

Prepared by the Department of Plant Pathology

Plant Diseases in Kentucky



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PLANT DISEASE DIAGNOSTIC LABORATORY

SUMMARY OF PLANT DISEASES

1986

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INTRODUCTION

The Plant Disease Diagnostic Labs at Lexington and Princeton handled a total of 5125 plant specimens and nematode soil samples during 1986. Samples with more than one problem numbered 393, bringing the number of actual diagnoses to 5518. Specimens coming through the County Extension system accounted for 95 percent of the total, while 5 percent came directly from non-extension clients. The Princeton Diagnostic Lab's specimen load totaled ~~2080~~, while the Lexington lab diagnosed 2317 specimens.

2808 Soil samples submitted for soybean cyst nematode analysis accounted for 1736 of the samples received by the Princeton Diagnostic Lab. A total of 1706 were submitted by researchers and 30 were submitted by commercial growers. The number of 1986 SCN research samples increased by about 600 over 1985 numbers, mainly as a result of soybean sudden death syndrome research, as well as an increase in sampling conducted by the Extension Agronomists.

HIGHLIGHTS

Highlights of some of the more notable disease problems observed in 1986 are given below:

Tomato spotted wilt virus was a big concern for tobacco growers during June and July. The Diagnostic Labs received 57 samples from 25 Kentucky counties and one Tennessee county. A majority of the Kentucky samples came from the Mammoth Cave, Lincoln Trail, Lake Cumberland, Pennyryle and Purchase Areas. As far as we were able to determine from Lab records, this was the first occurrence of tomato spotted wilt in our state. It appears that the tomato spotted wilt virus was introduced into Kentucky via thrips arriving from the South and Southwest, where a reservoir of both the insect and virus exists.

Fire blight was a major problem on apple, pear, crabapple, and ornamental pear. The high incidence of this bacterial disease was attributed to two important factors. (1) A long period of mild frost-free weather preceded the bloom period. This allowed large bacterial populations to develop and be spread by insects, wind and rain. (2) After and during bloom, a hard freeze caused injuries which allowed the bacteria free access for infecting the host plants. The following summary compares the number of fire blight samples submitted in 1986 and 1985.

	1986	1985
Apple	64	31
Crabapple	13	0
Pear	29	5
Pear, ornamental	5	0
Total	<u>111</u>	<u>36</u>

A number of Rhizoctonia diseases were diagnosed during the 1986 growing season. This soil-borne pathogen was observed causing a wide variety of

problems on the following crops: alfalfa (foliar blight, stem canker); cabbage (bottom rot); chrysanthemum, gazania, impatiens, ivy, lavatera, marigold, pansy, petunia, zinnia (stem, root and crown rots); begonia (leaf rot); and turf grass (brown patch).

EXPLANATORY REMARKS

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

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

Referrals and consultations: Insect problems were generally identified or verified by a specialist in the Entomology Department. Chemical injury on all commercially grown crops was diagnosed by the Weed Control Specialist or by the Crop Specialist in the Agronomy or Horticulture Departments. On a number of occasions we also consulted with crop specialists in other departments to diagnose or verify abiotic problems.

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

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We would also like to thank all the College of Agriculture Extension Specialists and researchers who served as consultants to the Diagnostic Labs in 1986. Their services ranged from making actual diagnoses to providing answers to plant or pesticide questions. While some of these able consultants may have cringed at the sight of us with dying plant in hand, all were most cooperative. Because these individuals are numerous, and any list is likely to leave someone out, we will not mention them by name (they know who they are). We are grateful to each for their valuable assistance.

Table 1. Total Diagnoses¹ according to crop category and problem area.

Crop Category	Abiotic Problems	Biotic ² Problems	Chemical Injury	Inadequate Specimen	Insect Injury	Other ³	Total Diagnoses
<u>Agronomic</u>							
Corn	74	76	7	4	16	22	199
Forages	34	57	2	9	19	10	131
Small grains	19	28	2	6	0	18	73
Soybeans	30	1844	26	9	4	20	1933
Tobacco	301	431	77	31	17	68	925
<u>Fruit</u>							
Small fruit	26	45	1	13	10	13	108
Tree fruit	33	129	4	10	31	29	236
<u>Herbs</u>	1	18	0	1	2	0	22
<u>Identification</u>	0	22	0	1	1	14	38
<u>Ornamentals</u>							
Herbaceous and Houseplants	80	88	5	18	21	26	238
Turfgrass	19	46	1	7	1	8	82
Woody	388	254	25	79	151	162	1059
<u>Vegetables</u>	96	208	33	30	33	58	458
<u>Miscellaneous</u>	5	0	0	0	0	11	16
<u>Total</u>	1106	3246	183	218	306	459	5518

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

²Refer 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. A breakdown of biotic problems by crop category.

