UNIVERSITY OF KENTUCKY · COLLEGE OF AGRICULTURE
COOPERATIVE EXTENSION SERVICE
AGRICULTURE · HOME ECONOMICS · 4-H · DEVELOPMENT

PLANT DISEASES in KENTUCKY

Plant Disease Diagnostic Laboratory Summary

* 1988 *

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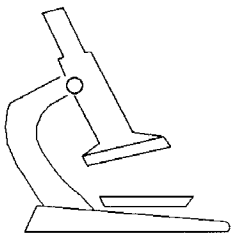

Department
of
Plant Pathology

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INTRODUCTION

The Plant Disease Diagnostic Lab (Lexington and Princeton) handled 2646 plant specimens and 2061 nematode soil samples during 1988. Samples with more than one problem numbered 431, bringing the total number of actual diagnoses to 4707. Specimens coming through the County Extension system accounted for 95 percent of the total, while the remainder came directly from non-Extension clients. The Lexington Lab diagnosed 1760 specimens. The Princeton Lab's specimen load totaled 2947; of this number 886 were plant samples and 2061 were soil samples submitted, almost exclusively, for soybean cyst nematode analysis. A total of 2025 of the nematode were submitted by researchers and 36 were submitted by commercial growers.
These numbers are summarized as follows:

The Plant Disease Diagnostic Lab, total samples	4707
Samples with more than 1 diagnosis	431
Total diagnoses	5138
Plant samples	2646
Nematode samples	2061
Lexington Lab, total (plant) samples	1760
Princeton Lab, total samples	2947
Plant samples	886
Nematode samples	2061
Percent of samples through Extension System	95(%)

HIGHLIGHTS

The **DROUGHT of 1988** caused considerable damage to all types of plants from agronomic to ornamental and vegetable. Soybean plants susceptible to the **SOYBEAN CYST NEMATODE** were especially affected by the dry weather. Many fields of early-planted corn were not even harvested for grain but rather cut for silage. **Leaf scorch and dieback** problems on ornamentals were much in evidence while leaf spot diseases were minimal due to a lack of available moisture for the causal organisms. Vegetable production, without the benefit of irrigation, was very poor.

The drought, we assume, also caused a 15 percent reduction in the number of plant samples received by the diagnostic lab in 1988 as compared to the totals for 1987 (2646 and 3094, respectively).

As in 1986 and 1987, a number of diseases caused by the fungus RHIZOCTONIA were frequently encountered. We commonly observed this organism causing root and stem rots of various bedding plants (e.g. impatiens, petunia, vinca and others), vegetables, including: snap bean (root and stem rot), cabbage and cauliflower (wire stem and bottom rot) and pea (root rot) and turfgrasses causing the disease known as brown patch. The number of soybean samples with Rhizoctonia root rot, as the primary or secondary diagnosis, was much higher in 1988 (49 samples) compared to 1987 (19 samples).

The **TOMATO SPOTTED WILT VIRUS** (TSWV) was identified for the first time in Kentucky on greenhouse ornamentals (gloxinia and fibrous begonia) and on tomato (home and commercially grown). Tobacco was also infected as in 1986 and 1987 but similar to those years, the extent of damage was limited in most fields to one or two percent. TSWV has become a major problem in commercial floral

greenhouses in the 80's for most of the United States but as with tobacco has not been a serious problem in vegetable production in the field to date.

Another virus, the **WHEAT STREAK MOSAIC VIRUS** (WSMV), occurred in epidemic proportions for the first time in Kentucky. This virus is carried and transmitted to wheat by the wheat curl mite which suppossedly occurred in large populations due to the mild winter temperatures of the last few years and an increase in corn acreage (a crop which they colonize between wheat crops).

A new, agronomic crop appears in this listing for the first time. It is **RAPESEED**, known commercially as **CANOLA**, and is a member of the genus Brassica (e.g. cabbage, turnip, mustard, kale, etc.). It is processed to make oils of very low saturated fats for human consumption. Some of the disease problems seen on this crop included **SCLEROTINIA CROWN/STEM ROT, POWDERY MILDEW** and **ALTERNARIA LEAF SPOT.**

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. Ocassionally, 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, if there was one.

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 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.

ACKNOWLEDGEMENTS

We wish to thank **Freddie Higgins** for his assistance in preparing this document. We would also like to thank the College of Agriculture's extension specialists and researchers who served as consultants to the diagnostic lab in 1988. Their services ranged from making actual diagnoses to providing answers to plant, insect, weed 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 diagnoses[1] by crop category and causal agent type.

Crop Category	Abiotic Problems	Biotic[2] Problems	Chemical Injury	Inadequate Specimen	Insect Injury	Other[3]	Total Diagnoses
Agronomic							
Corn	54	42	16	8	19	21	160
Forages	41	38	3	4	7	8	101
Rapeseed (Canola)	0	1	1	0	1	0	3
Small grains	19	70	1	1	19	10	120
Soybeans	56	2174	19	7	20	17	2293
Tobacco	155	260	56	13	23	48	555
Fruit							
Small fruit	16	34	6	5	7	22	90
Tree fruit	33	81	3	7	40	20	184
Herbs	1	8	0	2	0	1	12
Identification	0	24	0	1	1	4	30
Ornamentals							
Herbaceous and Houseplants	54	110	7	16	20	17	224
Turfgrass	25	72	1	5	1	9	113
Woody	348	208	40	51	142	149	938
Vegetables	76	119	23	13	31	41	303
Miscellaneous	3	1	0	0	1	7	12
Total	881	3242	176	133	332	374	5138

[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]
Agronomic					
Corn	3	37	0	2	0
Forages	3	35	0	0	1
Rapeseed (Canola)	0	1	0	0	0
Small grains	0	30	0	39	1
Soybeans	1	75	2098	0	0
Tobacco	28	166	0	66	0
Fruit					
Small fruit	2	29	0	2	1
Tree fruit	31	49	0	1	0
Herbs	1	7	0	0	0
Identification	0	16	0	0	8
Ornamentals					
Herbaceous and Houseplants	12	93	0	4	1
Turfgrass	0	67	1	0	4
Woody	23	176	2	5	1
Vegetables	19	73	2	25	0
Miscellaneous	0	1	0	0	0
Total	123	854	2193	144	17

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

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

Crop Category	Number of Specimens	Percentage of Total Specimens
Agronomic (-Tobacco)	2533	53.8
Tobacco	510	10.8
Fruit	245	5.2
Herbs	10	.2
Identifications	30	.6
Ornamentals	1093	23.3
Vegetables	274	5.8
Miscellaneous	12	.3
Total Specimens	4707	100.0

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

Crop Category and Crop	Number of Primary Diagnoses[1]	Number of Secondary Diagnoses[2]	Total Diagnoses
Agronomic			
Corn	139	21	160
Forages	77	24	101
Rapeseed (Canola)	3	0	3
Small grains	86	34	120
Soybeans	2228	65	2293
Tobacco	510	45	555
Fruit			
Small fruit	80	10	90
Tree fruit	165	19	184
Herbs	10	2	12
Identification	30	0	30
Ornamentals			
Herbaceous and Houseplants	191	33	224
Turfgrass	95	18	113
Woody	807	131	938
Vegetables	274	29	303
Miscellaneous	12	0	12
Total	4707	431	5138

[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 "Expanatory 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	Grower Type: Commercial Ext[1]	Commercial Non-Ext[2]	Homeowner Ext[1]	Homeowner Non-Ext[2]	Research Ext[1]	Research Non-Ext[2]	Institution Ext[1]	Institution Non-Ext[2]
Agronomic								
Tobacco	487	15	0	0	2	6	0	0
Other[3]	471	25	1	1	2031	4	0	0
Fruit	83	0	148	8	5	0	0	1
Ornamental	118	47	781	82	0	3	47	15
Vegetable	94	5	153	8	6	6	2	0
Other[4]	14	4	28	4	1	1	0	0
Total	1267	96	1111	103	2045	20	49	16
Total/Grower Type	1363		1214		2065		65	

Total number of samples received = 4707

[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, Rapeseed (Canola), Small Grains, and Soybeans.

[4] Other includes: Herbs, Identifications and Miscellaneous

Table 6. Number of referrals and/or consultations made with other departments, Uk lab facilities or outside agencies.

Department, Facility or outside agency	Crop Category					
	Agronomic	Fruit	Ornamental	Vegetable	Other	Total
Agronomy Department	114	0	10	8	4	136
Entomology Department	21	21	103	19	1	165
Horticulture Department	0	14	34	14	5	67
Regulatory Services	1	0	0	0	2	3
Nematode Lab	0	0	3	2	0	5
Clemson Univ.	0	0	1	0	0	1
Agdia, Inc.	0	0	1	0	0	1
					Total	378
				Total number of plant samples		2646
			Percent of plant samples referred outside Diagnostic Lab for consultation			14%

Table 7. Special laboratory tests performed.

