



COOPERATIVE EXTENSION SERVICE
AGRICULTURE * HOME ECONOMICS * 4-H * DEVELOPMENT

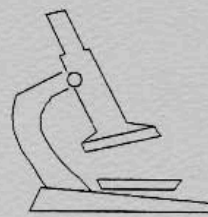
PLANT DISEASES
in
KENTUCKY

Plant Disease Diagnostic Laboratory Summary

* 1989 *

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INTRODUCTION

The Plant Disease Diagnostic Lab (Lexington and Princeton) handled 3667 plant specimens and 1235 nematode soil samples during 1989. Samples with more than one problem numbered 641, bringing the total number of actual diagnoses to 4308. The Lexington Lab diagnosed 2332 specimens. The Princeton Lab's specimen load totaled 2570; of this number 1335 were plant samples and 1235 were soil samples submitted, almost exclusively, for soybean cyst nematode analysis. A total of 1125 of the nematode were submitted by researchers and 110 were submitted by commercial growers.

These numbers are summarized as follows:

The Plant Disease Diagnostic Lab, total samples	4902
Samples with more than 1 diagnosis	641
Total diagnoses	5543
Plant samples	3667
Nematode samples	1235
Lexington Lab, total (plant) samples	2332
Princeton Lab, total samples	2570
Plant samples	1335
Nematode samples	1235

HIGHLIGHTS

As opposed to the drought of 1988, the WET SEASON of 1989 led to an increase in many plant diseases and disorders. Accordingly, the number of plant samples increased % over the 1988 level.

As in 1986, 1987 and 1988 a number of diseases caused by the fungus RHIZOCTONIA were frequently encountered in agronomic, vegetable and ornamental plants. Among the more noteworthy occurrences of this organism and its corresponding diseases were root rot in soybeans and alfalfa and a very widespread and serious foliar disease in turfgrass known as BROWN PATCH.

With the growing season starting out very wet and cool, especially in the central and eastern portions of the state, a number of related diseases and disorders developed: cold injury and DAMPING-OFF of tobacco in plant beds; ZINC DEFICIENCY in corn; among the ornamentals there were increased levels of ANTHRACNOSE on maple and ash, BROWN PATCH on tall fescues, creeping bentgrass and perennial ryegrasses, OAK LEAF BLISTER and many leaf spots; among the fruits, APPLE SCAB, CEDAR-APPLE RUST, PEACH LEAF CURL, PLUM POCKETS, and BLACK ROT of grape were common; and leaf spot diseases of alfalfa were severe at times. As the growing season continued the rains persisted but temperatures climbed leading to increased numbers of problems such as the fungal disease BLACK SHANK and drowning of tobacco, and Phytophthora root rot on alfalfa.

One disorder was not affected by the wetter than normal growing season. Carryover, of certain herbicides, was a problem in some soybean and corn plantings due mainly to the low levels of soil moisture created by the dry weather of 1988 and early 1989.

Two other diseases, among several others which were diagnosed in higher numbers for 1989, were WHEAT SPINDLE STREAK MOSIAC VIRUS (WSSMV) on wheat and SOUTHERN RUST of corn. Cool, wet soils are favorable to the soil-borne fungus Polymyxa graminis which carries the wheat virus into the root cells of the plant. Levels of symptom expression were very high in the more susceptible wheat varieties. SOUTHERN RUST, favored by high temperatures and high relative

humidity, was quite widespread in western Kentucky, but did not cause significant yield loss because the disease became prevalent after the corn had reached early maturity.

DOGWOOD ANTHRACNOSE
(caused by the fungus *Discula* sp.) was identified for the first time in the state of Kentucky. One sample was found during a formal survey by the USDA Forest Service in Rowan County and the other was sent to the Lexington Lab from Madison County (see Figure 1). In recent years this new disease has devastated native dogwood

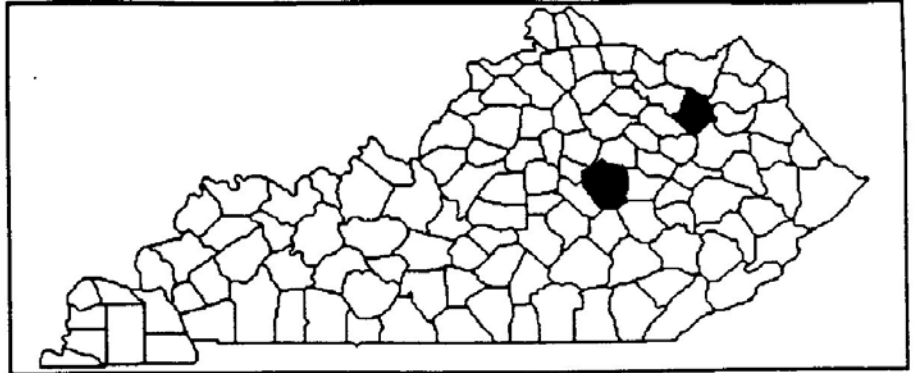


Figure 1 Counties with Dogwood Anthracnose (*Discula* sp.) found in 1989.

stands in the eastern U.S. and in the Pacific Northwest. This disease is different from the more common SPOT ANTHRACNOSE which causes spots of the leaf, flower and fruit of the tree and seldom significantly damages twigs or other wood of the tree. Trees attacked by this new disease develop extensive cankering of twigs, limbs and main stem which causes dieback of the affected plant parts while death of the entire plant is common within 2 to 3 years. This disease has caused so many dogwoods to die in some states that it is thought that the NATIVE DOGWOOD may go the way of the AMERICAN ELM and AMERICAN CHESTNUT.

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, 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 1989. 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 DIAGNOSES¹ BY CROP CATEGORY AND CAUSAL AGENT TYPE.

Crop Category Diagnoses	Abiotic Problems	Biotic ² Problems	Chemical Injury	Inadequate Specimen	Insect Injury	Other ³	Total
Agronomic							
Corn	61	36	19	1	14	12	143
Forages	41	133	0	10	39	24	247
Rapeseed (Canola)	1	1	0	0	2	2	6
Small grains	24	78	0	0	7	18	127
Soybeans	39	1420	38	4	7	12	1520
Tobacco	387	468	84	15	19	74	1047
Fruit							
Small fruit	19	58	5	2	12	25	113
Tree fruit	41	196	4	7	27	24	299
Herbs	6	6	0	1	1	0	14
Identification	0	35	0	1	1	2	39
Ornamentals							
Herbaceous and Houseplants	70	85	9	10	27	31	232
Turfgrass	38	87	0	3	2	22	152
Woody	328	437	21	41	206	223	1254
Vegetables	92	137	21	10	26	44	330
Miscellaneous	1	3	1	0	0	5	10
Total	1148	3180	202	105	390	518	5543

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	4	29	0	3	0
Forages	8	125	0	0	0
Rapeseed (Canola)	0	1	0	0	0
Small grains	3	44	0	31	0
Soybeans	5	132	1280	3	0
Tobacco	63	308	2	91	4
Fruit					
Small fruit	0	46	8	4	0
Tree fruit	24	170	0	0	2
Herbs	0	6	0	0	0
Identification	0	20	0	0	15
Ornamentals					
Herbaceous and Houseplants	24	58	0	3	0
Turfgrass	0	83	1	0	3
Woody	33	396	1	6	1
Vegetables	30	82	3	22	0
Miscellaneous	0	3	0	0	0
Total	194	1503	1295	163	25

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)	1860	37.9
Tobacco	884	18.0
Fruit	358	7.3
Herbs	12	.3
Identifications	38	.8
Ornamentals	1450	29.6
Vegetables	290	5.9
Miscellaneous	10	.2
Total Specimens	4902	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	122	21	143
Forages	184	63	247
Rapeseed (Canola)	5	1	6
Small grains	107	20	127
Soybeans	1442	78	1520
Tobacco	884	163	1047
Fruit			
Small fruit	111	10	113
Tree fruit	247	52	299
Herbs	12	2	14
Identification	38	1	39
Ornamentals			
Herbaceous and Houseplants	202	30	232
Turfgrass	131	21	152
Woody	1115	139	1254
Vegetables	290	40	330
Miscellaneous	10	0	10
Total	4902	641	5543

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	Grower Type							
	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								
Other ³								
Fruit	NOT AVAILABLE							
Ornamental	(Inadequate records were kept with regard to the information usually put in this table. The records, if presented here, would be a gross distortion of the true situation.)							
Vegetable								
Other ⁴								
Total								
Total/Grower Type								
Total number of samples received								

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					Total
	Agronomic	Fruit	Ornamental	Vegetable	Other	
Agronomy Department	454	3	15	13	5	490
Entomology Department	22	20	131	12	2	187
Forestry Department	0	0	1	0	0	1
Herbarium (Agro. Dept.)	0	0	0	0	1	1
Horticulture Department	0	29	73	29	10	141
Nematode Lab	1	0	2	0	0	3
Pioneer Hi-Bred International Union City, TN	2	0	0	0	0	2
					<u>Total</u>	825
					<u>Total number of plant samples</u>	3667
					<u>Percent of plant samples referred outside Diagnostic Lab for consultation</u>	22.5%

TABLE 7. SPECIAL LABORATORY TESTS PERFORMED.

Test	Number of Cases
Culturing	81
Incubation	133
Nematode extraction (total = 1236)	
Pinewood nematode	1
Soybean cyst nematode	1226
Other	9
Virus assays (total = 22)	
Electron Microscope	2
ELISA	11
Indicator plants (includes soil bioassays)	9
Soil tests (total = 330)	
pH	232
Soluble salts	3
pH/Soluble Salts	95
Miscellaneous tests	
Quick nitrate test (tobacco)	12

TABLE 8. NUMBER OF PLANT SAMPLES RECEIVED BY COUNTY (KY AND OUT-OF-STATE SOURCES) AND CROP CATEGORY.