Crop Category	Bacterial	Fungal	Nematode	Virus	Other ¹
<u>Agronomic</u>					
Corn	7	65	0	4	0
Forages	4	53	0	0	0
Small grains	0	26	0	2	0
Soybeans	4	64	1776	0	0
Tobacco	40	279	0	112	0
<u>Fruit</u>					
Small fruit	0	44	0	1	0
Tree fruit	95	34	0	0	0
<u>Herbs</u>					
	1	17	0	0	0
<u>Identification</u>					
	0	22	0	0	0
<u>Ornamentals</u>					
Herbaceous and Houseplants	10	83	1	1	0
Turfgrass	0	46	0	0	0
Woody	20	225	3	6	0
<u>Vegetables</u>					
	67	124	1	16	1
<u>Miscellaneous</u>					
	0	0	0	0	0
<u>Total</u>	248	1082	1781	142	1

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

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

Crop Category	Number of Specimens	Percentage of Total Specimens
Agronomic	2237	43.6
Tobacco	841	16.4
Fruit	316	6.2
Herbs	20	.4
Identifications	38	.8
Ornamentals	1231	24.0
Vegetables	426	8.3
Miscellaneous	16	.3
Total Specimens	5125	100.0

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

Crop Category and Crop	Number of Primary Diagnoses ¹	Number of Secondary Diagnoses ²	Total Diagnoses ³
<u>Agronomic</u>			
Corn	176	23	199
Forage crops	98	33	131
Small grains	68	5	73
Soybeans	1895	38	1933
Tobacco	841	84	925
<u>Fruit Crops</u>			
Small fruit	97	11	108
Tree fruit	219	17	236
<u>Herbs</u>	20	2	22
<u>Identification</u>	38	0	38
<u>Ornamentals</u>			
Herbaceous and Houseplants	215	23	238
Turfgrass	70	12	82
Woody	946	113	1059
<u>Vegetable</u>	426	32	458
<u>Miscellaneous</u>	16	0	16
<u>Total</u>	5125	393	5518

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

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

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

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

Crop Group	Number of Samples								
	Commercial		Homeowner		Research		Institution		
	Ext ¹	Non-Ext ²	Ext ¹	Non-Ext ²	Ext ¹	Non-Ext ²	Ext ¹	Non-Ext ²	
Agronomic									
Tobacco	816	9	2	1	1	12	1	0	0
Other ³	482	13	12	1	1710	19	0	0	0
Fruit	111	2	183	15	2	1	0	1	1
Ornamentals	144	24	895	71	6	10	64	20	20
Vegetables	150	10	239	13	0	13	0	0	0
Other	20	3	44	5	0	0	0	0	0
Total	1723	61	1375	106	1719	55	65	21	21
Grand Total		1784	1481		1774			86	

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

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

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

Table 6. Number of referrals and/or consultations made with other departments or UK lab facilities (1986).

Department or Facility	Agronomic Crops	Fruit Crops	Ornamental Crops	Vegetable Crops	Other	Total
Agronomy Department	194	0	5	2	0	201
Entomology Department	26	32	126	13	3	200
Horticulture Department	2	10	55	42	2	111
Regulatory Services	0	0	3	0	0	3
Nematode Lab	1	0	0	0	0	1
Herbarium	0	0	0	0	7	7

Table 7. Special Laboratory Tests Performed.

Test	Number of Cases
Culturing	144
Incubation	206
Nematode extractions (total = 1744)	
Pinewood nematode	7
Soybean cyst nematode	1736
Other	1
Virus assays (total = 12)	
(Electron Microscope)	2
Indicator plants	10
Soil tests (total = 209)	
pH	197
Soluble salts	8
pH/SS	4
Miscellaneous tests (total = 21)	
Quick nitrate test (tobacco)	21

Table 8. Total number of specimens received from Kentucky counties and out-of-state sources.