Test	Number of Cases
Culturing	58
Incubation	104
Nematode extraction (total = 2065)	
Pinewood nematode	4
Soybean cyst nematode	2056
Other	5
Virus assays (total = 26)	
(Electron Microscope)	3
ELISA	14
Indicator plants	9
Soil tests (total = 192)	
pH	176
Soluble salts	12
pH/SS	1
pH/Quick nitrate test (tobacco)	2
Saturated Media Extract (SME)	1
Miscellaneous tests	
Quick nitrate test (tobacco)	10

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

COUNTY	Total	Agronomic[1]	Tobacco	Fruit	Ornamental	Vegetable	Other
ADAIR	3	0	1	0	1	1	0
ALLEN	23	0	11	1	4	6	1
ANDERSON	13	1	4	4	3	1	0
BALLARD	32	10	11	2	6	2	1
BARREN	20	1	7	0	9	3	0
BATH	24	4	7	1	8	2	2
BELL	13	3	0	3	6	1	0
BOONE	25	1	5	3	15	1	0
BOURBON	12	1	6	1	3	0	1
BOYD	12	0	0	1	10	1	0
BOYLE	28	9	1	4	12	2	0
BRACKEN	5	0	3	0	0	2	0
BREATHITT	9	0	1	2	4	2	0
BRECKINRIDGE	12	1	2	0	5	4	0
BULLITT	18	0	3	1	12	0	2
BUTLER	8	3	1	2	2	0	0
CALDWELL	41	8	9	8	12	3	1
CALLOWAY	56	6	18	5	17	10	0
CAMPBELL	1	0	0	0	1	0	0
CARLISLE	23	5	7	2	9	0	0
CARROLL	17	1	7	0	6	3	0
CARTER	16	1	7	2	6	0	0
CASEY	21	0	6	2	1	12	0
CHRISTIAN	65	23	19	5	14	4	0
CLARK	20	3	10	0	6	1	0
CLAY	0	0	0	0	0	0	0
CLINTON	14	1	5	5	0	3	0
CRITTENDEN	12	3	0	3	2	3	1
CUMBERLAND	2	0	2	0	0	0	0
DAVIESS	105	54	19	6	19	5	2
EDMONSON	0	0	0	0	0	0	0
ELLIOTT	6	1	1	0	3	1	0
ESTILL	10	1	4	2	2	1	0
FAYETTE	441	13	20	24	344	34	6
FLEMING	16	5	5	1	2	2	1
FLOYD	8	0	0	0	6	2	0
FRANKLIN	32	4	0	3	22	0	3
FULTON	44	19	0	7	17	1	0
GALLATIN	0	0	0	0	0	0	0
GARRARD	9	0	1	0	8	0	0
GRANT	14	0	8	0	3	3	0
GRAVES	55	13	13	3	21	5	0
GRAYSON	3	2	1	0	0	0	0
GREEN	4	2	1	1	0	0	0
GREENUP	10	0	1	1	7	1	0
HANCOCK	8	6	1	1	0	0	0
HARDIN	22	9	4	3	3	3	0
HARLAN	6	0	0	0	4	1	1

COUNTY	Total	Agronomic[1]	Tobacco	Fruit	Ornamental	Vegetable	Other
HARRISON	18	7	3	1	7	0	0
HART	28	1	14	1	12	0	0
HENDERSON	17	6	5	1	3	1	1
HENRY	23	7	8	0	7	1	0
HICKMAN	11	9	1	0	1	0	0
HOPKINS	53	23	3	14	8	4	1
JACKSON	3	0	1	0	1	1	0
JEFFERSON	67	1	0	4	57	1	4
JESSAMINE	11	0	4	2	5	0	0
JOHNSON	3	0	0	1	2	0	0
KENTON	16	0	1	6	9	0	0
KNOTT	12	1	0	2	6	1	2
KNOX	8	1	1	0	4	2	0
LARUE	15	3	2	1	2	4	3
LAUREL	9	4	0	0	2	3	0
LAWRENCE	7	0	1	0	6	0	0
LEE	4	0	1	0	3	0	0
LESLIE	3	0	0	2	0	1	0
LETCHER	1	0	0	0	1	0	0
LEWIS	11	1	7	1	2	0	0
LINCOLN	13	5	2	0	4	2	1
LIVINGSTON	10	5	0	0	3	2	0
LOGAN	48	11	19	4	6	7	1
LYON	15	2	2	1	5	4	1
McCRACKEN	51	11	1	7	29	2	1
McCREARY	0	0	0	0	0	0	0
McLEAN	14	6	3	0	2	0	3
MADISON	76	3	34	10	27	2	0
MAGOFFIN	1	0	1	0	0	0	0
MARION	7	2	2	0	1	2	0
MARSHALL	24	5	4	6	8	1	0
MARTIN	2	0	0	1	1	0	0
MASON	12	3	1	1	7	0	0
MEADE	8	2	0	1	4	1	0
MENIFEE	0	0	0	0	0	0	0
MERCER	17	2	7	0	6	2	0
METCALFE	6	1	2	0	2	0	0
MONROE	5	0	3	1	0	1	0
MONTGOMERY	20	4	4	0	9	3	0
MORGAN	20	1	8	3	1	6	1
MUHLENBERG	6	3	0	1	2	0	0
NELSON	8	1	3	1	2	0	1
NICHOLAS	8	1	3	3	0	1	0
OHIO	14	8	5	1	0	0	0
OLDHAM	29	1	2	0	23	3	0
OWEN	22	2	6	3	11	0	0
OWSLEY	8	2	2	0	2	2	0
PENDELTON	7	2	3	0	1	0	1
PERRY	3	0	1	0	2	0	0
PIKE	0	0	0	0	0	0	0

COUNTY	Total	Agronomic[1]	Tobacco	Fruit	Ornamental	Vegetable	Other
POWELL	8	0	0	5	1	2	0
PULASKI	29	7	5	2	8	7	0
ROBERTSON	4	0	2	1	1	0	0
ROCKCASTLE	11	1	3	0	5	2	0
ROWAN	7	0	1	0	4	2	0
RUSSELL	26	1	2	0	16	7	0
SCOTT	15	0	1	2	10	1	1
SHELBY	35	13	3	2	13	2	2
SIMPSON	13	6	1	0	5	1	0
SPENCER	7	3	0	3	1	0	0
TAYLOR	29	6	8	7	5	3	0
TODD	44	13	15	6	4	6	0
TRIGG	27	4	7	5	6	5	0
TRIMBLE	10	5	2	0	2	1	0
UNION	34	18	0	3	10	1	2
WARREN	63	7	9	9	22	14	2
WASHINGTON	31	1	5	5	15	4	1
WAYNE	38	6	7	0	7	17	1
WEBSTER	23	8	6	3	4	2	0
WHITLEY	5	0	1	0	0	4	0
WOLFE	4	0	2	0	2	0	0
WOODFORD	41	3	11	2	19	6	0
Out-of-State	30	9	17	0	2	1	1
TOTALS	2682[2]	508	510	244	1094	272	52

[1] Agronomic crops include corn, soybeans, forages, rapeseed (Canola) and small grains but in this particular case, it excludes tobacco.

[2] Includes 36 samples sent to the nematode lab for analysis.

Table 9. The number of cases in which extension specialists, diagnosticians or researchers were involved in making a primary diagnosis and the number of cases in which they served as consultants.

SPECIALISTS, RESEARCHERS, DIAGNOSTICIANS	DEPARTMENT	NUMBER OF CASES	
		PRIMARY DIAGNOSIS*	CONSULTATIONS**
LEXINGTON			
Anderson, RG	Horticulture	7	18
Bitzer, MJ	Agronomy	10	1
Clinton, WP	Plant Pathology	1	0
Collins, M	Agronomy	0	2
Dougherty, CT	Agronomy	0	1
Fountain, WF	Horticulture	0	1
Green, JD	Agronomy	20	12
Hartman, JR	Plant Pathology	135	53
Kaiser, CA (Diagnostician)	Plant Pathology	1310	22
McNiel, RE	Horticulture	0	12
Nesmith, WC	Plant Pathology	13	9
Palmer, GK	Agronomy	14	2
Pirone, TP	Plant Pathology	0	4
Powell, AJ	Agronomy	0	2
Roberts, CR	Horticulture	11	5
Scheibner, RA	Entomology	105	32
Smiley, JH	Agronomy	67	6
Strang, JG	Horticulture	12	7
Stuckey, RE	Plant Pathology	33	19
Townsend, LH	Entomology	20	16
Wells, KL	Agronomy	12	2
Witt, ML	Horticulture	0	4
Witt, WW	Agronomy	0	1
PRINCETON			
Bachi, PR (Diagnostician)	Plant Pathology	864	2
Brown, GR	Horticulture	1	21
Dunwell, WC	Horticulture	0	22
Herbek, JH	Agronomy	0	7
Hershman, DE	Plant Pathology	9	19
Johnson, DJ	Entomology	0	21
Lacefield, GD	Agronomy	1	12
Legg, PD	Agronomy	0	1
Martin, JR	Agronomy	0	67
Murdock, LW	Agronomy	0	21
Maksymowicz, WC	Agronomy	0	13
Rasnake, M	Agronomy	0	2