COUNTY	Total	Agronomic ¹	Tobacco	Fruit	Ornamental	Vegetable	Other
ADAIR	0	0	0	0	0	0	0
ALLEN	34	0	11	3	18	2	0
ANDERSON	7	2	2	0	2	1	0
BALLARD	45	18	8	2	11	6	0
BARREN	14	3	3	1	6	1	0
BATH	46	3	19	4	16	4	0
BELL	22	1	0	7	13	1	0
BOONE	20	1	2	1	14	2	0
BOURBON	21	6	8	1	3	3	0
BOYD	20	0	0	6	13	1	0
BOYLE	51	4	10	5	31	1	0
BRACKEN	7	2	4	0	0	1	0
BREATHITT	11	0	2	2	5	2	0
BRECKINRIDGE	19	6	5	1	5	2	0
BULLITT	32	4	5	3	14	2	5
BUTLER	5	2	2	0	1	0	0
CALDWELL	66	13	10	9	25	6	3
CALLOWAY	88	14	32	3	21	16	2
CAMPBELL	21	0	0	3	17	1	0
CARLISLE	44	20	8	6	5	5	0
CARROLL	9	1	2	2	3	1	0
CARTER	21	0	12	2	4	2	1
CASEY	24	1	2	2	2	17	0
CHRISTIAN	121	25	41	10	37	6	2
CLARK	29	2	20	2	4	1	0
CLAY	4	0	1	0	2	1	0
CLINTON	7	0	4	1	2	0	0
CRITTENDEN	20	7	0	3	8	1	1
CUMBERLAND	1	0	1	0	0	0	0
DAVIESS	155	27	50	10	31	15	2
EDMONSON	0	0	0	0	0	0	0
ELLIOTT	10	0	2	3	4	0	1
ESTILL	25	1	6	5	11	2	0
FAYETTE	423	13	49	21	312	21	7
FLEMING	29	12	9	0	6	2	0
FLOYD	3	1	0	0	2	0	0
FRANKLIN	49	7	5	1	30	5	1
FULTON	38	11	0	4	16	6	1
GALLATIN	9	2	5	0	2	0	0
GARRARD	15	0	5	4	6	0	0
GRANT	29	3	9	4	9	3	1
GRAVES	63	14	18	4	23	3	1
GRAYSON	5	5	0	0	0	0	0
GREEN	5	1	1	0	2	1	0
GREENUP	7	0	0	3	4	0	0
HANCOCK	11	3	1	1	6	0	0
HARDIN	34	9	3	4	13	4	1
HARLAN	29	0	0	7	21	1	0

COUNTY	Total	Agronomic ¹	Tobacco	Fruit	Ornamental	Vegetable	Other
HARRISON	12	0	3	0	9	0	0
HART	17	0	11	1	15	0	0
HENDERSON	30	20	2	0	6	2	0
HENRY	27	4	15	0	6	2	0
HICKMAN	13	9	0	2	1	1	0
HOPKINS	72	31	2	17	13	7	2
JACKSON	14	3	5	1	3	2	0
JEFFERSON	84	1	0	4	72	4	3
JESSAMINE	14	0	5	3	5	1	0
JOHNSON	8	0	1	1	6	0	0
KENTON	13	1	1	3	6	2	0
KNOTT	19	0	1	4	12	2	0
KNOX	11	0	2	3	4	2	0
LARUE	26	6	11	1	3	5	0
LAUREL	24	4	6	3	7	4	0
LAWRENCE	14	1	5	2	4	2	0
LEE	9	0	4	2	3	0	0
LESLIE	4	0	0	1	1	2	0
LETCHER	5	0	0	1	4	0	0
LEWIS	18	1	9	4	2	1	1
LINCOLN	15	7	4	0	3	1	0
LIVINGSTON	11	4	0	3	2	2	0
LOGAN	55	17	18	7	18	5	0
LYON	15	2	2	1	8	1	1
McCRACKEN	83	6	5	14	39	18	1
McCREARY	12	0	0	5	5	2	0
McLEAN	42	22	10	0	5	3	2
MADISON	83	4	36	3	36	3	1
MAGOFFIN	4	0	1	0	3	0	0
MARION	11	2	5	1	3	0	0
MARSHALL	40	6	6	6	18	4	0
MARTIN	0	0	0	0	0	0	0
MASON	16	2	7	2	4	0	1
MEADE	31	12	13	0	4	2	0
MENIFEE	7	1	2	3	0	1	0
MERCER	20	1	11	1	6	1	0
METCALFE	7	1	4	0	2	0	0
MONROE	10	2	7	0	1	0	0
MONTGOMERY	51	6	13	3	23	2	3
MORGAN	8	1	2	2	2	1	0
MUHLENBERG	42	8	4	6	19	4	1
NELSON	19	4	11	0	4	0	0
NICHOLAS	12	0	5	3	3	1	0
OHIO	16	6	6	1	3	0	0
OLDHAM	23	3	3	1	13	3	0
OWEN	25	3	11	3	15	3	0
OWSLEY	11	1	4	2	3	1	0
PENDELTON	14	0	8	1	3	1	1
PERRY	6	0	0	0	2	1	3

COUNTY	Total	Agronomic ¹	Tobacco	Fruit	Ornamental	Vegetable	Other
PIKE	0	0	0	0	0	0	0
POWELL	6	1	1	1	2	1	0
PULASKI	50	6	4	6	30	4	0
ROBERTSON	0	0	0	0	0	0	0
ROCKCASTLE	32	0	10	10	6	4	2
ROWAN	13	0	2	2	8	1	0
RUSSELL	29	2	2	2	20	3	0
SCOTT	17	1	7	0	7	1	1
SHELBY	70	18	28	3	19	2	0
SIMPSON	19	2	6	2	9	0	0
SPENCER	9	1	4	0	4	0	0
TAYLOR	59	20	11	11	12	5	0
TODD	59	19	16	5	13	6	0
TRIGG	31	4	10	3	12	1	0
TRIMBLE	11	1	7	7	2	0	0
UNION	52	42	0	0	15	3	2
WARREN	97	8	17	16	49	15	2
WASHINGTON	21	0	6	1	14	0	0
WAYNE	56	12	18	4	12	9	1
WEBSTER	48	35	2	0	7	4	0
WHITLEY	21	0	0	10	8	3	0
WOLFE	1	0	0	1	0	0	0
WOODFORD	77	5	38	8	21	3	2
Out-of-State	43	2	37	3	0	1	0
TOTALS	3667	634	884	350	1449	290	60

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

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 ¹	Consultations ²

LEXINGTON			
Anderson, RG	Horticulture	8	20
Barnes, TB	Forestry	0	1
Bitzer, MJ	Agronomy	3	2
Christensen, CM	Entomology	1	1
Eshenaur, BC (Diagnostician)	Plant Pathology	1335	513
Fountain, WF	Horticulture	3	7
Green, JD	Agronomy	24	12
Hartman, JR	Plant Pathology	15	19
Kaiser, CA (Diagnostician)	Plant Pathology	5	0
Kennedy, BS	Plant Pathology	0	1
McNiel, RE	Horticulture	4	2
Nesmith, WC	Plant Pathology	542	60
Palmer, GK	Agronomy	27	2
Powell, AJ	Agronomy	1	3
Roberts, CR	Horticulture	10	2
Scheibner, RA	Entomology	82	46
Smiley, JH	Agronomy	221	5
Stoltz, LP	Horticulture	0	1
Strang, JG	Horticulture	12	4
Stuckey, RE	Plant Pathology	18	12
Townsend, LH	Entomology	16	14
Wells, KL	Agronomy	0	4
Wigglesworth, MD	Plant Pathology	1	0
Witt, ML	Horticulture	2	1
PRINCETON			
Bachi, PR (Diagnostician)	Plant Pathology	1247	23
Brown, GR	Horticulture	2	17
Dunwell, WC	Horticulture	3	43
Herbek, JH	Agronomy	0	23
Hershman, DE	Plant Pathology	68	18
Johnson, DJ	Entomology	1	13
Lacefield, GD	Agronomy	0	5
Martin, JR	Agronomy	1	79
Murdock, LW	Agronomy	0	16
Maksymowicz, WC	Agronomy	15	38
Rasnake, M	Agronomy	0	9

¹ The specialist or diagnostician signing the Plant Diagnostic Form was considered the primary diagnoser.

² 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	#1° DIAGs	#2° DIAGs	TOTAL
------	-----------	--------------	-----------	-----------	-------

AGRONOMIC CROPS

CORN (Zea)

ANTHRACNOSE	- COLLETOTRICHUM	6	0	6
BACTERIAL STALK ROT	- ERWINIA	1	0	1
BACTERIAL STRIPE	- PSEUDOMONAS	1	0	1
BROWN SPOT	- PHYSODERMA	1	0	1
CHEMICAL INJURY	- HERBICIDE, GROWTH REG.	16	3	19
EAR/KERNEL ROTs	- COLLETOTRICHUM	1	2	3
	- NIGROSPORA	1	0	1
	- PENICILLIUM	1	1	2
	- RHIZOCTONIA	0	1	1
	- TRICHODERMA	0	1	1
	- OTHER STRESSES	7	5	12
ENVIRONMENTAL	- COMPACTION	5	2	7
GRAY LEAF SPOT	- CERCOSPORA	3	0	3
INADEQUATE SPECIMEN, NO DISEASE		13	0	13
INSECT INJURY		14	6	20
NUTRITIONAL	- ACID SOIL	11	1	12
	- P DEFICIENCY	6	0	6
	- ZN DEFICIENCY	16	2	18
	- OTHERS	6	1	7
RUST, COMMON	- PUCCINIA	6	0	6
RUST, SOUTHERN	- PUCCINIA	4	0	4
SMUT	- USTILAGO	0	1	1
STALK ROT	- FUSARIUM	1	0	1
STEWART'S WILT	- ERWINIA	1	1	2
VIRUS	- COMPLEX	0	2	2
	- UNKNOWN	1	0	1

FORAGES

ALFALFA (Medicago)

ANTHRACNOSE	- COLLETOTRICHUM	3	0	3
BACTERIAL STEM BLIGHT	- PSEUDOMONAS	2	5	7
CROWN/ROOT ROT	- COMPLEX	4	2	6
	- FUSARIUM	1	1	2
	- RHIZOCTONIA	1	0	1
	- UNKNOWN	1	0	1
	- SCLEROTINIA	26	1	27
CROWN/STEM ROT		24	7	31
ENVIRONMENTAL STRESSES		24	7	31
FOLIAR BLIGHT	- RHIZOCTONIA	1	1	2
INADEQUATE SPECIMEN, NO DISEASE		27	0	27
INSECT INJURY		22	15	37
LEAF SPOT	- FUNGAL	1	1	2
	- LEPTOSPHAERULINA	28	7	35
	- PSEUDOPPEZIZA	1	2	3
	- UNKNOWN	1	2	3
	- OTHER	8	2	10
NUTRITIONAL	- ACID SOIL	3	0	3
	- POOR NODULATION	3	0	3
	- OTHER	8	2	10