COUNTY	Total	Agronomic ¹	Tobacco	Fruit	Ornamentl	Vegetab	Other
ADAIR	1	0	1	0	0	0	0
ALLEN	46	4	14	6	10	7	5
ANDERSON	14	1	4	0	9	0	0
BALLARD	13	2	9	0	0	2	0
BARREN	53	11	17	4	17	4	0
BATH	34	2	16	4	7	5	0
BELL	11	0	0	0	6	4	1
BOONE	29	0	7	4	14	0	4
BOURBON	35	4	13	0	15	3	0
BOYD	25	0	0	1	17	7	0
BOYLE	30	6	3	1	16	3	1
BRACKEN	5	0	2	0	2	0	1
BREATHITT	20	2	4	0	3	6	5
BRECKINRIDGE	21	3	12	0	0	6	0
BULLITT	33	3	3	6	19	2	0
BUTLER	14	6	2	2	4	0	0
CALDWELL	50	4	10	8	13	13	2
CALLOWAY	76	12	44	2	7	10	1
CAMPBELL	4	0	0	2	2	0	0
CARLISLE	36	16	11	2	3	4	0
CARROLL	7	1	3	0	3	0	0
CARTER	6	0	2	0	2	1	1
CASEY	21	4	9	0	2	5	1
CHRISTIAN	86	13	23	11	23	13	3
CLARK	26	1	7	2	11	5	0
CLAY	6	5	0	0	0	1	0
CLINTON	14	1	5	5	1	2	0
CRITTENDEN	22	4	0	7	5	4	2
CUMBERLAND	2	0	2	0	0	0	0
DAVIESS	220	59	38	24	61	35	3
EDMONSON	5	0	4	0	1	0	0
ELLIOTT	5	0	4	0	1	0	0
ESTILL	12	2	3	0	3	3	1
FAYETTE	527	27	37	36	362	56	9
FLEMING	24	4	10	5	3	2	0
FLOYD	5	0	0	1	4	0	0
FRANKLIN	59	3	7	12	30	5	2
FULTON	3	2	0	0	0	1	0
GALLATIN	12	2	4	0	4	2	0
GARRARD	18	1	8	0	3	6	0
GRANT	33	0	13	2	15	3	0
GRAVES	92	14	40	12	20	4	2
GRAYSON	3	1	1	0	0	1	0
GREEN	6	1	2	1	2	0	0
GREENUP	12	0	0	1	9	2	0
HANCOCK	8	4	2	0	2	0	0

HARDIN	41	8	11	1	16	3	2
HARLAN	1	0	0	0	1	0	0
HARRISON	26	3	10	0	10	2	1
HART	21	5	11	1	2	2	0
HENDERSON	31	8	5	2	13	3	0
HENRY	27	5	14	2	4	0	2
HICKMAN	22	13	3	1	4	1	0
HOPKINS	37	15	5	2	10	5	0
JACKSON	6	2	1	0	1	1	1
JEFFERSON	79	5	3	1	60	7	3
JESSAMINE	26	1	10	3	9	2	1
JOHNSON	8	0	1	0	5	2	0
KENTON	14	1	1	5	6	1	0
KNOTT	1	0	0	0	1	0	0
KNOX	8	2	1	4	1	0	0
LARUE	22	3	9	6	2	1	1
LAUREL	21	4	8	1	8	0	0
LAWRENCE	20	1	2	0	12	5	0
LEE	5	0	0	1	3	1	0
LESLIE	3	0	1	2	0	0	0
LETCHER	5	0	0	1	4	0	0
LEWIS	29	2	9	7	3	8	0
LINCOLN	11	3	6	0	2	0	0
LIVINGSTON	25	10	0	6	7	1	1
LOGAN	55	16	18	5	9	7	0
LYON	8	0	4	3	0	1	0
MCCRACKEN	56	8	6	18	22	1	1
MCCREARY	4	1	0	0	3	0	0
MCLEAN	18	3	9	0	4	2	0
MADISON	64	0	21	5	30	7	1
MAGOFFIN	3	0	2	0	0	1	0
MARION	10	1	5	4	0	0	0
MARSHALL	29	4	8	4	10	3	0
MARTIN	13	1	0	1	9	2	0
MASON	15	0	8	2	3	2	0
MEADE	26	6	9	2	5	4	0
MENIFEE	4	0	0	1	2	1	0
MERCER	11	1	2	0	6	2	0
METCALFE	13	4	8	0	1	0	0
MONROE	20	3	5	4	3	5	0
MONTGOMERY	42	3	4	5	26	3	1
MORGAN	16	3	7	1	2	2	1
MUHLENBERG	19	5	7	1	3	2	1
NELSON	33	14	6	4	8	1	0
NICHOLAS	15	4	4	1	2	3	1
OHIO	7	2	3	1	1	0	0
OLDHAM	26	2	1	0	22	0	1
OWEN	22	3	6	3	4	6	0
OWSLEY	20	2	8	2	1	7	0
PENDLETON	5	2	2	0	1	0	0
PERRY	1	0	0	0	0	1	0
PIKE	1	0	0	0	1	0	0
POWELL	7	1	1	0	2	1	2
PULASKI	43	7	5	6	22	3	0
ROBERTSON	2	0	1	0	1	0	0