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

** In some cases, more than one person was consulted, however, only one name can 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	1	0	1
	BACTERIAL STALK ROT	- ERWINIA	1	0	1
	BROWN SPOT	- PHYSODERMA	1	0	1
	CHEMICAL INJURY	- HERBICIDE	13	3	16
	DOWNY MILDEW	- PERONOSCLEROSPORA	1	0	1
	EAR/KERNEL ROTS	- ASPERGILLUS	0	2	2
		- DIPLODIA	10	0	10
		- GIBBERELLA	1	0	1
		- FUSARIUM	5	1	6
		- NIGROSPORA	1	0	1
		- PENICILLIUM	1	1	2
	ENVIRONMENTAL	- DROUGHT	4	0	4
		- OTHER STRESSES	8	1	9
	GRAY LEAF SPOT	- CERCOSPORA	6	0	6
	INADEQUATE SPECIMEN, NO DISEASE		26	0	26
	INSECT INJURY		13	6	19
	MUTATION	- GENETIC	0	1	1
	NUTRITIONAL	- ACID SOIL	11	2	13
		- K DEFICIENCY	10	0	10
		- ZN DEFICIENCY	7	2	9
		- OTHER	5	0	5
	PURPLE LEAF SHEATH	- SAPROBES	0	1	1
	REFERRAL		3	0	3
	RUST	- PUCCINIA	1	1	2
	SMUT	- USTILAGO	2	0	2
	STALK ROT	- FUNGAL	1	0	1
	STEWART'S WILT	- ERWINIA	2	0	2
	VIRUS	- COMPLEX	2	0	2
		Forages			
ALFALFA (Medicago)					
	ANTHRACNOSE	- COLLETOTRICHUM	1	0	1
	BACTERIAL STEM BLIGHT	- PSEUDOMONAS	0	2	2
	CHEMICAL INJURY	- ANTIFREEZE, HERBICIDE	1	1	2
	CROWN/ROOT ROT	- COMPLEX	1	0	1
		- FUSARIUM	0	1	1
		- FUNGAL	2	0	2
	CROWN/STEM ROT	- SCLEROTINIA	3	1	4
	ENVIRONMENTAL STRESSES		17	2	19
	INADEQUATE SPECIMEN, NO DISEASE		9	0	9
	INSECT INJURY		3	1	4
	LEAF SPOT	- CERCOSPORA	0	1	1
		- LEPTOSPHAERULINA	2	1	3
		- PSEUDOPEZIZA	0	1	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
ALFALFA (cont)					
	NUTRITIONAL	- ACID SOIL	5	1	6
		- POOR NODULATION	3	2	5
		- OTHER	4	2	6
	SPRING BLACK STEM	- PHOMA	0	2	2
	SUMMER BLACK STEM	- CERCOSPORA	3	0	3
CLOVER (Trifolium)					
	BLACK PATCH	- RHIZOCTONIA	1	0	1
	CROWN/ROOT ROT	- RHIZOCTONIA	1	0	1
	CROWN/STEM ROT	- SCLEROTINIA	1	0	1
	ENVIRONMENTAL	- FROST INJURY	0	1	1
FESCUE (Festuca)					
	BROWN PATCH	- RHIZOCTONIA	2	0	2
	CULTURAL	- MANAGEMENT	1	0	1
	INADEQUATE SPECIMEN		1	0	1
	INSECT INJURY		1	1	2
	LEAF SPOT	- CURVULARIA	1	0	1
		- DRECHSLERA	0	1	1
LESPEDEZA (Lespedeza)					
	CHEMICAL INJURY	- HERBICIDE	1	0	1
	NUTRITIONAL	- HIGH pH	0	1	1
MILLET (Panicum)					
	LEAF SPOT	- PYRICULARIA	5	0	5
ORCHARDGRASS (Dactylis)					
	LEAF SPOT	- FUNGAL	0	1	1
	NO DISEASE		1	0	1
	ROOT ROT	- FUNGAL	1	0	1
TIMOTHY (Phleum)					
	ENVIRONMENTAL	- DROUGHT	0	1	1
	INSECT INJURY	- MITE	1	0	1
		Rapeseed			
"CANOLA" (Brassica)					
	CHEMICAL INJURY	- HERBICIDE	1	0	1
	INSECT INJURY	- UNKNOWN	1	0	1
	STEM ROT	- SCLEROTINIA	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
		Soybean			
SOYBEAN (Glycine)					
	ANTHRACNOSE	- COLLETOTRICHUM	0	2	2
	BROWN SPOT	- SEPTORIA	1	4	5
	CHARCOAL ROT	- MACROPHOMINA	5	1	6
	CHEMICAL INJURY	- HERBICIDE, GROWTH REG.	15	4	19
	CULTURAL	- WATERING	1	0	1
	DAMPING-OFF	- PYTHIUM	2	0	2
	DOWNY MILDEW	- PERONOSPORA	1	0	1
	ENVIRONMENTAL	- DROUGHT	14	6	20
		- OTHER	1	2	3
	FROGEYE	- CERCOSPORA	0	1	1
	INADEQUATE SPECIMEN, NO DISEASE		24	0	24
	INSECT INJURY		10	10	20
	LEAF SPOT	- ALTERNARIA	1	0	1
	NUTRITIONAL	- ACID SOIL	0	1	1
		- K DEFICIENCY	7	4	11
		- OTHER	6	5	11
	POWDERY MILDEW	- MICROSPHAERA	0	1	1
	ROOT ROT	- FUNGAL	0	1	1
		- FUSARIUM	1	0	1
	ROOT/STEM ROT	- RHIZOCTONIA	31	18	49
	SOYBEAN CYST NEMATODE	- on plant samples	29	8	37
	HETERODERA	* in soil samples	1918	0	1918
		* absent in soil samples	143	0	143
	(*soil submitted to Nematode Lab)				
	SLIME MOLD	- species	0	1	0
	SOUTHERN BLIGHT	- ATHELIA	3	0	3
	STEM CANKER	- DIAPORTHE	2	0	2
	SUDDEN DEATH SYNDROME	- FUSARIUM?	5	0	5
		Small Grains			
BARLEY (Hordeum)					
	ENVIRONMENTAL	- COLOR BANDING	1	0	1
	NO DISEASE		1	0	1
	NET BLOTCH	- DRESCHLERA	1	0	1
	SPOT BLOTCH	- BIPOLARIS	1	0	1
OAT (Avena)					
	CHEMICAL INJURY	- HERBICIDE	1	0	1
	CROWN ROT	- RHIZOCTONIA	0	1	1
	ENVIRONMENTAL STRESSES		2	0	2
	NO DISEASE		1	0	1
RYE (Secale)					
	NO DISEASE		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
WHEAT (Triticum)					
	CULTURAL	- HEAVY SEEDING	0	2	2
	ENVIRONMENTAL STRESSES		7	4	11
	EYESPOT	- PSEUDOCERCOSPORELLA	2	0	2
	GLUME BLOTCH	- SEPTORIA	4	2	6
	INADEQUATE SPECIMEN, NO DISEASE		8	0	8
	INSECT INJURY		1	18	19
	LEAF BLOTCH	- SEPTORIA	4	1	5
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
	NUTRITIONAL	- ACID SOIL	1	0	1
		- K DEFICIENCY	0	1	1
	PHYSICAL INJURY	- BIRD	1	0	1
	POWDERY MILDEW	- ERYSIPHE	0	1	1
	RUST/LEAF	- PUCCINIA	2	0	2
	SMUT	- USTILAGO	2	1	3
	SPOT BLOTCH	- COCHLIOBULUS	1	0	1
	VIRUS	- WHEAT STREAK MOSAIC	30	2	32
		- WHEAT SPINDLE STREAK	7	0	7
		Tobacco			
TOBACCO (Nicotiana)					
	ANGULAR LEAF SPOT	- PSEUDOMONAS	21	2	23
	BACTERIAL SOFT ROT	- BACILLUS	1	0	1
	BLACK LEG	- ERWINIA	1	0	1
	BLACK ROOT ROT	- THIELAVIOPSIS	5	0	5
	BLACK SHANK	- PHYTOPHTHORA	126	0	126
	BROWN SPOT	- ALTERNARIA	4	2	6
	CHEMICAL INJURY	- GROWTH REGULATOR	27	0	27
		- SUCKER AGENTS	9	0	9
		- OTHER HERBICIDES	10	1	11
		- OTHER CHEMICALS	8	1	9
	CULTURAL	- CUT TOO EARLY	0	1	1
	DAMPING OFF	- PYTHIUM	1	0	1
		- RHIZOCTONIA	1	3	4
	ENVIRONMENTAL	- COLD INJURY	4	3	7
		- DROUGHT	7	1	8
		- LIGHTNING	19	0	19
		- WET FEET	7	0	7
		- WEATHER SCALD	16	0	16
		- OTHER STRESSES	4	0	4
	FALSE BROOMRAPE	- UNKNOWN	2	0	2
	FRENCHING	- METABOLITES	1	0	1
	FROGEYE	- CERCOSPORA	5	2	7
	HOLLOW STALK	- ERWINIA	3	0	3
	INADEQUATE SPECIMEN, NO DISEASE		61	0	61