CROP	DIAGNOSIS	CAUSAL AGENT	#1° DIAGs	#2° DIAGs	TOTAL
ALFALFA (cont)					
	ROOT ROT	- APHANOMYCES	0	1	1
		- CYLINDROCARPON	1	0	1
		- PHYTOPHTHORA	11	6	17
		- PYTHIUM	1	0	1
		- RHIZOCTONIA	0	1	1
		- UNKNOWN	1	0	1
	SPRING BLACK STEM	- PHOMA	0	2	2
	SUMMER BLACK STEM	- CERCOSPORA	3	1	4
	WEB BLIGHT	- RHIZOCTONIA	0	1	1
CLOVER (Trifolium)					
	CROWN STEM ROT	- SCLEROTINIA	1	0	1
	ENVIRONMENTAL	- FROST INJURY	1	0	1
	INSECT INJURY		2	0	2
	NO DISEASE		2	0	2
FESCUE (Festuca)					
	BROWN PATCH	- RHIZOCTONIA	1	0	1
	LEAF SPOT	- DRECHSLERA	1	0	1
		- RHIZOCTONIA	1	0	1
	NO DISEASE		2	0	2
	PHYSIOLOGICAL	- DORMANCY	1	0	1
LESPEDEZA (Lespedeza)					
	LEAF SPOT	- CERCOSPORA	1	0	1
	TAR SPOT	- PHYLLACHORA	1	0	1
ORCHARDGRASS (Dactylis)					
	LEAF SPOT	- DRECHSLERA	1	0	1
	NUTRITIONAL	- GENERAL	1	0	1
TIMOTHY (Phleum)					
	CROWN ROT	- UNKNOWN	1	0	1
<u>RAPSEED</u>					
"CANOLA" (Brassica)					
	ENVIRONMENTAL	- WET FEET	1	0	1
	INSECT INJURY		1	1	2
	LEAF SPOT	- CERCOSPORELLA	1	0	1
	NO DISEASE		2	0	2
<u>SOYBEAN</u>					
SOYBEAN (Glycine)					
	ANTHRACNOSE	- COLLETOTRICHUM	2	2	4
	BACTERIAL PUSTULE	- XANTHOMONAS	2	0	2
	BROWN SPOT	- SEPTORIA	7	11	18
	BROWN STEM ROT	- PHIALOPHORA	1	0	1
	CHARCOAL ROT	- MACROPHOMINA	3	1	4

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
SOYBEAN (cont)					
	CHEMICAL INJURY	- HERBICIDE, GROWTH REG.	28	12	40
	DAMPING-OFF	- PYTHIUM	1	0	1
		- RHIZOCTONIA	0	1	1
	DOWNY MILDEW	- PERONOSPORA	2	0	2
	ENVIRONMENTAL STRESSES		24	0	24
	FROGEYE	- CERCOSPORA	6	4	10
	INADEQUATE SPECIMEN, NO DISEASE		15	0	15
	INDUCED CHLOROSIS	- RHIZOBIUM	3	0	3
	INSECT INJURY		2	5	7
	NUTRITIONAL	- MN DEFICIENCY	5	3	8
		- K DEFICIENCY	3	1	4
		- ACID SOIL	1	0	1
	POD STEM ROT	- DIAPORTHE	5	4	9
	POWDERY MILDEW	- MICROSPHAERA	0	1	1
	ROOT/STEM ROT	- PHYTOPHTHORA	8	0	8
		- RHIZOCTONIA	21	14	35
		- UNKNOWN	1	0	1
	SOYBEAN CYST NEMATODE	- on plant samples	38	16	54
	HETERODERA	* in soil samples		0	
		* absent in soil samples		0	
		(*soil submitted to Nematode Lab)			
	SOUTHERN BLIGHT	- ATHELIA	1	0	1
	STEM CANCKER	- DIAPORTHE	4	2	6
	SUDDEN DEATH SYNDROME	- FUSARIUM	30	0	30
	VIRUS	- BEAN POD MOTTLE	2	0	2
		- BEAN YELLOW MOSAIC	1	0	1
<u>SMALL GRAINS</u>					
BARLEY (Hordeum)					
	BLACK HEAD MOLD	- ALTERNARIA	1	0	1
		- EPICOCCUM	0	1	1
		- FUNGAL	1	0	1
	ENVIRONMENTAL	- COLD, FROST INJURY	2	0	2
	NET BLOTCH	- DRESCHLERA	1	0	1
OAT (Avena)					
	BACTERIAL STRIPE	- PSEUDOMONAS	1	0	1
	ENVIRONMENTAL STRESSES		2	0	2
	VIRUS	- BARLEY YELLOW DWARF	1	0	1
WHEAT (Triticum)					
	BLACK CHAFF	- XANTHOMONAS	1	1	2
	CULTURAL	- HEAVY RESIDUE	1	0	1
	ENVIRONMENTAL STRESSES		10	2	12
	EYESPOT	- PSEUDOCERCOSPORELLA	0	1	1
	GLUME BLOTCH	- SEPTORIA	3	0	3
	INSECT INJURY		6	0	6
	LEAF BLOTCH	- SEPTORIA	5	7	12
	LEAF SPOT	- CERCOSPORA	1	0	1
		- FUNGAL	0	1	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
WHEAT (cont)					
	MELANISM	- PHYSIOLOGICAL	1	0	1
	NO DISEASE		16	0	16
	NUTRITIONAL	- GENERAL	1	0	1
		- N DEFICIENCY	1	3	4
	POWDERY MILDEW	- ERYSIPE	5	0	5
	TAKE-ALL	- GAEUMANNOMYCES	14	0	14
	TAN SPOT	- PYRENOPHORA	1	0	1
	VIRUS	- WHEAT STREAK MOSAIC	1	0	1
		- WHEAT SPINDLE STREAK	23	2	25
		- BYDV ABSENT	0	1	1
<u>TOBACCO</u>					
TOBACCO (Nicotiana)					
	AIR POLLUTION	- UNKNOWN	1	0	1
	ALGAE	- BLUE-GREEN	2	1	3
	ANGULAR LEAF SPOT	- PSEUDOMONAS	42	5	47
	BLACK LEG	- ERWINIA	3	2	5
	BLACK ROOT ROT	- CHARLARA	30	14	44
	BLACK SHANK	- PHYTOPHTHORA	137	3	140
	BLUE MOLD	- PERONOSPORA	27	4	31
	BROWN SPOT	- ALTERNARIA	7	3	10
	CHEMICAL INJURY	- GROWTH REGULATOR	44	2	46
		- SUCKER AGENTS	2	0	2
		- OTHER HERBICIDES	17	1	18
		- OTHER CHEMICALS	16	2	18
		- OEDEMA	1	0	1
	DAMPING OFF	- PYTHIUM	1	0	1
		- RHIZOCTONIA	2	0	2
	DODDER	- CUSCUTA	0	1	1
	ENVIRONMENTAL	- COLD INJURY	14	1	15
		- COMPACTION	11	3	14
		- LIGHTNING	4	0	4
		- WET FEET	34	11	45
		- WEATHER SCALD	7	2	9
		- OTHER STRESSES	18	4	22
	FRENCHING	- METABOLITES	3	0	3
	FROGEYE	- CERCOSPORA	5	2	7
	GRAY MOLD	- BOTRYTIS	1	0	1
	HOLLOW STALK	- ERWINIA	9	1	10
	IMPROPER CURING	- GREENING	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		88	0	88
	INSECT INJURY		13	6	20
	LEAF SPOT	- ALTERNARIA	4	3	7
		- PHYSIOLOGICAL	1	0	1
		- RHIZOCTONIA	1	0	1
	NUTRITIONAL	- ACID SOIL	44	8	52
		- FERTILIZER BURN	14	4	18
		- K DEFICIENCY	11	2	13
		- MN TOXICITY	57	5	62
		- N DEFICIENCY	42	6	48

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
TOBACCO (cont)					
	NUTRITIONAL	- P DEFICIENCY	37	10	47
		- OTHER	8	3	11
	PHYSICAL INJURY	- BRUISING	9	2	11
	ROOT KNOT NEMATODE	- MELOIDOGYNE	0	2	2
	ROOT PROBLEM	- UNKNOWN	1	0	1
	ROOT ROT	- RHIZOCTONIA	8	8	16
		- PYTHIUM	6	6	12
	SOFT ROT	- PYTHIUM	1	0	1
	STEM ROT	- RHIZOCTONIA	14	10	24
	STORAGE MOLD	- ALTERNARIA	1	0	1
	STUNT	- MYCORRHIZAE	0	1	1
	VARIEGATION	- GENETIC	4	0	4
	VIRUS	- ALFALFA MOSAIC	1	0	1
		- COMPLEX	30	4	34
		- PEANUT STUNT	0	1	1
		- POTATO VIRUS Y	0	1	1
		- TOBACCO ETCH	6	4	10
		- TOBACCO RINGSPOT	3	0	3
		- TOMATO SPOTTED WILT	25	10	35
		- UNKNOWN	5	1	6
	WEATHER FLECK	- OZONE	5	1	6
	WILT	- FUSARIUM	1	1	2

FRUIT CROPS

SMALL FRUITS

BLUEBERRY (Vaccinium)

	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	NUTRITIONAL	- PH HIGH	1	0	1

BRAMBLES - Blackberry and Raspberry (Rubus)