ROCKCASTLE	8	0	1	3	2	1	1
ROWAN	5	1	2	1	1	0	0
RUSSELL	30	13	5	3	3	6	0
SCOTT	12	1	2	1	7	1	0
SHELBY	45	6	18	0	14	4	3
SIMPSON	10	3	3	0	3	0	1
SPENCER	4	0	0	0	2	2	0
TAYLOR	20	3	8	3	3	3	0
TODD	53	5	17	6	5	19	1
TRIGG	20	3	9	2	3	3	0
TRIMBLE	7	1	5	0	0	1	0
UNION	25	13	2	0	7	2	1
WARREN	61	10	15	2	20	13	1
WASHINGTON	18	0	10	1	5	2	0
WAYNE	24	4	5	0	0	15	0
WEBSTER	51	20	17	4	6	4	0
WHITLEY	2	0	0	0	2	0	0
WOLFE	8	0	6	0	0	2	0
WOODFORD	65	3	18	8	28	7	1
Out-of-State	39	3	33	0	1	2	0
Unknown	1	0	1	0	0	0	0
TOTAL	3389	501	844	314	1230	426	74

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

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
AGRONOMIC CROPS					
<u>Corn</u>					
CORN	(Zea)				
	ANTHRACNOSE	- <u>COLLETOTRICHUM</u>	5	0	5
	BACTERIAL STALK ROT	- <u>ERWINIA</u>	2	2	4
	BARREN STALK	- COMPLEX	1	0	1
	BROWN SPOT	- <u>PHYSODERMA</u>	1	1	2
	CHARCOAL ROT	- <u>MACROPHOMINA</u>	3	0	3
	CHEMICAL, INJURY		7	0	7
	CRAZY TOP	- <u>SCLEROPHTHORA</u>	3	0	3
	EAR/KERNEL ROTS	- <u>ASPERGILLUS</u>	1	0	1
		- <u>DIPLODIA</u>	2	0	2
		- <u>FUSARIUM</u>	1	0	1
		- <u>PENICILLIUM</u>	0	0	0
	ENVIRONMENTAL	- DROUGHT	3	2	5
		- OTHER STRESSES	6	0	6
	GRAY LEAF SPOT	- <u>CERCOSPORA</u>	15	1	16
	INADEQUATE SPECIMEN, NO DISEASE		20	0	20
	INSECT INJURY		13	3	16
	LEAF SPOT	- <u>PHYLLOSTICTA</u>	2	0	2
		- <u>SETOSPHAERIA</u>	0	0	0
	MUTATION	- GENETIC	1	0	1
	NORTHERN CORN LEAF BLIGHT	- <u>SETOSPHAERIA</u>	1	1	2
	NUTRITIONAL	- ACID SOIL	17	1	18
		- P DEFICIENCY	7	0	7
		- ZN DEFICIENCY	28	1	29
		- OTHER	6	1	7
	PURPLE LEAF SHEATH	- COMPLEX	4	0	4
	REFERRALS		6	0	6
	RUST	- <u>PUCCINIA</u>	4	1	5
	SMUT	- <u>USTILAGO</u>	4	0	4
	SOUTHERN CORN LEAF BLIGHT	- <u>COCHLIOBULUS</u>	0	2	2
	STALK ROTS	- <u>DIPLODIA</u>	2	2	4
		- <u>GIBBERELLA</u>	4	3	7
	STEWART'S WILT	- <u>ERWINIA</u>	3	0	3
	VIRUS	- COMPLEX	2	0	2
		- MAIZE CHLOROTIC DWARF	2	0	2
<u>Forages</u>					
ALFALFA	(Medicago)				
	ANTHRACNOSE	- <u>COLLETOTRICHUM</u>	2	2	4
	BACTERIAL LEAF SPOT	- <u>XANTHOMONAS</u>	1	0	1
	BACTERIAL STEM BLIGHT	- <u>PSEUDOMONAS</u>	1	0	1
	BACTERIAL WILT	- <u>CLAVIBACTER</u>	1	0	1
	CHEMICAL INJURY		2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
ALFALFA (cont)					
	CROWN ROT	- COMPLEX	0	1	1
	CROWN/ROOT ROT	- <u>FUSARIUM</u>	2	1	3
	CROWN/STEM ROT	- <u>SCLEROTINIA</u>	3	0	3
	DAMPING-OFF	- <u>PYTHIUM</u>	0	1	1
	DOWNY MILDEW	- <u>PERONOSPORA</u>	1	0	1
	ENVIRONMENTAL STRESS		6	2	8
	FOLIAR BLIGHT	- <u>RHIZOCTONIA</u>	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		13	0	13
	INSECT INJURY		14	5	19
	LEAF SPOTS	- FUNGAL	3	4	7
		- <u>LEPTOSPHAERULINA</u>	7	1	8