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
TOBACCO (cont)					
	INSECT INJURY		16	7	23
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
	NUTRITIONAL	- ACID SOIL	11	8	19
		- FERTILIZER BURN	30	1	31
		- K DEFICIENCY	5	0	5
		- MN TOXICITY	9	0	9
		- N DEFICIENCY	4	0	4
		- P DEFICIENCY	2	1	3
		- OTHER	3	0	3
	PHYSICAL INJURY	- BRUISING	8	2	10
		- SPRAY PRESSURE	2	0	2
	RAGGED SPOT	- ASCOCHYTA	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
	ROOT ROT	- RHIZOCTONIA	1	1	2
	SOOTY MOLD	- species	0	1	1
	SORE SHIN	- RHIZOCTONIA	4	4	8
	VIRUS	- ALFALFA MOSAIC	2	0	2
		- COMPLEX	20	1	21
		- TOBACCO ETCH	2	0	2
		- TOBACCO RINGSPOT	5	0	5
		- TOBACCO STREAK	2	0	2
		- TOMATO SPOTTED WILT	28	0	28
		- TOBACCO VEIN MOTTLING	4	0	4
		- UNKNOWN	2	0	2
	WEATHER FLECK	- OZONE	2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
		*** FRUIT CROPS *** Small Fruits			
BLUEBERRY (Vaccinium)					
	ENVIRONMENTAL	- DROUGHT	0	1	1
	NO DISEASE		1	0	1
	NUTRITIONAL	- FE DEFICIENCY	1	0	1
	PHYSICAL INJURY	- RODENT	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
	STEM CANKER	- BOTRYOSPHAERIA	1	0	1
BRAMBLES - Blackberry and Raspberry (Rubus)					
	ANTHRACNOSE	- ELSINOE	3	0	3
	CANE CANKER	- BOTRYSPHAERIA	3	0	3
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	ENVIRONMENTAL STRESSES		5	0	5
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	INSECT INJURY		3	1	4
	LEAF SCORCH	- UNKNOWN	1	0	1
	NUTRITIONAL	- GENERAL	1	0	1
	ORANGE RUST	- GYMNOCONIA	2	0	2
	ROOT PROBLEM	- UNKNOWN	0	1	1
	ROOT ROT	- PYTHIUM	1	0	1
		- PHYTOPHTHORA	0	1	1
	VIRUS	- STERILITY	2	0	2
GOOSEBERRY (Ribes)					
	SILKY THREAD BLIGHT	- RHIZOCTONIA	1	0	1
GRAPE (Vitis)					
	BLACK ROT	- GUIGNARDIA	2	0	2
	CHEMICAL INJURY	- GROWTH REGULATOR	2	0	2
		- BURN	1	0	1
	CROWN GALL	- AGROBACTERIUM	2	0	2
	ENVIRONMENTAL STRESSES		2	1	3
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	INSECT INJURY		2	0	2
STRAWBERRY (Fragaria)					
	BLACK ROOT	- COMPLEX	2	0	2
		- RHIZOCTONIA	2	2	4
		- UNKNOWN	1	0	1
	CHEMICAL INJURY	- BURN	1	0	1
		- UNKNOWN	1	0	1
	ENVIRONMENTAL	- DROUGHT	1	1	2
		- COLD INJURY	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		11	0	11
	INSECT INJURY		1	0	1
	LEAF BLIGHT	- PHOMOPSIS	1	1	2
	LEAF SCORCH	- DIPLOCARPON	1	1	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
STRAWBERRY (cont)					
	NUTRITIONAL	- ACID SOIL	1	0	1
	ROOT ROT	- CERATOBASIDIUM	1	0	1
	RUST	- FROMMEA	1	0	1
		Tree Fruits			
APPLE (Malus)					
	BITTER PIT	- CA DEFICIENCY	1	0	1
	BITTER ROT	- GLOMERELLA	3	0	3
	BLACK ROT	- PHYSALOSPORA	2	0	2
	BLOTCH	- PHYLLOSTICTA	1	0	1
	CEDAR APPLE RUST	- GYMNOSPORANGIUM	5	1	6
	CANKER/ROT	- BOTRYOSPHAERIA	1	0	1
	CHEMICAL INJURY	- INSECTICIDE	0	1	1
	COLLAR ROT	- PHYTOPHTHORA	1	0	1
	CROWN GALL	- AGROBACTERIUM	2	0	2
	ENVIRONMENTAL STRESSES		7	2	9
	FIRE BLIGHT	- ERWINIA	19	0	19
	FLYSPECK	- SCHIZOTHYRIUM	0	1	1
	FROGEYE	- BOTRYOSPHAERIA	2	2	4
	INADEQUATE SPECIMEN, NO DISEASE		13	0	13
	INSECT INJURY		21	4	25
	INTERNAL BREAKDOWN	- STORAGE	2	0	2
	JOHNATHAN SPOT	- PHYSIOLOGICAL	1	0	1
	NUTRITIONAL	- GENERAL	1	0	1
	POLLIN PROBLEM	- UNKNOWN	1	0	1
	POWDERY MILDEW	- PODOSPHAERA	1	0	1
	ROOT ROT	- CLITOCYBE	1	0	1
	RUSSET	- GENETIC	1	0	1
		- UNKNOWN	1	0	1
	SCAB	- VENTURIA	2	0	2
	SOOTY BLOTCH	- GLOEODES	0	1	1
	SOOTY MOLD	- species	0	1	1
	TRANSPLANT SHOCK		1	0	1
	VIRUS	- UNKNOWN	1	0	1
CHERRY (PRUNUS)					
	CANKER	- LEUCOSTOMA	1	0	1
	CHEMICAL	- HERBICIDE	1	0	1
	ENVIRONMENTAL STRESSES		2	0	2
	GUMMOSIS	- UNKNOWN	1	0	1
	INSECT INJURY		0	2	2
	NO DISEASE		1	0	1
	POLLEN PROBLEM	- UNKNOWN	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
PEACH, NECTARINE and APRICOT (Prunus)					
	BACTERIAL SPOT	- XANTHOMONAS	1	0	1
	BROWN ROT	- MONILINIA	2	0	2
	CANKER	- LEUCOSTOMA	1	0	1
		- CYTOSPORA	2	0	2
	ENVIRONMENTAL STRESSES		4	0	4
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	INSECT INJURY		5	0	5
	LEAF CURL	- TAPHRINA	3	0	3
	NUTRITIONAL	- N DEFICIENCY	2	0	2
		- GENERAL	1	0	1
	TRUNK PROBLEM	- UNKNOWN	1	0	1
PEAR (Pyrus)					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	FIRE BLIGHT	- ERWINIA	7	0	7
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		1	0	1
PECAN (Carya)					
	ENVIRONMENTAL	- COLD INJURY	1	0	1
	INSECT INJURY		2	0	2
	NO DISEASE		1	0	1
	PHYSIOLOGICAL	- INTERNAL BREAKDOWN	1	0	1
	POWDERY MILDEW	- MICROSPHAERA	1	0	1
PLUM (Prunus)					
	BLACK KNOT	- APIOSPORINA	3	0	3
	BACTERIAL SPOT	- XANTHOMONAS	0	1	1
	INSECT INJURY		3	2	5
	NO DISEASE		1	0	1
	PHYSICAL INJURY	- UNKNOWN	1	0	1
		- ROPE	1	0	1
	PLUM POCKETS	- TAPHRINA	10	0	10
WALNUT (Juglans)					
	NUT SPOT	- FUNGAL	1	0	1
	NUT MOLD	- ALTERNARIA	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
		*** HERBS ***			
GINSENG (Panax)					
	ANTHRACNOSE	- COLLETOTRICHUM	1	0	1
	BACTERIAL SOFT ROT	- ERWINIA	0	1	1
	BLIGHT	- ALTERNARIA	2	0	2
	DAMPING-OFF	- PYTHIUM	2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	ROOT ROT	- FUSARIUM	1	0	1
SAGE (Salvia)					
	INADEQUATE SPECIMEN		1	0	1
SWEET WOODRUF (Galium)					
	SOUTHERN BLIGHT	- ATHELIA	1	0	1
		*** IDENTIFICATIONS ***			
FUNGAL IDENTIFICATION					
	BASIDIOMYCETE	- UNKNOWN	1	0	1
	CHLOROPHYLLUM	- MOLYBDITES	2	0	2
	CYATHUS	- species	1	0	1
	GYROMITRA	- BRUNNEA	1	0	1
	INADEQUATE SPECIMEN		1	0	1
	LEPIOTA	- species	1	0	1
	MORCHELLA	- ESCULENTA	1	0	1
	NIDULARIALES	- species	1	0	1
	POLYPORUS	- species	1	0	1
	PORIA	- species	1	0	1
	SCLERODERMA	- species	2	0	2
	SLIME MOLD	- FULIGO	2	0	2
		- species	2	0	2
INSECT IDENTIFICATION					
	SOWBUG	- Species	1	0	1
PLANT IDENTIFICATION					
	BROMUS	- COMMUTATUS	1	0	1
	CARYL	- CORDIFORMIS	1	0	1
	CUCURBITA	- species	1	0	1
	LOLIUM	- species	1	0	1
	MALUS	- species	1	0	1
	MELO	- DUDAIM	1	0	1
	POPULUS	- species	1	0	1
	PROBOSCIDEA	- LOUISIANICA	1	0	1
	REFERRAL	- AGRONOMY	2	0	2
		- HERBARIUM	1	0	1
		- HORTICULTURE	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
		*** MISCELLANEOUS ***			
JOHNSONGRASS (Sorghum)					
	DOWNY MILDEW	- PERONOSCLEROSPORA	1	0	1
	NO DISEASE		1	0	1