	ANTHRACNSOE	- ELSINOE	1	0	1
	CANE BLIGHT	- LEPTOSPHAERIA	1	0	1
		- PHOMA	1	0	1
	CHEMICAL INJURY	- GROWTH REG., HERBICIDE	2	0	2
	CULTURAL	- IMPROPER PLANTING DEPTH	1	0	1
	GRAY MOLD	- BOTRYTIS	3	0	3
	GROWTH CRACK	- ENVIRONMENTAL	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	INSECT INJURY		2	2	4
	LEAF SPOTCH	- SEPTORIA	1	0	1
	ORANGE RUST	- GYMNOCONIA	1	0	1
	ROOT ROT	- PHYTOPHTHORA	1	0	1
	ROSETTE	- CERCOSPORELLA	1	0	1
	SPUR BLIGHT	- DIDYMELLA	1	0	1
	VIRUS	- LEAF CURL	1	0	1
		- STERILITY	1	0	1
		- TOMATO RINGSPOT	1	0	1
		- UNKNOWN	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1° DIAGs	#2° DIAGs	TOTAL
GRAPE (Vitis)					
	ANTHRACNOSE	- ELSINOE	1	0	1
	BLACK ROT	- GUIGNARDIA	13	0	13
	CHEMICAL INJURY	- HERBICIDE	1	0	1
	DOWNY MILDEW	- PLASMOPARA	1	0	1
	ENVIRONMENTAL	- FROST INJURY	1	0	1
	INSECT INJURY		4	0	4
	NO DISEASE		7	0	7
STRAWBERRY (Fragaria)					
	BLACK ROOT	- COMPLEX	3	0	3
		- RHIZOCTONIA	0	1	1
	BLACK SEED	- MYCOSPHAERELLA	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	ENVIRONMENTAL	- DROUGHT	1	0	1
		- COLD INJURY	0	1	1
		- WET FEET	6	0	6
	INSECT INJURY		3	1	4
	LEAF BLIGHT	- PHOMOPSIS	5	1	6
	LEAF SPOT	- MYCOSPHAERELLA	6	1	7
	NO DISEASE		7	0	7
	NUTRITIONAL	- CA DEFICIENCY	4	0	4
		- PH LOW	0	1	1
		- HIGH SOLUBLE SALTS	1	0	1
	TRANSPLANT SHOCK		2	0	2
	WEB BLIGHT	- RHIZOCTONIA	2	0	2
<u>TREE FRUITS</u>					
APPLE (Malus)					
	ADVENTITIOUS ROOTING	- UNKNOWN	1	0	1
	BITTER PIT	- CA DEFICIENCY	4	0	4
	BITTER ROT	- GLOMERELLA	2	1	3
	BLACK ROT	- PHYSALOSPORA	2	0	2
	BLOTCH	- PHYLLOSTICTA	0	1	1
	CEDAR APPLE RUST	- GYMNOSPORANGIUM	33	3	36
	CANKER/ROT	- BOTRYOSPHAERIA	2	0	2
	CHEMICAL INJURY	- FUNGICIDE, HERBICIDE	2	1	3
	CROWN GALL	- AGROBACTERIUM	2	0	2
	CULTURAL PROBLEMS	- IMPROPER PLANTING DEPTH	1	0	1
		- EXCESSIVE MULCH	0	1	1
		- SPRAY INJURY	1	0	1
	ENVIRONMENTAL STRESSES		7	1	8
	FIRE BLIGHT	- ERWINIA	16	2	18
	FLYSPECK	- SCHIZOTHYRIUM	2	8	10
	FROGEYE	- BOTRYOSPHAERIA	20	6	26
	INADEQUATE SPECIMEN, NO DISEASE		14	0	14
	INSECT INJURY		11	7	18
	LEAF SPOT	- UNKNOWN	1	0	1
	MUTATION	- GENETIC	1	0	1
	NECROTIC LEAF BLOTCH	- PHYSIOLOGICAL	1	0	1
	NUTRITIONAL	- MG TOXICITY	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1° DIAGs	#2° DIAGs	TOTAL
APPLE (cont)					
	PHYSICAL INJURY	- RODENT	1	1	2
		- MOWER, UNKNOWN	1	1	2
	POWDERY MILDEW	- PODOSPHERA	2	1	3
	ROOT PROBLEM	- UNKNOWN	1	0	1
	ROOT ROT	- BASIDIOMYCETE	1	0	1
	SCAB	- VENTURIA	39	7	46
	SOOTY BLOTCH	- GLOEODES	6	7	13
	TRANSPLANT SHOCK		1	1	2
	WOOD DECAY	- BASIDIOMYCETE	1	0	1
CHERRY (PRUNUS)					
	BACTERIAL SPOT	- XANTHOMONAS	1	0	1
	ENVIRONMENTAL STRESSES		2	0	2
	GUMMOSIS	- UNKNOWN	1	0	1
	INSECT INJURY		0	2	2
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	LEAF CURL	- TAPHRINA	1	0	1
	POWDERY MILDEW	- PODOSPHERA	4	0	4
	ROOT PROBLEM	- UNKNOWN	1	0	1
FIG (Ficus)					
	ENVIRONMENTAL STRESS		1	0	1
PEACH, NECTARINE and APRICOT (Prunus)					
	BACTERIAL SPOT	- XANTHOMONAS	1	0	1
	CHEMICAL INJURY	- HERBICIDE	1	0	1
	ENVIRONMENTAL STRESSES		4	0	4
	GUMMOSIS	- UNKNOWN	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	INSECT INJURY		7	0	7
	LEAF CURL	- TAPHRINA	2	0	2
	NUTRITIONAL	- N DEFICIENCY	1	0	1
	SHORT LIFE	- ENVIRONMENTAL	1	0	1
PEAR (Pyrus)					
	ENVIRONMENTAL STRESSES		2	0	2
	FIRE BLIGHT	- ERWINIA	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	INSECT INJURY		1	0	1
PECAN (Carya)					
	INADEQUATE SPECIMEN		1	0	1
	LEAF SCORCH	- UNKNOWN	0	2	2
	PHYSIOLOGICAL	- INTERNAL BREAKDOWN	3	0	3
	SCAB	- FUSICLADIUMA	1	0	1
PLUM (Prunus)					
	BLACK KNOT	- APIOSPORINA	5	0	5
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	NUTRITIONAL	- N DEFICIENCY	1	0	1
	PLUM POCKETS	- TAPHRINA	10	0	10
	SOOTY BLOTCH	- GLOEODES	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
<u>HERBS</u>					
GINSENG (Panax)					
	ANTHRACNOSE	- COLLETOTRICHUM	0	1	1
	BLIGHT	- ALTERNARIA	2	0	2
	ENVIRONMENTAL	- WET FEET	4	0	4
	INADEQUATE SPECIMEN		1	0	1
	NUTRITIONAL	- PH HIGH	0	1	1
	PAPERY SPOT	- ENVIRONMENTAL	1	0	1
	ROOT ROT	- PHYTOPHTHORA	2	0	2
SAGE (Salvia)					
	STEM ROT	- RHIZOCTONIA	1	0	1
THYME (Thymus)					
	INSECT INJURY		1	0	1
<u>IDENTIFICATIONS</u>					
FUNGAL IDENTIFICATION					
	ALGAE	- BLUE-GREEN	1	0	1
	BASIDIOMYCETE	- EARTHSTAR	1	0	1
		- MUSHROOM	1	0	1
		- species	2	0	2
		- UNKNOWN	2	0	2
	CANTHARELLACEAE	- species	1	0	1
	CHLOROPHYLLUM	- MOLYBDITES	1	0	1
	CORTINARIUS	- species	1	0	1
	INADEQUATE SPECIMEN		2	0	2
	LYCOPERDON	- PYRIFORME	1	0	1
	MILDEW	- species	1	0	1
	MOLD	- UNKNOWN	1	0	1
	SOOTY MOLD	- species	6	0	6
	SUILLUS	- species	1	0	1
	XYLORIA	- POLYMORPH	1	0	1
INSECT IDENTIFICATION					
	LEPTOCORUS	- TRIVITTATUS	1	0	1
PLANT IDENTIFICATION					
	BAPTISTA	- AUSTRALIS	1	0	1
	BRACHIARIA	- PLATYPHYLLA	1	0	1
	CYNODON	- DACTYLON	1	0	1
		- species	1	0	1
	DATURA	- INOXIA	1	0	1
	ELEUSINE	- INDICA	1	0	1
	HAWTHORN	- species	1	0	1
	LONICERA	- TARTARIAN	1	0	1
	MAHONIA	- BEALEI	1	0	1
	MALUS	- GALA	1	0	1
	MAPLE	- species	1	0	1
	PAULOWNIA	- TOMENTOSA	1	0	1
	PINUS	- SYLVESTRIS	1	0	1
	VIOLA	- species	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1° DIAGs	#2° DIAGs	TOTAL
<u>MISCELLANEOUS</u>					
RAGWEED (<i>Ambrosia</i>)	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
SOIL	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	NUTRITIONAL	- ACID SOIL	1	0	1
	TOBACCO SOIL - BLACK SHANK	- PHYTOPHTHORA	3	0	3
<u>ORNAMENTALS</u>					
<u>HERBACEOUS ORNAMENTALS AND INDOOR PLANTS</u>					
AFRICAN VIOLET (<i>Saintpaulia</i>)	ENVIRONMENTAL	- COLD INJURY	1	0	1
	INSECT INJURY		1	0	1
	POWDERY MILDEW	- OIDIUM	1	0	1
ASTER (<i>Aster</i>)	POWDERY MILDEW	- species	1	0	1
BABYS BREATH (<i>Gypsophila</i>)	NO DISEASE		1	0	1
BEGONIA (<i>Begonia</i>)	ENVIRONMENTAL	- COLD INJURY	1	0	1
	LEAF SPOT	- XANTHOMONAS	1	0	1
	NO DISEASE		1	0	1
BENJAMIN FIG (<i>Ficus</i>)	INSECT INJURY		1	0	1
BOUGANVILLA (<i>Bougainvillea</i>)	NO DISEASE		1	0	1
CACTUS (<i>various</i>)	CULTURAL	- UNDERWATERING	1	0	1
	ROOT/STEM ROT	- FUSARIUM	1	0	1
CALADIUM (<i>Caladium</i>)	ENVIRONMENTAL	- COLD INJURY	1	0	1
CANDYTUFT (<i>Iberis</i>)	NO DISEASE		1	0	1
	ROOT ROT	- RHIZOCTONIA	1	0	1
CHRYSANTHEMUM (<i>Chrysanthemum</i>)	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	CULTURAL	- IMPROPER PLANTING DEPTH	1	0	1
	ENVIRONMENTAL	- WET FEET	0	1	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
CHRYSANTHEMUM (cont)					
	LEAF SPOT	- SEPTORIA	1	0	1
	NO DISEASE		1	0	1
	NUTRITIONAL	- N DEFICIENCY	1	0	1
CLEMATIS (Clematis)					
	ENVIRONMENTAL	- FROST INJURY	1	0	1
	INADEQUATE SPECIMEN		1	0	1
	INSECT INJURY		1	0	1
	LEAF SPOT	- ASCOCHYTA	0	1	1
COLEUS (Coleus)					
	INSECT INJURY		1	0	1
COLUMBINE (Aquilegia)					
	NO DISEASE		1	0	1
COREOPSIS (Coreopsis)					
	POWDERY MILDEW	- ERYSIPE	1	0	1
DAHLIA (Dahlia)					
	INADEQUATE SPECIMEN		1	0	1
	STEM ROT	- RHIZOCTONIA	2	0	2
	VIRUS	- MOSAIC	2	0	2
DAISY (Chrysanthemum)					
	CULTURAL	- OEDEMA	1	0	1
	ROOT ROT	- RHIZOCTONIA	1	0	1
DAYLILLY (Hemerocallis)					
	FOOT ROT	- FUSARIUM	1	0	1
	INSECT INJURY		1	0	1
DELPHINIUM (Delphinium)					
	NO DISEASE		3	0	3
DIANTHUS (Dianthus)					
	ROOT ROT	- RHIZOCTONIA	1	0	1
DIEFFENBACHIA (Dieffenbachia)					
	ANTHRACNOSE	- COLLETOTRICHUM	1	0	1
DRACAENA (Dracaena)					
	CULTURAL	- OVERWATERING	2	0	2
	LEAF SPOT	- PHYLLOSTICTA	1	0	1
DUSTY-MILLER (Centaurea)					
	CHEMICAL INJURY	- INSECTICIDE	1	0	1
ECHINACEA (Echinacea)					
	MUTATION	- GENETIC	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
FERN (Various)					
	ENVIRONMENTAL	- WET FEET	1	0	1
	INSECT INJURY		1	0	1
	NO DISEASE		2	0	2
FUCHSIA (Fuchsia)					
	CULTURAL	- IMPROPER LIGHTING	0	1	1
	CUTTING ROT	- BOTRYTIS	1	0	1
	INSECT INJURY		1	0	1
	RUST	- PUCCINIASTRUM	1	0	1
GARDENIA (Gardenia)					
	CULTURAL	- IMPROPER PLANTING DEPTH	1	0	1
		- OVERWATERING	0	1	1
	INSECT INJURY		1	0	1
GERANIUM (Pelargonium)					
	BACTERIAL BLIGHT	- XANTHOMONAS	7	0	7
	CULTURAL	- FERTILIZER BURN	1	0	1
		- HEAVY SOIL	0	2	2
		- OEDEMA	2	0	2
		- OVERWATERING	2	0	2
	CUTTING ROT	- BOTRYTIS	1	0	1
	INSECT INJURY		1	1	2
	NO DISEASE		3	0	3
	NUTRITIONAL	- HIGH SOLUBLE SALTS	2	0	2
	STEM ROT	- RHIZOCTONIA	1	0	1
GLADIOLUS (Gladiolus)					
	ENVIRONMENTAL	- WET FEET	1	0	1
HOLLYHOCK (Althaea)					
	INSECT INJURY		1	0	1
HOSTA (Hosta)					
	NO DISEASE		1	0	1
IMPATIENS (Impatiens)					
	CULTURAL	- FERTILIZER BURN	1	0	1
	GRAY MOLD	- BOTRYTIS	0	1	1
	NO DISEASE		1	0	1
	NUTRITIONAL	- HIGH SOLUBLE SALTS	2	0	2
	ROOT ROT	- PYTHIUM	1	0	1
	ROOT STEM ROT	- FUSARIUM	0	1	1
	VIRUS	- TOMATO SPOTTED WILT	1	0	1
IRIS (Iris)					
	BACTERIAL SOFT ROT	- ERWINIA	0	2	2
	ENVIRONMENTAL INJURY	- WET FEET	0	1	1
	INSECT INJURY		1	0	1
	LEAF BLIGHT	- XANTHOMONAS	0	1	1
	LEAF SPOT	- HETEROSPORIUM	10	0	10
		- MICROSPHAERELLA	2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	#1^o DIAGs	#2^o DIAGs	TOTAL
IVY (Various)					
	BACTERIAL SPOT	- XANTHOMONAS	1	0	1
	CHEMICAL INJURY	- INSECTICIDE	1	0	1
	INSECT INJURY		1	1	2
	STEM CANKER	- XANTHOMONAS	1	0	1
JADE PLANT (Crassula)					
	CULTURAL	- UNDERWATERING	1	0	1
	INADEQUATE SPECIMEN		1	0	1
JERUSALEM CHERRY (Solanum)					
	INSECT INJURY		1	0	1
LANTANA (Lantana)					
	CHEMICAL INJURY	- BURN	1	0	1
	CULTURAL	- IMPROPER LIGHTING	0	1	1
LILY (Lilium)					
	INADEQUATE SPECIMEN		1	0	1
LIRIOPE (Liriope)					
	NUTRITIONAL	- FE DEFICIENCY	2	0	2
		- N DEFICIENCY	0	2	2
MARIGOLD (Tagetes)					
	AERIAL BLIGHT	- RHIZOCTONIA	1	0	1
	BACTERIAL WILT	- PSEUDOMONAS	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	ENVIRONMENTAL	- WET FEET	1	0	1
	GRAY MOLD	- BOTRYTIS	1	0	1
	INADEQUATE SPECIMEN		3	0	3
	INSECT INJURY		4	1	5
	LEAF SPOT	- PSEUDOMONAS	1	0	1
	ROOT ROT	- RHIZOCTONIA	0	1	1
	WILT	- FUSARIUM	0	1	1
MORNING GLORY (Ipomoea)					
	CHEMICAL INJURY	- UNKNOWN	1	0	1
NORFOLK ISLAND PINE (Araucaria)					
	CULTURAL	- IMPROPER LIGHTING	1	0	1
	ENVIRONMENTAL STRESS		1	0	1
ORCHID (Various)					
	ANTHRACNOSE	- FUNGAL	1	0	1
	BROWN SPOT	- PSEUDOMONAS	1	0	1
	NO DISEASE		1	0	1
PACHYSANDRA (Pachysandra)					
	NUTRITIONAL	- FE DEFICIENCY	1	0	1
		- HIGH PH	1	0	1
		- N DEFICIENCY	0	1	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1º DIAGs	#2º DIAGs	TOTAL
PANSY (<i>Viola</i>)					
	BACTERIAL WILT	- BACTERIUM	1	0	1
	INSECT INJURY		1	0	1
	NO DISEASE		1	0	1
PEONY (<i>Paeonia</i>)					
	ANTHRACNOSE	- GLOEOSPORIUM	1	0	1
	GRAY MOLD	- BOTRYTIS	1	0	1
	LEAF SPOT	- ALTERNARIA	0	1	1
	NO DISEASE		2	0	2
	RED SPOT	- CLADOSPORIUM	1	0	1
PETUNIA (<i>Petunia</i>)					
	GRAY MOLD	- BOTRYTIS	1	0	1
	ENVIRONMENTAL STRESSES		2	0	2
	NO DISEASE		1	0	1
PHILODENDRON (<i>Philodendron</i>)					
	LEAF SPOT	- COLLETOTRICHUM	1	0	1
PHLOX (<i>Phlox</i>)					
	INSECT INJURY		1	0	1
	LEAF BLIGHT	- PHYSIOLOGICAL	2	0	2
	NO DISEASE		2	0	2
	POWDEY MILDEW	- ERYSIPHE	1	0	1
	SOUTHERN BLIGHT	- ATHELIA	1	0	1
PILEA (<i>Pilea</i>)					
	CULTURAL	- OVERWATERING	1	0	1
PLUMERIA (<i>Plumeria</i>)					
	LEAF SCORCH	- UNKNOWN	1	0	1
PODOCARPUS (<i>Podocarpus</i>)					
	NO DISEASE		1	0	1
POINSETTIA (<i>Euphorbia</i>)					
	CHEMICAL INJURY	- UNKNOWN	1	0	1
	NO DISEASE		1	0	1
	NUTRITIONAL	- MG DEFICIENCY	2	0	2
		- HIGH SOLUBLE SALTS	1	0	1
		- N DEFICIENCY	1	0	1
	ROOT STEM ROT	- FUSARIUM	1	0	1
		- PYTHIUM	1	0	1
		- RHIZOCTONIA	1	0	1
PRAYER PLANT (<i>Maranta</i>)					
	INSECT INJURY		1	0	1
SALVIA (<i>Salvia</i>)					
	BACTERIAL BLIGHT	- BACTERIAL	7	0	7
	ENVIRONMENTAL	- WET FEET	0	1	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
SCHEFFLERA (Brassaia)					
	AIR POLLUTION	- ETHYLENE	1	0	1
	ANTHRACNSOE	- COLLETOTRICHUM	1	0	1
	CULTURAL	- OEDEMA	1	0	1
SNAPDRAGON (Antirrhinum)					
	INADEQUATE SPECIMEN		2	0	2
	INSECT INJURY		1	0	1
	RUST	- PUCCINIA	1	0	1
	STEM ROT	- FUSARIUM	1	0	1
SPATHIPHYLLUM (Spathiphyllum)					
	NUTRITIONAL	- FERTILIZER BURN	1	0	1
SPIDER PLANT (Chlorophytum)					
	INSECT INJURY		1	0	1
TULIP (Tulipa)					
	BLIGHT	- BOTRYTIS	2	0	2
UNKNOWN					
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
VERBENA (Verbena)					
	INSECT INJURY		1	0	1
VERONICA (Veronica)					
	ENVIRONMENTAL	- DROUGHT	1	0	1
	NO DISEASE		1	0	1
VINCA (Vinca)					
	ANTHRACNOSE	- COLLETOTRICHUM	1	0	1
	ENVIRONMENTAL	- WET FEET	1	0	1
	NO DISEASE		1	0	1
	NUTRITIONAL	- FE DEFICIENCY	1	0	1
		- HIGH SOLUBLE SALTS	1	0	1
		- N DEFICIENCY	0	1	1
	ROOT ROT	- RHIZOCTONIA	2	0	2
VIOLET (Viola)					
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	POWDERY MILDEW	- species	1	0	1
WANDERING JEW (Tradescantia)					
	NUTRITIONAL	- HIGH SOLUBLE SALTS	1	0	1
YUCCA (Yucca)					
	LEAF SPOT	- PHYLLOSTICTA	1	0	1
ZINNIA (Zinnia)					
	NO DISEASE		1	0	1
	NUTRITIONAL	- HIGH SOLUBLE SALTS	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
<u>TURFGRASS</u>					
BENTGRASS (<i>Agrostis</i>)					
	ANTHRACNOSE	- COLLETOTRICHUM	3	0	3
	BLIGHT	- PYTHIUM	4	4	8
	BROWN PATCH	- RHIZOCTONIA	8	0	8
	CULTURAL	- HEAVY THATCH	0	1	1
		- OVERWATERING	1	0	1
	ENVIRONMENTAL	- COMPACTION	1	1	2
		- WET FEET	4	1	5
	NO DISEASE		4	0	4
	NECROTIC RING SPOT	- LEPTOSPHAERIA	1	0	1
	ROOT ROT	- PYTHIUM	1	0	1
BERMUDAGRASS (<i>Cynodon</i>)					
	BROWN PATCH	- RHIZOCTONIA	2	0	2
	FADING OUT	- CURVULARIA	0	1	1
BLUEGRASS (<i>Poa</i>)					
	ALGAE	- BLUE-GREEN	1	0	1
	BROWN PATCH	- RHIZOCTONIA	5	0	5
	CULTURAL	- HEAVY THATCH	2	0	2
	DOLLAR SPOT	- LANZIA./MOELL.	1	0	1
	ENVIRONMENTAL STRESSES		1	1	2
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		1	1	2
	MELTING OUT	- DRECHSLERA	2	0	2
	NECROTIC RING SPOT	- LEPTOSPHAERIA	0	1	1
	NUTRITIONAL	- N DEFICIENCY	0	1	1
	RED THREAD	- LAETISARIA	3	0	3
	RUST	- PUCCINIA	1	0	1
	SLIME MOLD	- species	1	0	1
	SUMMER PATCH	- PHIALOPHORA	1	0	1
FESCUE (<i>Festuca</i>)					
	ANTHRACNOSE	- COLLETOTRICHUM	0	1	1
	BROWN PATCH	- RHIZOCTONIA	17	0	17
	DOG SPOT	- N TOXICITY	1	0	1
	DOLLAR SPOT	- LANZIA./MOELL.	2	1	3
	ENVIRONMENTAL STRESSES		10	2	12
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	LEAF SPOT	- RHIZOCTONIA	0	1	1
	NUTRITIONAL	- N DEFICIENCY	0	1	1
	RED THREAD	- LAETISARIA	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
	RUST	- PUCCINIA	1	0	1
	SLIME MOLD	- species	1	0	1
	SUMMER PATCH	- PHIALOPHORA	1	0	1
RYEGRASS (<i>Lolium</i>)					
	CULTURAL	- OVERWATERING	1	0	1
	ENVIRONMENTAL	- WET FEET	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
TURF (Various)					
	ALGAE	- BLUE-GREEN	2	0	2
	ANTHRACNOSE	- COLLETOTRICHUM	0	1	1
	BROWN PATCH	- RHIZOCTONIA	7	0	7
	CROWN ROT	- FUSARIUM	1	0	1
		- HELMINTHOSPORIUM	0	1	1
	CULTURAL	- HEAVY THATCH	1	0	1
	DOG SPOT	- N TOXICITY	1	0	1
	DOLLAR SPOT	- LANZIA/MOELL	0	1	1
	ENVIRONMENTAL STRESSES		5	0	5
	INADEQUATE SPECIMEN, NO DISEASE		11	0	11
	LEAF SPOT	- DRECHSLERA	1	0	1
	SLIME MOLD	- species	2	0	2
	SMUT	- USTILAGO	2	0	2
	SCALD	- RHYNCHOSPORIUM	1	0	1
ZOYSIA (Zoysia)					
	ENVIRONMENTAL STRESS		1	0	1
	NO DISEASE		1	0	1
<u>WOODY ORNAMENTALS</u>					
ALMOND (Prunus)					
	CHEMICAL INJURY	- UNKNOWN	1	0	1
	INSECT INJURY		1	0	1
ARBORVITAE (Thuja)					
	ENVIRONMENTAL	- WET FEET	1	0	1
	INSECT INJURY		4	1	5
	NO DISEASE		3	0	3
	SENESCENCE	- NATURAL	1	0	1
	TRANSPLANT SHOCK		0	1	1
	TWIG BLIGHT	- KABATINA	2	0	2
		- PESTALOTIOPSIS	1	1	2
ASH (Fraxinus)					
	ANTHRACNOSE	- DISCULA	5	0	5
	INSECT INJURY		2	1	3
	LEAF SCORCH	- UNKNOWN	3	0	3
	NO DISEASE		2	0	2
	PHYSICAL INJURY	- UNKNOWN	1	0	1
AZALEA - See Rhododendron					
BEECH (Fagus)					
	NO DISEASE		3	0	3
BIRCH (Betula)					
	ANTHRACNOSE	- DISCULA	3	0	3
	ENVIRONMENTAL STRESS		2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		3	0	3