		- <u>PSEUDOPEZIZA</u>	4	0	4
		- <u>STEMPHYLIUM</u>	1	1	2
	NUTRITIONAL	- ACID SOIL	4	2	6
		- B DEFICIENCY	4	1	5
		- OTHER	2	2	4
	ROOT ROT	- <u>RHIZOCTONIA</u>	1	0	1
	SOUTHERN BLIGHT	- <u>SCLEROTIUM</u>	1	0	1
	SPRING BLACK STEM	- <u>PHOMA</u>	2	0	2
	STEM CANKER	- <u>RHIZOCTONIA</u>	2	2	4
	SUMMER BLACK STEM	- <u>CERCOSPORA</u>	1	0	1
CLOVER (<u>Trifolium</u>)					
	BLACK PATCH	- <u>RHIZOCTONIA</u>	2	0	2
	INADEQUATE SPECIMEN		3	0	3
	ROOT ROT	- FUNGAL	3	0	3
FESCUE (<u>Festuca</u>)					
	DAMPING-OFF	- <u>RHIZOCTONIA</u>	1	0	1
	ENVIRONMENTAL STRESS		2	0	2
	INADEQUATE SPECIMEN		2	0	2
	NUTRITIONAL	- P DEFICIENCY	1	0	1
	REFERRAL		1	0	1
	RUST	- <u>PUCCINIA</u>	1	0	1
MILLETT (<u>Panicum</u>)					
	NUTRITIONAL	- P DEFICIENCY	1	0	1
ORCHARDGRASS (<u>Dactylis</u>)					
	NUTRITIONAL		1	0	1
	ROOT ROT	- <u>RHIZOCTONIA</u>	1	0	1
TIMOTHY (<u>Phleum</u>)					
	BROWN STRIPE	- <u>CERCOSPORIDIUM</u>	1	0	1
WEED (Unidentified)					
	POWDERY MILDEW	- <u>OIDIUM</u>	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
<u>Soybean</u>					
SOYBEAN	(<u>Glycine</u>)				
	ANTHRACNOSE	- <u>COLLETOTRICHUM</u>	5	5	10
	BACTERIAL BLIGHT	- <u>PSEUDOMONAS</u>	2	0	2
	BACTERIAL PUSTULE	- <u>XANTHOMONAS</u>	2	0	2
	BLIGHT	- <u>FUSARIUM</u>	0	1	1
	BROWN SPOT	- <u>SEPTORIA</u>	3	0	3
	BROWN STEM ROT	- <u>PHIALOPHORA</u>	1	0	1
	CHARCOAL ROT	- <u>MACROPHOMINA</u>	4	3	7
	CHEMICAL INJURY		26	0	26
	DAMPING-OFF	- FUNGAL	1	0	1
	FROG-EYE	- <u>CERCOSPORA</u>	0	1	1
	ENVIRONMENTAL STRESS		2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		27	0	27
	INSECT INJURY		4	0	4
	NUTRITIONAL	- K DEFICIENCY	8	4	12
		- OTHER	4	0	4
	MUTATION	- GENETIC	1	0	1
	POD/STEM ROT	- <u>DIAPORTHE</u>	6	5	11
	REFERRAL		2	0	2
	ROOT ROT	- <u>PYTHIUM</u>	1	0	1
	ROOT/STEM ROT	- <u>PHYTOPHTHORA</u>	4	0	4
		- <u>RHIZOCTONIA</u>	8	2	10
	SOUTHERN BLIGHT	- <u>SCLEROTIUM</u>	2	0	2
	SOYBEAN CYST NEMATODE	- on plant samples	38	8	40
	<u>HETERODERA</u>	- in soil samples	1614	0	1614
		- absent in soil samples	122	0	122
	(*soil without plants submitted for SCN analysis)				
	STEM CANKER	- <u>DIAPORTHE</u>	3	0	3
	SUDDEN DEATH SYNDROME		10	0	10
<u>Small Grains</u>					
BARLEY	(<u>Hordeum</u>)				
	ENVIRONMENTAL	- DROUGHT	1	0	1
	NET BLOTCH	- <u>DRECHSLERA</u>	1	0	1
	NUTRITIONAL	- N DEFICIENCY	1	0	1
OAT	(<u>Avena</u>)				
	CHEMICAL INJURY		1	0	1
	INADEQUATE SPECIMEN		1	0	1
	RUST	- <u>PUCCINIA</u>	1	0	1
RYE	(<u>Secale</u>)				
	SMUT	- <u>USTILAGO</u>	1	0	1
SORGHUM	(<u>Sorghum</u>)				
	ANTHRACNOSE	- <u>COLLETOTRICHUM</u>	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
