGICAL	- OEDEMA	1	0	1
	ROOT KNOT NEMATODE	- MELOIDOGYNE	1	0	1
	STEM ROT	- PYTHIUM	1	0	1
	VIRUS	- WATERMELON MOSAIC	1	0	1
		- WMV strain 2	3	0	3
		- UNKNOWN	0	1	1
EGGPLANT (Solanum)					
	INSECT INJURY		1	0	1
	POLLINATION PROBLEM		1	0	1
KALE - see listing under CRUCIFERS					
MUSTARD - see listing under CRUCIFERS					
OKRA (Hibiscus)					
	NUTRITIONAL	- ACID SOIL	1	0	1
	ROOT KNOT NEMATODE	- MELOIDOGYNE	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
ONION (Allium)					
	INSECT INJURY		1	0	1
	BASAL ROT	- FUSARIUM	0	1	1
PEA (Pisum)					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
		- UNKNOWN	1	0	1
	ROOT ROT	- FUSARIUM	1	0	1
		- RHIZOCTONIA	1	1	2
PEPPER (Capsicum)					
	ANTHRACNOSE	- COLLETOTRICHUM	2	0	2
	BACTERIAL SOFT ROT	- ERWINIA	2	0	2
	BACTERIAL SPOT	- XANTHOMONAS	13	0	13
	BLOSSOM END ROT	- CA DEFICIENCY/DRY	2	0	2
	CHEMICAL INJURY		1	1	2
	ENVIRONMENTAL	- DROUGHT	1	0	1
	FRUIT ROT	- ALTERNARIA	0	1	1
	INADEQUATE SPECIMEN, NO DISEASE, UNKNOWN		14	0	14
	INSECT INJURY		1	0	1
	LEAF SPOT	- PHYLLOSTICTA	2	0	2
	NUTRITIONAL	- ACID SOIL	3	0	3
		- GENERAL	2	1	3
		- P DEFICIENCY	0	1	1
	PHYSICAL INJURY		1	1	2
	ROOT ROT	- PYTHIUM	0	1	1
	ROOT/STEM ROT	- RHIZOCTONIA	0	1	1
	SOUTHERN BLIGHT	- SCLEROTIUM	3	0	3
	STEM ROT	- FUNGAL	1	0	1
	VIRUS	- TOBACCO MOSAIC	2	0	2
		- UNKNOWN	1	0	1
	WILT	- FUSARIUM	1	0	1
POTATO (Solanum)					
	BACTERIAL SOFT ROT	- ERWINIA	1	0	1
	CHEMICAL INJURY		3	0	3
	CULTURAL	- IMPROPER LIGHT	0	1	1
	DRY ROT	- FUSARIUM	3	1	4
	ENVIRONMENTAL	- SUNSCALD	1	0	1
	HOLLOW HEART	- ENVIRONMENTAL	0	1	1
	INSECT INJURY		2	0	2
	LATE BLIGHT	- PHYTOPHTHORA	1	0	1
	LENTICELS ENLARGED	- ENVIRONMENTAL	1	0	1
	NO DISEASE		3	0	3
	NUTSEGE INJURY		1	0	1
	ROOT KNOT NEMATODE	- MELOIDOGYNE	3	0	3
	WILT	- FUSARIUM	3	0	3

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
PUMPKIN - see listing under CUCURBITS					
RHUBARB (Rheum)					
	CROWN ROT	- RHIZOCTONIA	1	0	1
	SOUTHERN BLIGHT	- SCLEROTIUM	1	0	1
SPINACH (Spinacia)					
	NUTRITIONAL	- N DEFICIENCY	1	0	1
SWEET POTATO (Ipomoea)					
	DRY ROT	- FUSARIUM	0	1	1
	NO DISEASE		1	0	1
	ROOT ROT	- RHIZOCTONIA	1	0	1
	SCURF	- MONILOCHAETE	1	0	1
TOMATO (Lycopersicon)					
	BACTERIAL SOFT ROT	- ERWINIA	1	0	1
	BACTERIAL SPOT	- XANTHOMONAS	1	0	1
	BLOSSOM END ROT	- CA DEFICIENCY/DRY	3	0	3
	BUCKEYE ROT	- PHYTOPHTHORA	4	0	4
	CATFACING	- ENVIRONMENTAL	2	0	2
	CHEMICAL INJURY		8	1	9
	CULTURAL	- COLD INJURY	1	0	1
		- IMPROPER LIGHT	1	0	1
	DAMPING-OFF	- PYTHIUM	2	0	2
	EARLY BLIGHT	- ALTERNARIA	8	1	9
	ENVIRONMENTAL	- DROUGHT	1	1	2
		- STRESS	2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		23	0	23
	INSECT INJURY		4	1	5
	LEAF ROLL	- PHYSIOLOGICAL	1	0	1
	LEAF SPOT	- SEPTORIA	6	2	8
	NUTRITIONAL	- ACID SOIL	1	0	1
		- GENERAL	3	1	4
	PHYSICAL INJURY	- BRUISING	1	0	1
	PITH NECROSIS	- PSEUDOMONAS	7	0	7
	ROOT ROT	- PYTHIUM	0	1	1
	ROOT/STEM ROT	- RHIZOCTONIA	1	0	1
	SLIME MOLD		1	0	1
	SOUTHERN BLIGHT	- SCLEROTIUM	2	0	2
	STEM CANCER	- ALTERNARIA	1	0	1
		- BOTRYTIS	1	0	1
	STEM ROT	- ALTERNARIA	1	0	1
		- RHIZOCTONIA	1	0	1
		- PHYTOPHTHORA	0	1	1
		- UNKNOWN	2	0	2
	TRANSPLANT SHOCK		2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
TOMATO (cont)					
	VIRUS	- DOUBLE STREAK	1	0	1
		- TOBACCO MOSAIC	4	0	4
	WILT	- FUSARIUM	3	0	3
		- VERTICILLIUM	1	0	1
TURNIP - see listing under CRUCIFERS					
WATERMELON - see listing under CUCURBITS					
ZUCCHINI - see listing under CUCURBITS					
TOTALS			4518	403	4921