CROP	DIAGNOSIS	CAUSAL AGENT	#1° DIAGs	#2° DIAGs	TOTAL
BIRCH (cont)					
	LEAF SPOT	- CYLINDROSPORIUM	1	0	1
		- FUNGAL	1	0	1
		- SEPTORIA	1	0	1
BITTERSWEET (Celastrus)					
	CULTURAL	- MALE/FEMALE	1	0	1
BOXELDER (Acer)					
	INADEQUATE SPECIMEN		1	0	1
BOXWOOD (Buxus)					
	ANTHRACNOSE	- COLLETOTRICHUM	1	0	1
	CULTURAL	- BLCK PLASTIC	1	0	1
		- OEDEMA	1	1	2
	ENVIRONMENTAL	- COLD INJURY	2	0	2
	INADEQUATE SPECIMEN		2	0	2
	INSECT INJURY		4	3	7
	LEAF SCORCH	- ENVIRONMENTAL	0	1	1
	LEAF SPOT	- MACROPHOMA	1	0	1
CATALPA (Catalpa)					
	WILT	- VERTICILLIUM	1	0	1
CEDAR (Cedrus)					
	ENVIRONMENTAL	- WET FEET	1	0	1
CHAMAECYPARIS (Chamaecyparis)					
	SENESCENCE	- NATURAL	1	0	1
CHERRY (Prunus)					
	ENVIRONMENTAL	- WINTER INJURY	1	0	1
CHESTNUT (Castanea)					
	ENVIRONMENTAL STRESS		1	0	1
	NO DISEASE		1	0	1
	LEAF SCORCH	- ENVIRONMENTAL	1	0	1
CLEMATIS (Clematis)					
	LEAF SPOT	- CERCOSPORA	1	0	1
	NO DISEASE		1	0	1
COTONEASTER (Cotoneaster)					
	ENVIRONMENTAL	- WET FEET	1	0	1
	FIRE BLIGHT	- ERWINIA	1	0	1
	TRANSPLANT SHOCK		0	1	1
COTTONWOOD (Populus)					
	INSECT INJURY		1	0	1
CRABAPPLE (Malus)					
	CEDAR/APPLE RUST	- GYMNOSPORANGIUM	1	0	1
	ENVIRONMENTAL	- FROST INJURY	3	0	3