SORGHUM (cont)					
	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	ROOT ROT	- <u>FUSARIUM, RHIZOCTONIA</u>	2	0	2
	TARGET SPOT	- <u>BIPOLARIS</u>	1	0	1
	VIRUS	- MAIZE DWARF MOSAIC	1	0	1
WHEAT (<u>Triticum</u>)					
	CHEMICAL INJURY		1	0	1
	ENVIRONMENTAL STRESS		14	1	15
	GLUME BLOTCH	- <u>SEPTORIA</u>	4	1	5
	HEAD SCAB	- <u>GIBBERELLA</u>	0	1	1
	INADEQUATE SPECIMEN, NO DIAGNOSIS		18	0	18
	NUTRITIONAL	- ACID SOIL	1	0	1
	PHYSIOLOGICAL		1	0	1
	POWDERY MILDEW	- <u>ERYSIPHE</u>	1	2	3
	RUST (LEAF)	- <u>PUCCINIA</u>	3	0	3
	SMUT	- <u>USTILAGO</u>	1	0	1
	SPOT BLOTCH	- <u>COCHLIOBULUS</u>	2	0	2
	TAKE-ALL	- <u>GAEUMANNOMYCES</u>	4	0	4
	VIRUS	- WHEAT SPINDLE STREAK	1	0	1
<u>Tobacco</u>					
TOBACCO (<u>Nicotiana</u>)					
	ANGULAR LEAF SPOT	- <u>PSEUDOMONAS</u>	25	1	26
	ANTHRACNOSE	- <u>COLLETOTRICUM</u>	6	1	7
	BACTERIAL BLACK STALK	- <u>ERWINIA</u>	1	0	1
	BACTERIAL SOFT ROT	- <u>ERWINIA</u>	3	2	5
	BLACK LEG	- <u>ERWINIA</u>	5	0	5
	BLACK ROOT ROT	- <u>THIELAVIOPSIS</u>	32	5	37
	BLACK SHANK	- <u>PHYTOPHTHORA</u>	175	0	175
	BLACKFIRE	- <u>PSEUDOMONAS</u>	2	0	2
	BLUE MOLD	- <u>PERONOSPORA</u>	2	0	2
	BROWN SPOT	- <u>ALTERNARIA</u>	3	3	6
	CHEMICAL INJURY	- GROWTH REGULATOR	45	0	45
		- OTHER HERBICIDES	18	0	18
		- OTHER CHEMICALS	12	2	14
	EARLY FLOWERING	- ENVIRONMENTAL	1	0	1
	ENVIRONMENTAL	- COLD INJURY	5	3	8
		- COMPACTION	3	4	7
		- DROUGHT	9	2	11
		- LIGHTNING	15	0	15
		- WET FEET	10	2	12
		- WEATHER SCALD	20	3	23
		- OTHER STRESSES	12	0	12
	FALSE BROOMRAPE		1	0	1
	FROGEYE	- <u>CERCOSPORA</u>	8	0	8
	IMPROPER CURING		2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
TOBACCO (cont)					
	INADEQUATE SPECIMEN		31	0	31
	INSECT INJURY		14	3	17
	LEAF SPOT	- <u>RHIZOCTONIA</u>	1	0	1
	MUTATION	- GENETIC	3	0	3
	NO DISEASE		66	0	66
	NUTRITIONAL	- ACID SOIL/MN TOXICITY	83	9	92
		- FERTILIZER BURN	37	1	38
		- K DEFICIENCY	13	2	15
		- N DEFICIENCY	10	3	13
		- P DEFICIENCY	19	0	19
		- OTHER	2	6	8
	PHYSICAL INJURY		12	0	12
	RAGGED SPOT	- <u>ASCOCHYTA</u>	1	1	2
	REFERRAL		1	0	1
	ROOT PROBLEM		5	3	8
	ROOT ROT	- <u>RHIZOCTONIA</u>	7	5	12
	ROOT/STEM ROT	- FUNGAL	1	0	1
	SOFT ROT	- <u>PYTHIUM</u>	3	1	4
	SOOTY MOLD		1	2	3
	SORE SHIN	- <u>RHIZOCTONIA</u>	12	5	17
	STEM CANKER	- UNKNOWN BACTERIUM	1	0	1
	STORAGE MOLDS	- <u>ASPERGILLUS, PENICILLIUM</u>	2	0	2
	VIRUS	- ALFALFA MOSAIC VIRUS	1	1	2
		- COMPLEX	23	2	25
		- TOBACCO ETCH	9	4	13
		- TOBACCO MOSAIC	1	0	1
		- TOBACCO RINGSPOT	5	1	6
		- TOBACCO STREAK	1	0	1
		- TOMATO SPOTTED WILT	57	1	58
		- TOBACCO VEIN MOTTLING	2	2	4
		- UNKOWN	1	1	2
	WEATHER FLECK	- OZONE	1	1	2