SOIL					
	INADEQUATE SPECIMEN, NO DISEASE		10	0	10
	NUTRITIONAL	ACID SOIL	6	0	6
	REFERRAL	REGULATORY SERVICES	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
		***** ORNAMENTALS *****			
		Herbaceous ornamentals and indoor plants			
ACIMENES (Achimenes)					
	RING SPOT	- COLD WATER	1	0	1
AFRICAN VIOLET (Saintpaulia)					
	CHLOROSIS	- CULTURAL	1	0	1
	INADEQUTE SPECIMEN		2	0	2
	INSECT INJURY		1	0	1
AGLAONEMA (Aglaonema)					
	INSECT INJURY		2	0	2
	ROOT ROT	- RHIZOCTONIA	1	0	1
AJUGA (Ajuga)					
	CROWN ROT	- ATHELIA	1	0	1
ASPIDISTRA (Aspidistra)					
	NO DISEASE		1	0	1
BEGONIA (Begonia)					
	BLIGHT	- BOTRYTIS	1	0	1
	CROWN ROT	- PYTHIUM	1	0	1
	NUTRITIONAL	- HIGH SOLUBLE SALTS	0	1	1
	POWDERY MILDEW	- OIDIUM	1	0	1
	ROOT PROBLEM	- CULTURAL	1	0	1
	STEM ROT	- PYTHIUM	1	0	1
	VIRUS	- TOMATO SPOTTED WILT	1	0	1
BROWALLIA (Browallia)					
	VIRUS	- TOMATO SPOTTED WILT	1	0	1
CALADIUM (Caladium)					
	BACTERIAL SOFT ROT	- ERWINIA	0	1	1
	TUBER ROT	- FUNGAL	1	0	1
CARNATION (Dianthus)					
	STEM ROT	- FUSARIUM	1	0	1
CENTAUREA (Centaurea)					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
CHRYSANTHEMUM (Chrysanthemum)					
	CHEMICAL	- HERBICIDE	1	0	1
	CULTURAL	- GENERAL	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	NUTRITIONAL	- CA DEFICIENCY	2	0	2
		- ACID SOIL	0	2	2
	ROOT/STEM ROT	- PYTHIUM	1	0	1
		- RHIZOCTONIA	1	0	1
CITRUS (Citrus)					
	INSECT INJURY		1	0	1
COLUMBINE (Aquilegia)					
	SOUTHERN BLIGHT	- ATHELIA	1	0	1
COREOPSIS (Coreopsis)					
	SOUTHERN BLIGHT	- ATHELIA	1	0	1
COSMOS (Cosmos)					
	BACTERIAL WILT	- PSEUDOMONAS	1	0	1
CRAPEMYRTLE (Lagerstroemia)					
	POWDERY MILDEW	- ERYSIPHE	1	0	1
CYCLAMEN (Cyclamen)					
	TUBER ROT	- ERWINIA	1	0	1
DAHLIA (Dahlia)					
	CULTURAL	- GENERAL	1	0	1
	INADEQUATE SPECIMEN		1	0	1
DAISY (Chrtsanthemum)					
	CULTURAL	- OEDEMA	1	0	1
	ROOT ROT	- RHIZOCTONIA	1	0	1
DAYLILLY (Hemerocallis)					
	ANTHRACNOSE	- COLLETOTRICHUM	1	0	1
	CROWN/ROOT ROT	- PYTHIUM	1	0	1
	INSECT INJURY		0	1	1
	LEAF SPOT	- FUNGAL	0	1	1
	NO DISEASE		2	0	2
DRACAENA (Dracaena)					
	CULTURAL	- GENERAL	2	0	2
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
	NUTRITIONAL	- CA/K IMBALANCE	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
FERN (Various)					
	INSECT INJURY		1	1	2
	SOOTY MOLD	- species	1	1	2
FIG (Ficus)					
	ENVIRONMENTAL STRESS		1	0	1
	INSECT INJURY		1	0	1
	NO DISEASE		1	0	1
FUSHIA (Fushia)					
	BLIGHT	- BOTRYTIS	1	0	1
GARDENIA (Gardenia)					
	CANKER	- FUNGAL	1	0	1
GERANIUM (Pelargonium)					
	AIR POLLUTION	- UNKNOWN	0	1	1
	CHEMICAL	- BURN	1	0	1
	CULTURAL	- OEDEMA	4	0	4
	GRAY MOLD	- BOTRYTIS	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	NUTRITIONAL	- GENERAL	2	0	2
	PHYSICAL INJURY	- UNKNOWN	1	0	1
	ROOT ROT	- PYTHIUM	1	0	1
		- RHIZOCTONIA	0	1	1
GERBERA (Gerbera)					
	INSECT INJURY		1	0	1
	ROOT PROBLEM	- UNKNOWN	0	1	1
GLOXINIA (Gloxinia)					
	VIRUS	- TOMATO SPOTTED WILT	1	0	1
HELIOTROPE (Heliotropium)					
	ROOT PROBLEM	- CULTURAL	1	0	1
HOSTA (Hosta)					
	ENVIRONMENTAL STRESS		1	0	1
	INSECT INJURY		0	1	1
	SLIME MOLD	- species	1	0	1
HOUSEPLANT (Unknown)					
	INADEQUATE SPECIMEN		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
IMPATIENS (Impatiens)					
	BACTERIAL SOFT ROT	- ERWINIA	0	1	1
	CHEMICAL INJURY	- INSECTICIDE	1	0	1
	CULTURAL	- GENERAL	1	0	1
	ENVIRONMENTAL	- EXCESSIVE HEAT	0	1	1
	GRAY MOLD	- BOTRYTIS	2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		1	1	2
	LEAF/STEM ROT	- BOTRYTIS	1	0	1
	NUTRITIONAL	- HIGH SOLUBLE SALTS	1	0	1
	REFERRAL	- ENTOMOLOGY	1	0	1
	ROOT ROT	- PYTHIUM	5	1	6
		- RHIZOCTONIA	3	1	4
	STEM ROT	- FUNGAL	1	0	1
		- PYTHIUM	0	1	1
		- RHIZOCTONIA	1	0	1
IRIS (Iris)					
	BACTERIAL SOFT ROT	- ERWINIA	1	1	2
	INADEQUATE SPECIMEN		1	0	1
	INSECT INJURY		1	0	1
	LEAF SPOT	- MICROSPHAERELLA	3	0	3
IVY (Various)					
	CUTTING ROT	- FUSARIUM	1	0	1
	INADEQUATE SPECIMEN		1	0	1
	INSECT INJURY		1	0	1
	LEAF SPOT	- AMEROSPORIUM	1	0	1
		- PHYLLOSTICTA	1	0	1
	ROOT ROT	- PYTHIUM	1	0	1
		- RHIZOCTONIA	0	1	1
KALANCHOE (Kalanchoe)					
	NO DISEASE		1	0	1
LIATRUS (Liatrus)					
	STEM ROT	- SCLEROTINIA	1	0	1
LILY (Lilium)					
	ENVIRONMENTAL STRESS		1	0	1
	ROOT ROT	- PYTHIUM	0	1	1
		- RHIZOCTONIA	1	0	1
LILY OF THE VALLEY (Convallaria)					
	ENVIRONMENTAL STRESS		0	1	1
	ROOT ROT	- FUNGAL	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
LIRIOPE (Liriope)					
	ANTHRACNOSE	- COLLETOTRICHUM	1	0	1
LUNARIA (Lunaria)					
	BLACK LEG	- ERWINIA	1	0	1
LUPINE (Lupinus)					
	SOUTHERN BLIGHT	- ATHELIA	1	0	1
MARIGOLD (Tagetes)					
	BACTERIAL SOFT ROT	- ERWINIA	1	0	1
		- PSEUDOMONAS	0	1	1
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	NUTRITIONAL	- P DEFICIENCY	1	0	1
		- HIGH SOLUBLE SALTS	1	0	1
NARCISSUS (Narcissus)					
	NO DISEASE		1	0	1
	VIRUS	- YELLOW STRIPE	1	0	1
NASTURTIUM (Nasturtium)					
	INSECT INJURY		1	0	1
ORCHID (Various species)					
	NUTRITIONAL	- HIGH SOLUBLE SALTS	1	0	1
	ROOT ROT	- FUNGAL	1	0	1
		- PYTHIUM	1	0	1
PACHYSANDRA (Pachysandra)					
	ENVIRONMENTAL	- DROUGHT	1	0	1
	INSECT INJURY		0	1	1
	LEAF SCORCH	- UNKNOWN	1	0	1
	LEAF/STEM BLIGHT	- PSEUDONECTRIA	3	0	3
PALM (Various species)					
	CULTURAL	- GENERAL	1	0	1
		- OVERWATERING	1	0	1
	INSECT INJURY		0	1	1
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
PEONY (Paeonia)					
	BLIGHT	- BOTRYTIS	2	0	2
	CROWN ROT	- FUNGAL	1	0	1
	PHYSICAL INJURY	- RODENT	1	0	1
	RED SPOT	- CLADOSPORIUM	0	1	1
	ROOT/STEM ROT	- FUNGAL	1	0	1
	SOUTHERN BLIGHT	- ATHELIA	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
PETUNIA (Petunia)					
	INADEQUATE SPECIMEN		1	0	1
	MUTATION	- GENETIC	1	0	1
	NUTRITIONAL	- CA/MG DEFICIENCY	1	0	1
	ROOT/STEM ROT	- RHIZOCTONIA	2	0	2
PHLOX (Phlox)					
	CHEMICAL INJURY	- BURN	1	0	1
	SOUTHERN BLIGHT	- ATHELIA	1	0	1
POINSETTIA (Euphorbia)					
	BACTERIAL SOFT ROT	- ERWINIA	0	1	1
	CHEMICAL	- UNKNOWN	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		1	0	1
	NUTRITIONAL	- GENERAL	2	0	2
		- HIGH SOLUBLE SALTS	2	0	2