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
CRABAPPLE (cont)					
	FIRE BLIGHT	- ERWINIA	2	5	7
	INSECT INJURY		1	1	2
	LEAF SCORCH	- UNKNOWN	0	1	1
	NO DISEASE		4	0	4
	POWDERY MILDEW	- PODOSPHAERA	0	1	1
	SCAB	- VENTURIA	39	0	39
CRAPEMYRTLE (Lagerstroemia)					
	INSECT INJURY		0	1	1
	POWDERY MILDEW	- ERYSHIPHE	1	0	1
DOGWOOD (Cornus)					
	ANTHRACNOSE	- DISCULA	1	0	1
	CHEMICAL INJURY	- BURN	2	0	2
	ENVIRONMENTAL STRESSES		18	1	19
	INADEQUATE SPECIMEN, NO DISEASE		13	0	13
	INSECT INJURY		2	1	3
	LEAF SCORCH	- ENVIRONMENTAL	2	0	2
		- UNKNOWN	2	0	2
	LEAF SPOT	- CERCOSPORA	1	0	1
		- CRISTULARIELLA	0	1	1
		- SEPTORIA	9	0	9
	PHYSICAL INJURY	- BRUSING	1	1	2
		- CONSTRUCTION	2	0	2
	POWDEY MILDEW	- PHYLLACTINIA	1	0	1
		- species	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
	SPOT ANTHRACNOSE	- ELSINOE	20	2	22
	TRANSPLANT SHOCK		1	0	1
ELM (ULMUS)					
	CANKER	- PHOMOPSIS	0	1	1
	CHEMICAL INJURY	- HERBICIDE	1	0	1
	DUTCH ELM DISEASE	- CERATOCYSTIS	8	0	8
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	INSECT INJURY		2	1	3
	NUTRITIONAL	- ACID SOIL	0	1	1
	TRANSPLANT SHOCK		1	0	1
	WOOD DECAY	- BASIDIOMYCETE	1	0	1
EUONYMUS (Euonymus)					
	ANTHRACNOSE	- GLOESPORIUM	3	1	4
	CROWN GALL	- AGROBACTERIUM	2	0	2
	CULTURAL	- IMPROPER PLANTING	1	0	1
	ENVIRONMENTAL STRESSES		2	1	3
	INSECT INJURY		11	0	11
	NO DISEASE		6	0	6
	NUTRITIONAL	- GENERAL	2	0	2
		- HIGH SOLUBLE SALTS	1	0	1
		- PH HIGH	1	0	1
	POWDERY MILDEW	- MICROSPHAERA	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
FIR (<i>Abies</i>)					
	NO DISEASE		1	0	1
FORSYTHIA (<i>Forsythia</i>)					
	CROWN GALL	- AGROBACTERIUM	1	0	1
	LEAF SPOT	- ALTERNARIA	1	0	1
	NO DISEASE		1	0	1
GOLDEN RAINTREE (<i>Koelreuteria</i>)					
	ENVIRONMENTAL	- WET FEET	1	0	1
HAWTHORN (<i>Crataegus</i>)					
	CEDAR-HAWTHORN RUST	- GYMNOSPORANGIUM	3	0	3
	CHEMICAL INJURY	- HERBICIDE	0	1	1
	INSECT INJURY		1	0	1
	NO DISEASE		1	0	1
HEMLOCK (<i>Tsuga</i>)					
	ENVIRONMENTAL STRESSES		6	0	6
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
HIBISCUS (<i>Hibiscus</i>)					
	LEAF SPOT	- COLLETOTRICHUM	1	0	1
HICKORY (<i>Carya</i>)					
	INSECT INJURY		2	0	2
	NO DISEASE		1	0	1
	PHYSICAL INJURY	- CONSTRUCTION	1	0	1
HOLLY (<i>Ilex</i>)					
	BACTERIAL BLIGHT	- CORYNEBACTERIUM	4	0	4
	BLACK ROOT ROT	- CHARLARA	5	0	5
	CHEMICAL INJURY	- INSECTICIDE	2	0	2
	CROWN GALL	- AGROBACTERIUM	1	0	1
	CULTURAL	- MALE/FEMALE	1	0	1
	ENVIRONMENTAL STRESSES		8	5	13
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	INSECT INJURY		8	2	10
	LEAF DROP	- NORMAL	2	0	2
	LEAF SPOT	- PHYLLOSTICTA	1	0	1
	NUTRITIONAL	- ACID SOIL	1	1	2
		- B DEFICIENCY	0	1	1
		- FE DEFICIENCY	1	0	1
		- GENERAL	0	1	1
		- HIGH PH	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
	ROOT ROT	- PHYTOPHTHORA	1	1	2
		- PYTHIUM	1	0	1
	SOOTY MOLD	- species	1	0	1
	SPINE SPOT	- SPINE INJURY	2	1	3
	TRANSPLANT SHOCK		2	1	3