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
FRUIT CROPS					
<u>Small Fruits</u>					
BLUEBERRY (<u>Vaccinium</u>)					
	ENVIRONMENTAL STRESS		1	1	2
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	SECONDARY LEAF BLIGHT	- <u>ALTERNARIA</u>	1	0	1
BRAMBLES - Blackberry and Raspberry (<u>Rubus</u>)					
	ANTHRACNOSE	- <u>ELSINOE</u>	3	0	3
	CANE BLIGHT	- <u>LEPTOSPHERIA</u>	1	0	1
	CHEMICAL INJURY		1	0	1
	ENVIRONMENTAL STRESS		8	1	9
	INADEQUATE SPECIMEN, NO DISEASE		8	0	8
	INSECT INJURY		4	2	6
	LEAF SCORCH		1	0	1
	LEAF SPOTS	- <u>CERCOSPORA, CERCOSPORELLA,</u> <u>MYCOSPHAERELLA</u>	4	0	4
	REFERRAL		1	0	1
	ROOT PROBLEM		2	0	2
	ROOT ROT	- <u>RHIZOCTONIA</u>	1	0	1
	SPUR BLIGHT	- <u>DIDYMELLA</u>	1	0	1
	VIRUS	- <u>STERILITY</u>	1	0	1
GRAPE (<u>Vitis</u>)					
	BITTER ROT	- <u>MELANCONIUM</u>	1	0	1
	BLACK ROT	- <u>GUIGNARDIA</u>	5	0	5
	DOWNY MILDEW	- <u>PERONOSPORA</u>	1	0	1
	ENVIRONMENTAL STRESS		1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	INSECT INJURY		2	0	2
	NUTRITIONAL	- B DEFICIENCY	2	0	2
STRAWBERRY (<u>Fragaria</u>)					
	BLACK ROOT	- <u>COMPLEX</u>	5	0	5
		- <u>FUSARIUM</u>	0	4	4
		- <u>PYTHIUM, PYTHIACEOUS</u>	4	0	4
		- <u>RHIZOCTONIA</u>	4	1	5
	CROWN ROT	- <u>FUNGAL</u>	1	0	1
	ENVIRONMENTAL STRESS		7	0	7
	INADEQUATE SPECIMEN, NO DISEASE		8	0	8
	INSECT INJURY		2	0	2
	LEAF BLIGHT	- <u>PHOMOPSIS</u>	5	1	6
	LEAF SCORCH	- <u>DIPLOCARPON</u>	1	0	1
	LEAF SPOT	- <u>MYCOSPHAERELLA</u>	1	1	2
	WILT	- <u>VERTICILLIUM</u>	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
<u>Tree Fruits</u>					
APPLE	(<u>Malus</u>)				
	BITTER PIT	- CA DEFICIENCY	1	0	1
	CEDAR APPLE RUST	- <u>GYMNOSPORANGIUM</u>	10	1	11
	CANKER	- <u>LEPTOSPHAERIA</u>	1	0	1
	CANKER/ROT	- <u>BOTRYOSPHAERIA</u>	1	0	1
	CHEMICAL INJURY		2	0	2
	CROWN GALL	- <u>AGROBACTERIUM</u>	1	0	1
	ENVIRONMENTAL STRESS		2	1	3
	FIRE BLIGHT	- <u>ERWINIA</u>	64	0	64
	FROGEYE LEAF SPOT	- <u>PHYSALOSPORA</u>	0	1	1
	GRAFT INCOMPATIBILITY		2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		10	0	10
	INSECT INJURY		15	6	21
	LEAF SCORCH		1	0	1
	NUTRITIONAL	- GENERAL	3	0	3
	PHYSICAL INJURY		2	0	2
	POWDERY MILDEW	- <u>PODOSPHAERA</u>	1	0	1
	REFERRAL		1	0	1
	SOUTHERN BLIGHT	- <u>SCLEROTIUM</u>	1	0	1
	SOOTY MOLD		2	0	2
	TRANSPLANT SHOCK		1	0	1
CHERRY	(<u>Prunus</u>)				
	BACTERIAL CANKER	- <u>PSEUDOMONAS</u>	1	0	1
	CANKER	- <u>BOTRYOSPHAERIA</u>	1	0	1
	CHEMICAL INJURY		0	1	1
	ENVIRONMENTAL STRESS		4	1	5
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	INSECT INJURY		1	1	2
	LEAF SPOT	- <u>COCCOMYCES</u>	1	0	1
	POWDERY MILDEW	- <u>PODOSPHAERA</u>	1	0	1
	TRANSPLANT SHOCK, OTHER ROOT PROBLEMS		2	0	2
PEACH and NECTARINE	(<u>Prunus</u>)				
	BLACK KNOT	- <u>DIBOTRYON</u>	1	0	1
	BROWN ROT	- <u>MONILINIA</u>	3	0	3
	CANKER	- <u>CYTOSPORA</u>	1	0	1
	ENVIRONMENTAL STRESS		2	2	4
	INADEQUATE SPECIMEN, NO DISEASE		13	0	13
	INSECT INJURY		4	0	4
	NUTRITIONAL	- N DEFICIENCY	2	0	2
	SCAB	- <u>FUSICLADIUM</u>	4	1	5
	TRANSPLANT SHOCK		4	0	4
PEAR	(<u>Pyrus</u>)				
	CHEMICAL INJURY		1	0	1
	FIRE BLIGHT	- <u>ERWINIA</u>	29	0	29