	ROOT ROT	- PYTHIUM	2	1	3
	ROOT/STEM ROT	- RHIZOCTONIA	2	0	2
RUBBER PLANT (Ficus)					
	CULTURAL	- GENERAL	1	0	1
SCHEFFLERA (Brassaia)					
	CULTURAL	- OEDEMA	1	0	1
	INSECT INJURY		0	1	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
SNAPDRAGON (Antirrhinum)					
	INADEQUATE SPECIMEN		1	0	1
	ROOT/STEM ROT	- RHIZOCTONIA	2	0	2
SPIDER PLANT (Chlorophytum)					
	CULTURAL	- HIGH TEMPERATURE	1	0	1
	INSECT INJURY		1	0	1
SUNFLOWER (Helianthus)					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
SWEDISH IVY (Plectranthus)					
	CULTURAL	- HIGH TEMPERATURE	1	0	1
SWEET BAY (Laurus)					
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
TULIP (Tulipa)					
	BLIGHT	- BOTRYTIS	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
VINCA (Vinca)					
	BLACK ROOT ROT	- THIELAVIOPSIS	2	0	2
	CANKER/DIEBACK	- PHOMA	7	0	7
	INADEQUATE SPECIMEN		1	0	1
	ROOT/STEM ROT	- RHIZOCTONIA	3	3	6
VIOLET (Viola)					
	CULTURAL	- COLD WATER	1	0	1
	NUTRITIONAL	- CA/MG DEFICIENCY	1	0	1
WANDERING JEW (Tradescantia)					
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
ZINNIA (Zinnia)					
	BACTERIAL LEAF SPOT	- XANTHOMONAS	1	0	1
	ROOT/STEM ROT	- RHIZOCTONIA	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
		Turfgrass			
BENTGRASS (Agrostis)					
	ALGAE	- BLUE-GREEN	3	0	3
	ANTHRACNOSE	- COLLETOTRICHUM	0	1	1
	BLIGHT	- PYTHIUM	1	0	1
	BROWN PATCH	- RHIZOCTONIA	2	0	2
	DOLLAR SPOT	- LANZIA/MOELL	1	0	1
	DOWNY MILDEW	- SCLEROPHTHORA	1	0	1
	ENVIRONMENTAL STRESSES		5	0	5
	LEAF BLIGHT	- PHYLLOSTICTA	0	2	2
	LEAF SPOT	- CURVULARIA	1	0	1
	LOCAL DRY SPOT	- ENVIRONMENTAL	2	0	2
	NO DISEASE		3	0	3
	PINK SNOW MOLD	- FUSARIUM	1	0	1
BERMUDAGRASS (Cynodon)					
	SMUT	- USTILAGO	2	0	2
BLUEGRASS (Poa)					
	BROWN PATCH	- RHIZOCTONIA	4	0	4
	CHEMICAL INJURY	- BURN	1	0	1
	CULTURAL	- HEAVY THATCH	3	1	3
	DAMPING-OFF	- PYTHIUM	0	1	1
	DOLLAR SPOT	- LANZIA./MOELL.	1	2	3
	ENVIRONMENTAL STRESS		4	2	6
	FADING-OUT	- CURVULARIA	0	1	1
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	LEAF BLIGHT	- LEPTOSPHAERULINA	2	0	2
	LEAF SPOT	- DRECHSLERA	2	0	2
	NECROTIC RING SPOT	- LEPTOSPHAERIA	2	0	2
	PATCH DISEASE	- UNKNOWN	4	0	4
	RED THREAD	- LAETISARIA	2	0	2
	SLIME MOLD	- PHYSARUM	1	0	1
	SMUT	- USTILAGO	1	0	1
	STRIPE SMUT	- USTILAGO	1	0	1
	SUMMER PATCH	- PHIALOPHORA	1	1	2
FESCUE (Festuca)					
	ANTHRACNOSE	- COLLETOTRICHUM	2	0	2
	BROWN PATCH	- RHIZOCTONIA	3	0	3
	CULTURAL	- HEAVY THATCH	1	0	1
	DAMPING-OFF	- PYTHIUM	1	0	1
	ENVIRONMENTAL STRESS		4	1	5
	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	LEAF SPOT	- BIPOLARIS	1	0	1
		- DRESCHLERA	1	1	2
	MELTING-OUT	- DRESCHLERA	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
FESCUE (cont)					
	NEMATODE	- HELICOTYLENCHUS	1	0	1
	NUTRITIONAL	- N EXCESS	1	0	1
		- pH HIGH	0	1	1
	POWDERY MILDEW	- ERYSIPHE	1	0	1
	SEEDLING BLIGHT	- RHIZOCTONIA	1	0	1
	SLIME MOLD	- species	1	0	1
RYEGRASS (Lolium)					
	BLIGHT	- PYTHIUM	1	0	1
	BROWN PATCH	- RHIZOCTONIA	0	1	1
	NO DISEASE		1	0	1
TURF (Various)					
	BROWN PATCH	- RHIZOCTONIA	4	0	4
	DOLLAR SPOT	- LANZIA/MOELL	2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	LEAF SPOT	- RHIZOCTONIA	0	1	1
	MOSS	- UNKNOWN	1	0	1
	NECROTIC RING SPOT	- LEPTOSPHAERIA	1	0	1
	SMUT	- USTILAGO	1	0	1
	STRIPE SMUT	- USTILAGO	2	0	2
	SUMMER PATCH	- PHIALOPHORA	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
		Woody Ornamentals			
ALMOND (Prunus)					
	LEAF SCORCH	- UNKNOWN	1	0	1
ARBORVITAE (Thuja)					
	CANKER	- BOTRYOSPHAERIA	1	0	1
	ENVIRONMENTAL STRESSES		6	1	7
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		4	0	4
	NEEDLE DROP	- NORMAL	2	0	2
	PHYSICAL INJURY	- UNKNOWN	1	0	1
	ROOT ROT	- BASIDIOMYCETE	0	1	1
	TRANSPLANT SHOCK		1	0	1
	TWIG BLIGHT	- KABATINA	2	0	2
		- FUNGAL	0	1	1
ASH (Fraxinus)					
	ANTHRACNOSE	- DISCULA	2	0	2
	CHEMICAL INJURY	- BURN	1	0	1
		- UNKNOWN	1	0	1
	ENVIRONMENTAL	- FROST INJURY	1	0	1
	INSECT INJURY		2	0	2
	WOOD DECAY	- BASIDIOMYCETE	2	0	2
AZALEA - See Rhododendron					
BALDCYPRESS (Taxodium)					
	INADEQUATE SPECIMEN		1	0	1
BARBERRY (Berberis)					
	ENVIRONMENTAL STRESS		1	0	1
	NO DISEASE		1	0	1
BEECH (Fagus)					
	NO DISEASE		1	0	1
BIRCH (Betula)					
	ANTHRACNOSE	- GLOEOSPORIUM	1	0	1
	CHEMICAL INJURY	- UNKNOWN	1	0	1
	ENVIRONMENTAL STRESS		1	0	1
	INSECT INJURY		2	0	2
	NO DISEASE		2	0	2
BOXELDER (Acer)					
	ENVIRONMENTAL STRESS		1	0	1
	INSECT INJURY		0	2	2
	ROOT PROBLEM	- UNKNOWN	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
BOXWOOD (Buxus)					
	DIEBACK	- PHOMA	1	0	1
		- PHOMOPSIS	1	0	1
	ENVIRONMENTAL STRESSES		2	0	2
	INSECT INJURY		1	0	1
	LEAF SCORCH	- WINTER DRYING	1	0	1
	NO DISEASE		1		1
	ROOT PROBLEM	- UNKNOWN	1	0	1
CATALPA (Catalpa)					
	INADEQUATE SPECIMEN		1	0	1
CEDAR (Cedrus)					
	ENVIRONMENTAL	- SUNSCALD	1	0	1
CHERRY (Prunus)					
	ENVIRONMENTAL	- DROUGHT	1	0	1
CHESTNUT (Castanea)					
	ENVIRONMENTAL	- FROST INJURY	1	0	1
CLEMATIS (Clematis)					
	DIEBACK	- FUNGAL	1	0	1
	INADEQUATE SPECIMEN		2	0	2
	INSECT INJURY		1	0	1
	PHYSICAL INJURY	- UNKNOWN	0	1	1
	ROOT PROBLEM	- UNKNOWN	2	0	2
COTONEASTER (Cotoneaster)					
	INSECT INJURY		1	1	2
CRABAPPLE (Malus)					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	ENVIRONMENTAL STRESS		1	0	1
	FIRE BLIGHT	- ERWINIA	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	INSECT INJURY		1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
	ROOT/BUTT ROT	- GANODERMA	1	0	1
	SCAB	- VENTURIA	1	1	2
	TRANSPLANT SHOCK		1	0	1
DOGWOOD (Cornus)					
	BACTERIAL SCORCH?	- XYLELLA	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	ENVIRONMENTAL STRESS		6	1	7
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	INSECT INJURY		2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
DOGWOOD (cont)					
	LEAF SCORCH	- DROUGHT	3	0	3
		- UNKNOWN	1	0	1
	LEAF SPOT	- SEPTORIA	1	0	1
	NUTRITIONAL	- pH HIGH	1	0	1
	PHYSICAL INJURY	- UNKNOWN	1	0	1
	SPOT ANTHRACNOSE	- ELSINOE	1	0	1
	TRANSPLANT SHOCK		4	1	5
	WOOD DECAY	- BASIDIOMYCETE	0	1	1
ELM (ULMUS)					