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
HONEYLOCUST (<i>Gleditsia</i>)					
	ENVIRONMENTAL	- WET FEET	1	0	1
	LEAF SPOT	- CERCOSPORA	1	0	1
	WOOD DECAY	- GANODERMA	1	0	1
HONEYSUCKLE (<i>Lonicera</i>)					
	CHEMICAL INJURY	- HERBICIDE	1	0	1
	INSECT INJURY		0	1	1
	NO DISEASE		1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
HYDRANGEA (<i>Hydrangea</i>)					
	LEAF SPOT	- COLLETOTRICHUM	1	0	1
		- FUNGAL	1	0	1
INKBERRY (<i>Ilex</i>)					
	CULTURAL	- IMPROPER PLANTING DEPTH	1	0	1
JUNIPER (<i>Juniperus</i>)					
	CEDAR/QUINCE RUST	- GYMNOSPORANGIUM	3	0	3
	ENVIRONMENTAL STRESSES		7	5	12
	INSECT INJURY		14	2	16
	NO DISEASE		7	0	7
	NEEDLE BLIGHT	- PESTALOTIOPSIS	1	0	1
	NUTRITIONAL	- ACID SOIL	1	0	1
		- HIGH SOLUBLE SALTS	0	1	1
		- PH HIGH	0	1	1
	PHYSICAL INJURY	- UNKNOWN	1	1	2
	ROOT PROBLEM	- UNKNOWN	4	0	4
	ROOT ROT	- PHYTOPHTHORA	7	0	7
		- PYTHIUM	0	2	2
	TRANSPLANT SHOCK		1	0	1
	TWIG BLIGHT	- KABATINA	5	0	5
		- PHOMOPSIS	4	0	4
KY COFFEETREE (<i>Gymnocladus</i>)					
	NO DISEASE		1	0	1
LARCH (<i>Larix</i>)					
	ENVIRONMENTAL	- WET FEET	1	0	1
	NO DISEASE		1	0	1
LILAC (<i>Syringa</i>)					
	BACTERIAL BLIGHT	- PSEUDOMONAS	2	0	2
	ENVIRONMENTAL STRESSES		2	0	2
	INSECT INJURY		2	1	3
	LEAF NECROSIS	- ENVIRONMENTAL	1	1	2
	LEAF SPOT	- PHYLLOSTICTA	1	0	1
		- ALTERNARIA	0	2	2
	POWDERY MILDEW	- MICROSPHAERA	3	0	3
	TRANSPLANT SHOCK		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
LINDEN (<i>Tilia</i>)					
	CHEMICAL INJURY	- INSECTICIDE	1	0	1
	LEAF SPOT SCORCH?	- PHYLLOSTICTA	1	0	1
	NO DISEASE		1	0	1
LOCUST (<i>Robinia</i>)					
	INADEQUATE SPECIMEN		1	0	1
MAGNOLIA (<i>Magnolia</i>)					
	BACTERIAL LEAF SPOT	- PSEUDOMONAS	2	0	2
	ENVIRONMENTAL STRESSES		1	1	2
	INSECT INJURY		9	5	14
	LEAF SCORCH	- UNKNOWN	1	0	1
		- WINTER DRYING	6	0	6
	NO DISEASE		1	0	1
	SOOT MOLD	- species	0	1	1
MAHONIA (<i>Mahonia</i>)					
	NO DISEASE		1	0	1
	LEAF SPOT	- PHYLLOSTICTA	1	0	1
	SPINE SPOT	- SPINE INJURY	1	0	1
MAPLE (<i>Acer</i>)					
	ANTHRACNOSE	- KABATIELLA	58	0	58
		- DISCULA	2	0	2
	BULL'S EYE SPOT	- CRISTULARIELLA	7	0	7
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
		- HERBICIDE	1	0	1
		- UNKNOWN	2	0	2
	CULTURAL	- PLASTIC BURLAP	1	0	1
	DECLINE	- ENVIRONMENTAL	1	1	2
	ENVIRONMENTAL STRESSES		8	1	9
	GIRDLING ROOT	- CULTURAL	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		39	0	39
	INSECT INJURY		22	12	34
	LEAF BLISTER	- TAPHRINA	2	0	2
	LEAF SCORCH	- ENVIRONMENTAL, UNKNOWN	6	0	6
	LEAF SPOT	- PHYLLOSTICTA	8	1	9
		- VENTURIA	1	0	1
	NUTRITIONAL	- GENERAL	0	1	1
	PHYSICAL INJURY	- MOWER, TOPPING, UNKNOWN	3	0	3
	SOOTY MOLD	- species	0	1	1
	TRANSPLANT SHOCK		1	1	2
	UNKNOWN		1	0	1
	WILT	- VERTICILLIUM	6	0	6
	WOOD DECAY	- BASIDIOMYCETE	2	0	2
MIMOSA (<i>Albizzia</i>)					
	WILT	- VERTICILLIUM	1	0	1
MOUNTAIN ASH (<i>Sorbus</i>)					
	FIRE BLIGHT	- ERWINIA	1	0	1
	SCAB	- VENTURIA	0	1	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
OAK (Quercus)					
	ANTHRACNOSE	- APTOGNOMONIA	2	0	2
	BACTERIAL SCORCH	- XYLELLA	2	0	2
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
		- HERBICIDE	1	0	1
	ENVIRONMENTAL STRESSES		3	1	4
	INADEQUATE SPECIMEN, NO DISEASE		18	0	18
	INSECT INJURY		18	4	22
	LEAF BLISTER	- TAPHRINA	6	1	7
	LEAF SCORCH	- UNKNOWN	1	0	1
	LEAF SPOT	- TUBAKIA	14	4	18
	NUTRITIONAL	- FE DEFICIENCY	3	3	6
	PHYSICAL INJURY	- CONSTRUCTION	1	0	1
	POWDERY MILDEW	- species	7	0	7
	WILT	- CERATOCYSTIS	2	0	2
	WOOD DECAY	- UNKNOWN	0	2	2
PEAR (Pyrus)					
	CULTURAL	- BLACK PLASTIC	1	0	1
	ENVIRONMENTAL STRESSES		9	0	9
	FIRE BLIGHT	- ERWINIA	4	0	4
	LEAF SCORCH	- UNKNOWN	1	0	1
	NO DISEASE		11	0	11
	TRANSPLANT SHOCK		2	0	2
	UNKNOWN		1	0	1
	WOOD DECAY	- BASIDIOMYCETE	1	0	1
PHOTINIA (Photinia)					
	LEAF SPOT	- ENTOMOSPORIUM	3	0	3
PIERIS (Pieris)					
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
PINE (Pinus)					
	CANKER	- FUNGAL	1	0	1
		- LEUCOSTOMA	1	0	1
	ENVIRONMENTAL STRESSES		14	2	16
	INADEQUATE SPECIMEN, NO DISEASE		35	0	35
	INSECT INJURY		8	3	11
	NEEDLE CAST	- CYCLANEUSMA	1	0	1
		- LOPHODERMIIUM	3	0	3
		- PLOIODERMA	2	0	2
	NEEDLE DROP	- NORMAL	1	0	1
	NEEDLE NECROSIS	- ENVIRONMENTAL	21	1	22
	NUTRITIONAL	- PH HIGH	1	0	1
	PHYSICAL INJURY	- BIRD (SAPSUCKER)	0	1	1
	PINEWOOD NEMATODE	- BURSAPHELENCUS	1	0	1
	PITCH CANKER	- FUSARIUM	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
	SOOTY MOLD	- species	5	0	5
	TIP BLIGHT	- SPHAEROPSIS	6	0	6
	TRANSPLANT SHOCK		4	1	5
	WHITE PINE DECLINE	- ENVIRONMENTAL	6	0	6

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
PLUM (Prunus)					
	BLACK KNOT	- APIOSPORINA	1	0	1
	CANKER	- LEUCOSTOMA	1	0	1
	INADEQUATE SPECIMEN		1	0	1
	INSECT INJURY		2	1	3
	LEAF SPOT	- XANTHOMONAS	1	0	1
	TRANSPLANT SHOCK		1	0	1
POPLAR (Populus)					
	ANTHRACNOSE	- COLLETOTRICHUM	1	0	1
	ENVIRONMENTAL STRESSES		2	0	2
	INADEQUATE SPECIMEN		3	0	3
	INSECT INJURY		2	0	2
	LEAF SCORCH	- UNKNOWN	1	0	1
	LEAF SPOT	- SEPTORIA	1	0	1
PRIVET (Ligustrum)					
	INSECT INJURY		3	0	3
PYRACANTHA (Pyracantha)					
	NO DISEASE		3	0	3
	SCAB	- SPILOCAEA	1	0	1
REDBUD (Ceris)					
	CHEMICAL INJURY	- HERBICIDE	1	0	1
	ENVIRONMENTAL	- COLD INJURY	1	0	1
	NO DISEASE		1	0	1
RHODODENDRON and AZALEA (Rhododendron)					
	CULTURAL	- IMPROPER PLANTING DEPTH	2	0	2
	DIEBACK	- BOTRYOSPHERA	3	0	3
		- PHOMOPSIS	1	0	1
	ENVIRONMENTAL STRESSES		8	1	9
	INADEQUATE SPECIMEN, NO DISEASE		16	0	16
	INSECT INJURY		6	0	6
	LEAF SCORCH	- WINTER DRYING	2	0	2
	LEAF SPOT	- CERCOSPORA	1	0	1
		- COLLETOTRICHUM	1	0	1
		- FUNGAL	2	0	2
		- UNKNOWN	1	0	1
	LEAF/FLOWER GALL	- EXOBASIDIUM	4	0	4
	NUTRITIONAL	- FE DEFICIENCY	3	0	3
		- ACID SOIL	1	0	1
		- FERTILIZER BURN	0	1	1
		- pH HIGH	2	1	1
		- HIGH SOLUBLE SALTS	0	1	1
	ROOT PROBLEM	- UNKNOWN	1	1	2
	ROOT ROT	- PHYTOPHTHORA	2	1	3
		- PYTHIUM	1	1	2
	TRANSPLANT SHOCK		3	2	5

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
ROSE (Rosa)					
	BLACK SPOT	- DIPLOCARPON	12	0	12
	BRAND CANKER	- CONIOTHYRIUM	2	0	2
	BROWN CANKER	- CRYPTOSPORELLA	2	0	2
	BUD/TWIG BLIGHT	- BOTRYTIS	2	1	3
	CHEMICAL INJURY	- HERBICIDE	1	0	1
		- UNKNOWN	1	1	2
	COMMON CANKER	- LEPTOSPHAERIA	1	0	1
	CULTURAL	- IMPROPER PLANTING DEPTH	1	0	1
		- EXCESSIVE MULCH	0	1	1
	ENVIRONMENTAL STRESSES		5	1	6
	INADEQUATE SPECIMEN, NO DISEASE		11	0	11
	INSECT INJURY		3	0	3
	NUTRITIONAL	- ACID SOIL	1	0	1
		- GENERAL	1	0	1
		- HIGH SOLUBLE SALTS	1	0	1
	POWDERY MILDEW	- SPHAEROTHECA	2	0	2
	PHYSICAL INJURY	- UNKNOWN	0	1	1
	TRANSPLANT SHOCK		1	0	1
	VIRUS	- ROSE MOSAIC	3	1	4
		- UNKNOWN	2	0	2
RUSSIAN-OLIVE (Elaeagnus)					
	CANKER	- FUNGAL	1	0	1
	NO DISEASE		1	0	1
SASSAFRAS (Sassafras)					
	INSECT INJURY		1	0	1
SERVICEBERRY (Amelanchier)					
	LEAF SPOT	- ENTOMOSPORIUM	1	0	1
SMOKETREE (Cotinus)					
	FACIATION	- UNKNOWN	1	0	1
	WILT	- VERTICILLIUM	3	0	3
SPIREA (Spiraea)					
	NO DISEASE		2	0	2
SPRUCE (Picea)					
	CANKER	- UNKNOWN	1	0	1
	CHEMICAL INJURY	- UNKNOWN	0	1	1
	ENVIRONMENTAL STRESSES		8	1	9
	INADEQUATE SPECIMEN, NO DISEASE		9	0	9
	INSECT INJURY		12	1	13
	NEEDLE CAST	- RHIZOSPHAERA	6	2	8
	TRANSPLANT SHOCK		5	0	5
SUMAC (Rhus)					
	WOOD DECAY	- UNKNOWN	3	0	3
SWEETGUM (Liquidambar)					
	BLEEDING CANKER	- BOTRYOSPHAERIA	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1° DIAGs	#2° DIAGs	TOTAL
SWEETGUM (cont)					
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	TWIG BLIGHT	- BOTRYOSPHERA	1	0	1
SYCAMORE (Platanus)					
	ANTHRACNOSE	- APIOGNOMONIA	4	0	4
	BACTERIAL SCORCH	- XYLELLA	1	0	1
TAXODIUM (Taxodium)					
	CHEMICAL INJURY	- HERBICIDE	1	0	1
TAXUS (Taxus)					
	ENVIRONMENTAL STRESSES		12	3	15
	NO DISEASE		13	0	13
	NUTRITIONAL	- ACID SOIL	2	0	2
		- FERTILIZER BURN	0	1	1
		- PH HIGH	1	0	1
	PHYSICAL INJURY	- GARBAGE	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
	ROOT ROT	- PHYTOPHTHORA	2	0	2
		- PYTHIUM	1	0	1
	TWIG BLIGHT	- KABATINA	1	0	1
TULIPTREE (Liriodendron)					
	ANTHRACNOSE	- GLOEOSPORIUM	1	0	1
	ENVIRONMENTAL	- FROST INJURY	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	INSECT INJURY		8	1	9
	SOOTY MOLD	- species	1	2	3
	WILT	- VERTICILLIUM	1	0	1
UNKNOWN					
	INSECT INJURY		1	0	1
	NO DISEASE		3	0	3
VIBURNUM (Viburnum)					
	ENVIRONMENTAL	- WET FEET	3	0	3
	LEAF SPOT	- PSEUDOMONAS	1	0	1
	NO DISEASE		2	0	2
	NUTRITIONAL	- ACID SOIL	0	1	1
	ROOT ROT	- RHIZOCTONIA	1	0	1
WEIGELA (Weigela)					
	INSECT INJURY		1	0	1
WILLOW (Salix)					
	CANKER	- MACROPHOMA	1	0	1
	CROWN GALL	- AGROBACTERIUM	2	0	2
	NO DISEASE		1	0	1
YELLOWWOOD (Cladrastis)					
	ENVIRONMENTAL STRESS		1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
<u>VEGETABLES</u>					
ASPARAGUS (<i>Asparagus</i>)					
	CROWN ROT	- FUSARIUM	1	0	1
BEAN (<i>Phaseolus</i>)					
	ANTHRACNOSE	- COLLETOTRICHUM	2	0	2
	CHEMICAL	- GROWTH REGULATOR	3	0	3
		- HERBICIDE	1	0	1
		- UNKNOWN	4	1	5
	DAMPING-OFF	- FUNGAL	1	0	1
	ENVIRONMENTAL STRESSES		9	0	9
	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	INSECT INJURY		4	4	8
	NUTRITIONAL	- N TOXICITY	0	1	1
	ROOT KNOT NEMATODE	- MELOIDOGYNE	1	0	1
	ROOT/STEM ROT	- PYTHIUM	1	1	2
		- RHIZOCTONIA	5	1	6
	RUST	- UROMYCES	2	0	2
	VIRUS	- BEAN YELLOW MOSAIC	3	1	4
	YEAST SPOT	- NEMATOSPORA	3	0	3
BEET (<i>Beta</i>)					
	ROOT PROBLEM	- UNKNOWN	1	0	1
	ROOT/STEM ROT	- PYTHIUM	1	0	1
BROCCOLI - see listing under CRUCIFERS					
CABBAGE - see listing under CRUCIFERS					
CANTALOUPE - see listing under CUCURBITS					
CORN, sweet (<i>Zea</i>)					
	BACTERIAL STALK ROT	- ERWINIA	1	0	1
	BUGGY WHIPPING	- PHYSIOLOGICAL	1	0	1
	COMMON RUST	- PUCCINIA	1	0	1
	ENVIRONMENTAL STRESSES		1	1	2
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	INSECT INJURY		3	0	3
	LEAF BLIGHT	- HELMINTHOSPORIUM	1	0	1
	NUTRITIONAL	- ZN DEFICIENCY	3	0	1
		- ACID SOIL	1	1	2
		- ACID SOIL	1	0	1
	SMUT	- USTILAGO	1	0	1
	STEWARTS WILT	- ERWINIA	0	1	1
	VIRUS	- MAIZE DWARF MOSAIC	1	0	1
CRUCIFERS - BROCCOLI, CABBAGE, and TURNIP (<i>Brassica</i>)					
	BLACK ROT	- XANTHOMONAS	1	1	2
	CROWN/ROOT ROT	- PYTHIUM	0	1	1
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	LEAF SPOT	- PSEUDOMONAS	1	0	1
	NUTRITIONAL	- FERTILIZER BURN	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	#1° DIAGs	#2° DIAGs	TOTAL
CRUCIFERS (cont)					
	OEDEMA	- ENVIRONMENT	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
CUCURBITS - CANTALOUPE, CUCUMBER (Cucumis), SQUASH (Cucurbita) and WATERMELON (Citrullis)					
	ANGULAR LEAF SPOT	- PSEUDOMONAS	1	0	1
	BACTERIAL WILT	- ERWINIA	1	0	1
	CHEMICAL INJURY	- UNKNOWN	1	0	1
	DOWNY MILDEW	- PERONOSPORA	1	0	1
	ENVIRONMENTAL STRESS	- WET FEET	3	0	3
	FRUIT DECAY	- FUSARIUM	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		12	0	12
	INSECT INJURY		2	2	4
	LEAF BLIGHT	- ALTERNARIA	3	0	3
	LEAF SPOT	- CERCOSPORA	1	0	1
	NUTRITIONAL	- ACID SOIL	2	0	2
	POWDERY MILDEW	- SPHAEROTHECA	1	0	1
	STEM ROT	- PYTHIUM	3	0	3
	VIRUS	- SQUASH MOSAIC	1	0	1
		- COMPLEX	1	0	1
		- UNKNOWN	1	0	1
LETTUCE (Lactuca)					
	NUTRITIONAL	- MG DEFICIENCY	1	0	1
OKRA (Hibiscus)					
	NO DISEASE		1	0	1
ONION (Allium)					
	ENVIRONMENTAL STRESSES		2	0	2
PEA (Pisum)					
	BACTERIAL BLIGHT	- PSEUDOMONAS	1	0	1
	BLACK ROOT ROT	- CHARLARA	1	0	1
	ROOT/STEM ROT	- PYTHIUM	1	0	1
		- RHIZOCTONIA	3	0	3
PEPPER (Capsicum)					
	BACTERIAL SPOT	- XANTHOMONAS	3	0	3
	BLOSSOM END ROT	- CA DEFICIENCY/DRY	1	0	1
	ENVIRONMENTAL STRESSES		6	0	6
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	LEAF SPOT	- CERCOSPORA	0	1	1
	ROOT/STEM ROT	- RHIZOCTONIA	1	0	1
		- PYTHIUM	0	1	1
	SOUTHERN BLIGHT	- ATHELIA	1	0	1
	VIRUS	- ALFALFA MOSAIC	1	0	1
		- COMPLEX	1	1	2
		- TOMATO SPOTTED WILT	2	1	3

CROP	DIAGNOSIS	CAUSAL AGENT	#1 ^o DIAGs	#2 ^o DIAGs	TOTAL
POTATO (<i>Solanum</i>)					
	BLACK LEG	- ERWINIA	1	1	2
	DRY ROT	- FUSARIUM	1	0	1
	EARLY BLIGHT	- ALTERNARIA	1	0	1
	ENVIRONMENTAL	- FROST INJURY, WET FEET	2	0	2
	INSECT INJURY		2	0	2
	LEAK		0	1	1
	NO DISEASE		4	0	4
	NUTRITIONAL	- K DEFICIENCY	1	0	1
		- N DEFICIENCY	1	0	1
	ROOT KNOT NEMATODE	- MELOIDOGYNE	1	0	1
	ROOT PROBLEM	- UNKNOWN	1	0	1
	SCAB	- STREPTOMYCES	4	0	4
RHUBARB (<i>Rheum</i>)					
	CROWN ROT	- FUNGAL	1	0	1
		- PHYTOPHTHORA	1	0	1
	LEAF SPOT	- ASCOCHYTA	1	0	1
SQUASH - see listing under CUCURBITS					
SWEET POTATO (<i>Ipomoea</i>)					
	BLACK ROT	- CERATOCYSTIS	1	0	1
	CULTURAL	- OEDEMA	1	0	1
	MUTATION	- GENETIC	1	0	1
	SCURF	- MONILOCHAETE	3	0	3
TOMATO (<i>Lycopersicon</i>)					
	BACTERIAL CANKER	- CLAVIBACTER	5	0	5
	BACTERIAL SOFT ROT	- ERWINIA	1	0	1
	BACTERIAL SPOT	- XANTHOMONAS	4	0	4
	BACTERIAL WILT	- PSEUDOMONAS	2	0	2
	BLOSSOM END ROT	- CA DEFICIENCY/DRY	1	0	1
	BUCKEYE ROT	- PHYTOPHTHORA	2	0	2
	CATFACING	- ENVIRONMENTAL	1	1	2
	CHEMICAL INJURY	- GROWTH REGULATOR	7	0	7
		- HERBICIDE	3	0	3
	CLOUDY SPOT	- STINKBUG	1	0	1
	DAMPING-OFF	- PYTHIUM	1	0	1
	EARLY BLIGHT	- ALTERNARIA	8	1	9
	ENVIRONMENTAL STRESSES		17	2	19
	GROWTH CRACK	- ENVIRONMENTAL	0	2	2
	FRUIT HARDENING	- GENETIC	2	0	2
	FRUIT SPOT	- PHYSIOLOGICAL	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		20	0	20
	INSECT INJURY		7	1	8
	LEAF ROLL	- PHYSIOLOGICAL	2	0	2
	LEAF SCORCH	- UNKNOWN	0	1	1
	LEAF SPOT	- SEPTORIA	3	0	3
	NUTRITIONAL	- ACID SOIL	0	1	1
		- FERTILIZER BURN	2	0	2
		- GENERAL	1	1	2
		- HIGH N	2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	#1° DIAGs	#2° DIAGs	TOTAL
TOMATO (cont)					
	NUTRITIONAL	- MG DEFICIENCY	3	0	3
		- P DEFICIENCY	0	1	1
	PHYSICAL INJURY	- BRUISING	1	0	1
	ROOT KNOT NEMATODE	- MELOIDOGYNE	1	0	1
	ROOT/STEM ROT	- FUSARIUM	2	0	2
		- RHIZOCTONIA	0	1	1
	SOOTY MOLD	- species	1	0	1
	STEM ROT	- SCLEROTINIA	2	0	2
	TRANSPLANT SHOCK		2	0	2
	VIRUS	- CUCUMBER MOSIAC	1	0	1
		- COMPLEX	1	0	1
		- TOMATO SPOTTED WILT	4	0	4
		- UNKNOWN	2	0	2
	WILT	- FUSARIUM	1	1	2
		- VERTICILLIUM	2	0	2

TURNIP - see listing under CRUCIFERS

WATERMELON - see listing under CUCURBITS

TOTALS			4902	640	5542
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