	BLACK SPOT	- GNOMONIA	1	0	1
	CANKER	- FUNGAL	1	0	1
		- NECTRIA	1	0	1
	DUTCH ELM DISEASE	- CERATOCYSTIS	3	0	3
	ENVIRONMENTAL	- DROUGHT	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	INSECT INJURY		5	1	6
	PHYSICAL INJURY	- CONSTRUCTION	0	1	1
	WILT	- UNKNOWN	1	0	1
EUONYMUS (Euonymus)					
	ANTHRACNOSE	- GLOEOSPORIUM	1	0	1
	CHEMICAL INJURY		3	0	3
	CROWN GALL	- AGROBACTERIUM	3	0	3
	ENVIRONMENTAL STRESSES		2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		6	0	6
	INSECT INJURY		3	1	4
	LEAF SCORCH	- UNKNOWN	1	0	1
	LEAF SPOT	- FUNGAL	1	0	1
FIR (Abies)					
	ENVIRONMENTAL STRESS		1	1	2
	TRANSPLANT SHOCK		2	0	2
	TRUNK PROBLEM	- UNKNOWN	1	0	1
FORSYTHIA (Forsythia)					
	CHEMICAL INJURY	- GROWTH REGULATOR	2	0	2
	ROOT PROBLEM	- UNKNOWN	1	0	1
	SAPSTREAK	- CEPHALOSPORIUM	1	0	1
FRINGETREE (CHIONANTHUS)					
	NO DISEASE		1	0	1
GINGKO (Gingko)					
	NO DISEASE		2	0	2
	ROOT PROBLEM	- UNKNOWN	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
HAWTHORN (Crataegus)					
	CEDAR-HAWTHORN RUST	- GYMNOSPORANGIUM	1	0	1
	CHEMICAL INJURY	- UNKNOWN	1	0	1
	LEAF SCORCH	- UNKNOWN	1	0	1
	TRANSPLANT SHOCK		1	0	1
HEMLOCK (Tsuga)					
	ENVIRONMENTAL STRESSES		5	3	8
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	NEEDLE DROP	- NORMAL	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
	ROOT ROT	- PYTHIUM	1	0	1
		- BASIDIOMYCETE	0	1	1
	TRANSPLANT SHOCK		2	0	2
HIBISCUS (Hibiscus)					
	NO DISEASE		2	0	2
HICKORY (Carya)					
	ENVIRONMENTAL	- DROUGHT	0	1	1
	INSECT INJURY		3	0	3
	LEAF BLOTCH	- MICROSTROMA	2	0	2
	LEAF SPOT	- TUBAKIA	1	0	1
HOLLY (Ilex)					
	BLACK ROOT ROT	- THIELAVIOPSIS	6	0	6
	CHEMICAL INJURY	- UNKNOWN	1	0	1
	ENVIRONMENTAL STRESSES		8	2	10
	INADEQUATE SPECIMEN, NO DISEASE		10	0	10
	INSECT INJURY		3	1	4
	LEAF SCORCH	- WINTER DRYING	1	0	1
	NUTRITIONAL	- FE DEFICENCY	1	0	1
		- pH HIGH	1	0	1
		- GENERAL	1	1	2
	ROOT PROBLEM	- CULTURAL	1	0	1
		- UNKNOWN	2	0	2
	SPINE SPOT	- SPINE INJURY	1	1	2
	TRANSPLANT SHOCK		1	1	2
HONEYLOCUST (Gleditsia)					
	ROOT/BUTT ROT	- FUNGAL	1	0	1
	TRANSPLANT SHOCK	- CULTURAL	1	0	1
	WOOD DECAY	- POLYPORUS	1	0	1
HONEYSUCKLE (Lonicera)					
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
HORNBEAM (Carpinus)					
	ROOT PROBLEM	- UNKNOWN	1	0	1
HORSECHESTNUT (Aesculus)					
	CANKER	- FUNGAL	1	0	1
HYDRANGEA (Hydrangea)					
	INSECT INJURY		2	0	2
	NO DISEASE		1	0	1
INKBERRY (Ilex)					
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	ROOT ROT	- RHIZOCTONIA	1	1	2
	TRANSPLANT SHOCK		2	1	3
JUNIPER (Juniperus)					
	CEDAR/QUINCE RUST	- GYMNOSPORANGIUM	1	0	1
	DIEBACK	- FUNGAL	1	0	1
	ENVIRONMENTAL STRESSES		3	2	5
	FALL COLORATION	- NORMAL	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		10	0	10
	INSECT INJURY		6	1	7
	NUTRITIONAL	- P DEFICIENCY	0	1	1
	ROOT PROBLEM	- UNKNOWN	2	0	2
	ROOT ROT	- RHIZOCTONIA	2	3	5
		- PYTHIUM	1	2	3
		- PHYTOPHTHORA	2	0	2
	TRANSPLANT SHOCK		4	1	5
	TWIG BLIGHT	- KABATINA	6	1	7
		- PHOMOPSIS	1	0	1
KY COFFEETREE (Gymnocladus)					
	CHEMICAL INJURY	- UNKNOWN	1	0	1
LILAC (Syringa)					
	BACTERIAL BLIGHT	- PSEUDOMONAS	1	0	1
	INSECT INJURY		1	0	1
	POWDERY MILDEW	- MICROSPHAERA	1	0	1
	TREAD BLIGHT	- CERATOBASIDIUM	1	0	1
LINDEN (Tilia)					
	BACTERIAL SCORCH	- XYLELLA	1	0	1
	BACTERIAL SCORCH?	- XYLELLA	1	0	1
	INSECT INJURY		3	0	3
LOCUST (Robinia)					
	CHEMICAL INJURY	- UNKNOWN	1	0	1
	LEAF SCORCH	- UNKNOWN	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
MAGNOLIA (Magnolia)					
	CHEMICAL INJURY	- BURN	1	0	1
	ENVIRONMENTAL STRESSES		6	0	6
	INSECT INJURY		5	2	7
	LEAF SCORCH	- UNKNOWN	1	0	1
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
	NO DISEASE		1	0	1
	PHYSICAL INJURY	- MOWER	1	0	1
	ROOT ROT	- BASIDIOMYCETE	0	1	1
MAHONIA (Mahonia)					
	NO DISEASE		1	0	1
	LEAF SCORCH	- WINTER DRYING	0	1	1
	LEAF SPOT	- FUNGAL	1	0	1
MAPLE (Acer)					
	ANTHRACNOSE	- KABATIELLA	19	0	19
	BACTERIAL SCORCH?	- XYLELLA	1	0	1
	CANKER	- FUNGAL	1	0	1
		- BOTRYOSPHAERIA	0	1	1
	CHEMICAL INJURY		3	1	4
	DECLINE	- ENVIRONMENTAL	1	0	1
	ENVIRONMENTAL STRESSES		8	4	12
	GIRDLING ROOT	- CULTURAL	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		24	0	24
	INSECT INJURY		13	2	15
	LEAF SCORCH	- DROUGHT, UNKNOWN	13	0	13
	PHYSICAL INJURY	- MOWER, TOPPING, UNKNOWN	3	1	4
	ROOT PROBLEM	- UNKNOWN	1	0	1
	TRANSPLANT SHOCK		9	0	9
	WILT	- VERTICILLIUM	1	0	1
	WOOD DECAY	- BASIDIOMYCETE	2	1	3
		- FUNGAL	1	0	1
MOCKORANGE (Philadephus)					
	NO DISEASE		1	0	1
	POWDERY MILDEW	- PHYLLACTINIA	1	0	1
MOUNTAIN ASH (Sorbus)					
	ENVIRONMENTAL	- DROUGHT	0	1	1
	FIRE BLIGHT	- ERWINIA	2	0	2
	PHYSICAL INJURY	- UNKNOWN	0	1	1
	TRANSPLANT SHOCK		1	0	1
MOUNTAIN LAUREL (Kalmia)					
	NO DISEASE		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
NANDINA (Nandina)					
	ENVIRONMENTAL	- WINTER DRYING	1	0	1
OAK (Quercus)					
	BACTERIAL SCORCH	- XYLELLA	2	0	2
	BACTERIAL SCORCH?	- XYLELLA	5	0	5
	CANKER	- CYTOSPORA	1	0	1
		- FUNGAL	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
		- UNKNOWN	2	0	2
	ENVIRONMENTAL STRESSES		2	3	5
	NO DISEASE		6	0	6
	INSECT INJURY		17	3	20
	LEAF SCORCH		4	0	4
	LEAF SPOT	- TUBAKIA	1	0	1
	NUTRITIONAL	- FE DEFICIENCY	1	0	1
	PHYSICAL INJURY	- CONSTRUCTION	1	0	1
	TRUNK PROBLEM	- UNKNOWN	1	0	1
	TWIG BLIGHT	- FUNGAL	1	0	1
	WOOD DECAY	- BASIDIOMYCETE	2	1	3
PAULOWNIA (Paulownia)					
	NO DISEASE		1	0	1
PEAR (Pyrus)					
	CHEMICAL INJURY	- STERILANT	1	0	1
	ENVIRONMENTAL	- DROUGHT	2	0	2
	FIRE BLIGHT	- ERWINIA	6	0	6
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	LEAF SCORCH	- UNKNOWN	1	0	1
	PHYSICAL INJURY	- UNKNOWN	1	0	1
	TRANSPLANT SHOCK		2	1	3
	WOOD DECAY	- BASIDIOMYCETE	2	0	2
PIERIS (Pieris)					
	CULTURAL	- OVERWATERING	0	1	1
	INSECT INJURY		1	0	1
	LEAF SPOT	- CERCOSPORA	1	0	1
	NUTRITIONAL	- pH HIGH	0	1	1
	TRANSPLANT SHOCK		1	0	1
PINE (Pinus)					
	AIR POLLUTION	- OZONE	1	0	1
	CANKER	- ASCOMYCETE	1	0	1
		- SPHAEROPSIS	0	1	1
	CHEMICAL INJURY	- GROWTH REGULATOR	2	0	2
		- OTHER	2	0	2
	ENVIRONMENTAL STRESSES		14	12	26

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
PINE (cont)					
	INADEQUATE SPECIMEN, NO DISEASE		13	0	13
	INSECT INJURY		10	4	14
	NEEDLE CAST	- LOPHODERMIUM	1	0	1
	NEEDLE DROP	- NORMAL	6	0	6
	NUTRITIONAL	- GENERAL	1	0	1
	PHYSICAL INJURY	- BIRD (SAPSUCKER)	1	0	1
	PINEWOOD NEMATODE	- BURSAPHELENCUS	2	0	2
	ROOT/BUTT ROT	- BASIDIOMYCETE	1	1	2
	ROOT ROT	- PHYTOPHTHORA	0	1	1
	SOOTY MOLD	- species	2	2	4
	TIP BLIGHT	- SPHAEROPSIS	3	1	4
	TIP BURN	- UNKNOWN	3	0	3
	TRANSPLANT SHOCK		12	0	12
	TRUNK PROBLEM	- GIRDLED	1	0	1
	WHITE PINE DECLINE	- ENVIRONMENTAL	3	0	3
PRIVET (Ligustrum)					
	ENVIRONMENTAL STRESSES		1	1	2
	INSECT INJURY		3	0	3
	NO DISEASE		2	0	2
	POWDERY MILDEW	- MICROSPHAERA	1	0	1
	TWIG DIEBACK	- SPHAEROPSIS	1	0	1
PYRACANTHA (Pyracantha)					
	CHEMICAL INJURY	- UNKNOWN	1	0	1
	INSECT INJURY		1	0	1
	SCAB	- SPILOCAEA	1	0	1
QUINCE (Chaenomeles)					
	INADEQUATE SPECIMEN		1	0	1
	NUTRITIONAL	- HIGH SOLUBLE SALTS	0	1	1
	ROOT ROT	- PYTHIACEOUS	1	0	1
REDBUD (Ceris)					
	ANTHRACNOSE	- DISCULA	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
RHODODENDRON and AZALEA (Rhododendron)					
	CANKER	- FUNGAL	1	0	1
	CHEMICAL INJURY	- UNKNOWN	1	0	1
	CULTURAL	- GENERAL	1	0	1
	DIEBACK	- BOTRYOSPHAERIA	5	0	5
		- PHOMOPSIS	0	1	1
		- SPHAEROPSIS	0	1	1
	ENVIRONMENTAL STRESSES		1	6	7
	GRAY BLIGHT	- PESTALOTIOPSIS	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
RHODODENDRON and AZALEA (cont)					
	INSECT INJURY		1	2	3
	LEAF SCORCH	- WINTER DRYING	1	0	1
	LEAF SPOTS	- FUNGAL	1	0	1
	LEAF/FLOWER GALL	- EXOBASIDIUM	3	0	3
	NUTRITIONAL	- FE DEFICIENCY	1	0	1
		- ACID SOIL	1	0	1
		- pH HIGH	2	2	4
		- CA/MG IMBALANCE	1	0	1
		- GENERAL	1	1	2
	PHYSICAL INJURY	- UNKNOWN	1	0	1
	ROOT PROBLEM	- UNKNOWN	2	1	3
	ROOT ROT	- PHYTOPHTHORA	1	0	1
		- PYTHIUM	1	0	1
	TRANSPLANT SHOCK		16	2	18
ROSE (Rosa)					
	BLACK SPOT	- DIPLOCARPON	1	0	1
	BLIGHT	- BOTRYTIS	0	1	1
	CHEMICAL INJURY	- GROWTH REGULATOR	0	1	1
	COMMON CANKER	- LEPTOSPHAERIA	1	0	1
	CULTURAL	- UNDER WATERED	1	0	1
	ENVIRONMENTAL	- DROUGHT	0	1	1
	INADEQUATE SPECIMEN, NO DISEASE		11	0	11
	INSECT INJURY		3	2	5
	LEAF SCORCH	- DROUGHT	1	0	1
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
	MUTATION	- GENETIC	1	0	1
	NUTRITIONAL	- FE DEFICIENCY	1	0	1
	POWDERY MILDEW	- SPHAEROTHECA	3	0	3
	ROOT PROBLEM	- UNKNOWN	1	0	1
	STEM CANKER	- FUNGAL	1	0	1
	TRANSPLANT SHOCK		1	0	1
	VIRUS	- ROSE MOSAIC	4	0	4
		- UNKNOWN	1	0	1
RUSSIAN-OLIVE (Elaeagnus)					
	INADEQUATE SPECIMEN		1	0	1
	TWIG BLIGHT	- SPHAEROPSIS	1	0	1
SASSAFRAS (Sassafras)					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
SPIREA (Spiraea)					
	NUTRITIONAL	- GENERAL	1	0	1
	ROOT ROT	- FUNGAL	0	1	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
SPRUCE (Picea)					
	CHEMICAL INJURY	- HERBICIDE	1	0	1
	ENVIRONMENTAL STRESSES		9	3	12
	INADEQUATE SPECIMEN, NO DISEASE		16	0	16
	INSECT INJURY		12	1	13
	ROOT/BUTT ROT	- BASIDIOMYCETE	1	0	1
	TRANSPLANT SHOCK		7	1	8
SWEETGUM (Liquidambar)					
	BLEEDING CANKER	- BOTRYOSPHAERIA	3	0	3
		- FUNGAL	1	0	1
	ENVIRONMENTAL STRESSES		1	1	2
	INSECT INJURY		0	1	1
	NO DISEASE		3	0	3
	NUTRITIONAL	- FE DEFICIENCY	1	0	1
		- N DEFICIENCY	1	0	1
	PHYSICAL INJURY	- MOWER	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
SYCAMORE (Platanus)					
	ANTHRACNOSE	- APIOGNOMONIA	4	0	4
	ENVIRONMENTAL	- DROUGHT	0	1	1
	NO DISEASE		1	0	1
TAXUS (Taxus)					
	BLACK ROOT ROT	- THIELAVIOPSIS	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	0	1	1
		- HERBICIDE	1	0	1
	ENVIRONMENTAL STRESSES		7	4	11
	INADEQUATE SPECIMEN, NO DISEASE		14	0	14
	INSECT INJURY		1	0	1
	PHYSICAL INJURY	- UNKNOWN	2	0	2
	ROOT PROBLEM	- UNKNOWN	2	0	2
	ROOT ROT	- PHYTOPHTHORA	3	0	3
TULIPTREE (Liriodendron)					
	ENVIRONMENTAL STRESSES		4	0	4
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	INSECT INJURY		4	2	6
	PHYSICAL INJURY	- MOWER	1	0	1
	POWDERY MILDEW	- species	2	0	2
	WILT	- VERTICILLIUM	1	0	1
	WOOD DECAY	- BASIDIOMYCETE	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
VIBURNUM (Viburnum)					
	CANKER	- FUNGAL	1	0	1
	CHEMICAL INJURY	- STERILANT	1	0	1
	ENVIRONMENTAL STRESS		1	0	1
	INSECT INJURY		4	0	4
	LEAF SCORCH	- DROUGHT	2	0	2
	NO DISEASE		3	0	3
	ROOT ROT	- BASIDIOMYCETE	0	1	1
WEIGELA (Weigela)					
	NO DISEASE		1	0	1
WILLOW (Salix)					
	ENVIRONMENTAL	- FROST CRACK	0	1	1
	TRANSPLANT SHOCK		1	0	1
YELLOWWOOD (Cladrastis)					
	ENVIRONMENTAL STRESS		1	0	1
	INSECT INJURY		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
		*** VEGETABLES ***			
ASPARAGUS (Asparagus)					
	INSECT INJURY		1	0	1
	LEAF SPOT	- CERCOSPORA	1	0	1
	NO DISEASE		1	0	1
BEAN (Phaseolus)					
	BACTERIAL BLIGHT	- XANTHOMONAS	1	0	1
	ENVIRONMENTAL	- SUNSCALD	3	0	3
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	INSECT INJURY		8	5	13
	ROOT PROBLEM	- UNKNOWN	1	0	1
	ROOT ROT	- RHIZOCTONIA	0	1	1
	ROOT/STEM ROT	- PYTHIUM	3	0	3
		- RHIZOCTONIA	8	1	9
	VIRUS	- BEAN COMMON MOSAIC	1	0	1
		- BEAN YELLOW MOSAIC	4	0	4
		- UNKNOWN	1	0	1
	WEB BLIGHT	- RHIZOCTONIA	1	0	1
BEET (Beta)					
	REFERRAL	- ENTOMOLOGY	1	0	1
BROCCOLI - see listing under CRUCIFERS					
CABBAGE - see listing under CRUCIFERS					
CANTALOUPE - see listing under CUCURBITS					
CAULIFLOWER - see listing under CRUCIFERS					
CORN, sweet (Zea)					
	BACTERIAL STALK ROT	- ERWINIA	1	0	1
	CHEMICAL INJURY	- BURN	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		1	0	1
	NUTRITIONAL	- ZN DEFICIENCY	1	0	1
		- ACID SOIL	2	1	3
		- P DEFICIENCY	1	0	1
		- FERTILIZER BURN	1	0	1
	STEWARTS WILT	- ERWINIA	2	0	2
	VIRUS	- MAIZE DWARF MOSAIC	1	0	1
		- COMPLEX	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
CRUCIFERS - BROCCOLI, CABBAGE, CAULIFLOWER, KALE, TURNIP (Brassica) and RADISH (Raphanus)					
	BACTERIAL SOFT ROT	- ERWINIA	1	0	1
	BLACK ROT	- XANTHOMONAS	1	0	1
	BLACK SPOT	- ALTERNARIA	1	1	2
	BOTTOM ROT	- RHIZOCTONIA	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
		- HERBICIDE	1	0	1
		- UNKNOWN	1	0	1
	CULTURAL	- UNEVEN WATERING	0	1	1
	DOWNY MILDEW	- PERONOSPORA	2	0	2
	ENVIRONMENTAL STRESSES		4	1	5
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	INSECT INJURY		1	0	1
	LEAF SPOTS	- CERCOSPORELLA	1	0	1
	NUTRITIONAL	- ACID SOIL	1	0	1
		- N DEFICENCY	1	0	1
		- GENERAL	1	0	1
	OEDEMA	- ENVIRONMENT	1	0	1
	REFERRAL	- ENTOMOLOGY	1	0	1
	ROOT ROT	- RHIZOCTONIA	0	1	1
	STEM ROT	- SCLEROTINIA	1	0	1
	VIRUS	- TOBACCO MOSAIC	1	0	1
		- UNKNOWN	1	0	1
	WIRE STEM	- RHIZOCTONIA	3	0	3
CUCURBITS - CANTALOUPE, CUCUMBER (Cucumis), PUMPKIN and SQUASH (Cucurbita) and WATERMELON (Citrulis)					
	ANTHRACNOSE	- COLLETOTRICHUM	1	0	1
	BACTERIAL WILT	- ERWINIA	3	0	3
	CHEMICAL INJURY	- UNKNOWN	1	0	1
	CULTURAL	- GENERAL	1	0	1
	ENVIRONMENTAL STRESSES		4	0	4
	FRUIT ROT	- FUSARIUM	3	0	3
		- RHIZOCTONIA	0	1	1
	GUMMY STEM BLIGHT	- DIDYMELLA	0	2	2
	INSECT INJURY		4	0	4
	LEAF BLIGHT	- ALTERNARIA	1	1	2
	NO DISEASE		7	0	7
	NUTRITIONAL	- ACID SOIL	4	0	4
	ROOT ROT	- PYTHIUM	0	1	1
	VIRUS	- SQUASH MOSAIC	1	0	1
		- WMV strain 2	1	0	1
		- UNKNOWN	1	0	1
	WILT	- FUSARIUM	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
EGGPLANT (Solanum)					
	ENVIRONMENTAL	- SUNSCALD	1	0	1
	INSECT INJURY		0	1	1
	NO DISEASE		1	0	1
KALE - see listing under CRUCIFERS					
LETTUCE (Lactuca)					
	LEAF SCORCH	- UNKNOWN	1	0	1
OKRA (Hibiscus)					
	ROOT KNOT NEMATODE	- MELOIDOGYNE	1	0	1
	WILT	- VERTICILLIUM	1	0	1
ONION (Allium)					
	BLUE MOLD	- PENICILLIUM	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	NECK ROT	- BOTRYTIS	1	1	2
PEA (Pisum)					
	INSECT INJURY		1	0	1
	ROOT ROT	- RHIZOCTONIA	1	0	1
	VIRUS	- UNKNOWN	1	0	1
PEANUT (Arachis)					
	INSECT INJURY		1	0	1
PEPPER (Capsicum)					
	BACTERIAL SPOT	- XANTHOMONAS	2	0	2
	BLIGHT	- PHYTOPHTHORA	2	0	2
	BLOSSOM END ROT	- CA DEFICIENCY/DRY	4	0	4
	CHEMICAL INJURY	- HERBICIDE	1	1	2
	CULTURAL	- OEDEMA	1	0	1
	ENVIRONMENTAL STRESSES		6	0	6
	FRUIT ROT	- ALTERNARIA	1	2	3
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	INSECT INJURY		1	0	1
	LEAF SPOT	- PHYLLOSTICTA	1	0	1
	MUTATION	- GENETIC	1	0	1
	NUTRITIONAL	- GENERAL	1	0	1
	PHYSICAL INJURY	- UNKNOWN	2	0	2
	ROOT/STEM ROT	- RHIZOCTONIA	2	0	2
	SOUTHERN BLIGHT	- ATHELIA	2	0	2
	STEM ROT	- FUNGAL	0	1	1
	VIRUS	- TOBACCO ETCH	1	0	1
		- UNKNOWN	2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
POTATO (Solanum)					
	BLACK LEG	- ERWINIA	6	0	6
	CANKER	- RHIZOCTONIA	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	EARLY BLIGHT	- ALTERNARIA	2	0	2
	ENVIRONMENTAL	- DROUGHT	0	1	1
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	INTERNAL BROWN SPOT	- HEAT/DROUGHT	1	0	1
PUMPKIN - see listing under CUCURBITS					
RADISH - see listing under CRUCIFERS					
SWEET POTATO (Ipomoea)					
	SCURF	- MONILOCHAETE	1	0	1
TOMATO (Lycopersicon)					
	ANTHRACNOSE	- COLLETOTRICHUM	1	0	1
	BACTERIAL SPOT	- XANTHOMONAS	1	0	1
	BLOSSOM END ROT	- CA DEFICIENCY/DRY	1	1	2
	BUCKEYE ROT	- PHYTOPHTHORA	0	1	1
	CHEMICAL INJURY	- GROWTH REGULATOR	5	0	5
		- OTHER	5	1	6
	CULTURAL	- EXCESS HEAT	1	0	1
		- IMPROPER PLANTING DEPTH	2	0	2
	EARLY BLIGHT	- ALTERNARIA	4	0	4
	ENVIRONMENTAL STRESSES		6	1	7
	GROWTH CRACK	- ENVIRONMENT	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		24	0	24
	INSECT INJURY		5	1	6
	LEAF ROLL	- PHYSIOLOGICAL	4	0	4
	NUTRITIONAL	- FERTILIZER BURN	1	0	1
		- GENERAL	3	0	3
	PHYSICAL INJURY	- BRUISING	1	1	2
	PITH NECROSIS	- PSEUDOMONAS	1	0	1
	ROOT KNOT NEMATODE	- MELOIDOGYNE	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
	STEM ROT	- FUNGAL	3	0	3
		- SCLEROTINIA	2	0	2
	TRANSPLANT SHOCK		1	0	1
	VASCULAR WILT	- UNKNOWN	1	0	1
	VIRUS	- TOMATO SPOTTED WILT	6	0	6
		- UNKNOWN	2	0	2
	WALNUT WILT	- JUGLONE	1	0	1
	WILT	- FUSARIUM	4	0	4

CROP	DIAGNOSIS	CAUSAL AGENT	# OF PRIMARY DIAGNOSES	# OF SECONDARY DIAGNOSES	TOTAL
TURNIP - see listing under CRUCIFERS					
WATERMELON - see listing under CUCURBITS					
TOTALS			**4707**	**431**	**5138**