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
PEAR	(cont)				
	INADEQUATE SPECIMEN, NO DISEASE		8	0	8
	INSECT INJURY		0	1	1
	LEAF SCORCH		1	0	1
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
PECAN	(Carya)				
	KERNEL SPOT, OTHER INSECT PROBLEMS		2	0	2
PLUM	(Prunus)				
	BLACK KNOT	- <u>DIBOTRYON</u>	1	0	1
	ENVIRONMENTAL	- WET FEET	1	0	1
	INSECT INJURY		1	0	1
	LEAF SPOT	- <u>COCCOMYCES</u>	1	0	1
	NO DISEASE		3	0	3
	SCAB	- <u>FUSICLADIUM</u>	1	0	1
	TRANSPLANT SHOCK		0	1	1

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
HERBS					
BASIL	(Ocimum) GRAY MOLD	- <u>BOTRYTIS</u>	1	0	1
GINSENG	BLIGHT	- <u>ALTERNARIA</u>	5	0	5
	DAMPING-OFF	- <u>FUSARIUM, PYTHIUM,</u> <u>RHIZOCTONIA</u>	2	1	3
HEMP	(Cannabis) BACTERIAL SOFT ROT	- <u>ERWINIA</u>	1	0	1
LAMBS EAR	(Stachys) ROOT ROT	- <u>PYTHIUM, RHIZOCTONIA</u>	1	1	2
ROSEMARY	(Rosmarinus) ROOT ROT	- <u>RHIZOCTONIA</u>	1	0	1
SALVIA	(Salvia) CULTURAL		1	0	1
	SLIME MOLD		1	0	1
	ROOT ROT	- <u>PYTHIUM, RHIZOCTONIA</u>	2	0	2
SWEET WOODRUFF	(Galium) SOUTHERN BLIGHT	- <u>SCLEROTIUM</u>	1	0	1
TARRAGON	(Artemesia) SOUTHERN BLIGHT	- <u>SCLEROTIUM</u>	1	0	1
MISCELLANEOUS HERBS	INADEQUATE SPECIMEN		1	0	1
	INSECT INJURY		2	0	2
IDENTIFICATIONS					
FUNGAL IDENTIFICATION	BASIDIOMYCETES	- PUFFBALLS, MUSHROOMS	15	0	15
		- FUNGAL FELT	1	0	1
	MYXOMYCETES	- SLIME MOLDS	7	0	7
INSECT IDENTIFICATION	REFERRAL TO ENTOMOLOGY		1	0	1
PLANT IDENTIFICATION	ALGAE, MOSS, LICHEN		3	0	3
	INADEQUATE SPECIMEN		1	0	1
	VASCULAR PLANTS (Referrals to Herbarium)		11	0	11

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
MISCELLANEOUS					
SOIL					
	NO DISEASE		6	0	6
	NUTRITIONAL	- ACID SOIL	5	0	5
	REFERRALS	- REGULATORY SERVICES	3	0	3
OTHER					
	NO DISEASE		2	0	2
ORNAMENTALS					
<u>Herbaceous ornamentals and indoor plants</u>					
AFRICAN VIOLET (<u>Saintpaulia</u>)					
	CULTURAL	- OVERWATERING, RINGSPOT	2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		2	1	3
	NEMATODE	- <u>PRATYLENCHUS</u>	1	0	1
	NUTRITIONAL	- FERTILIZER BURN	1	0	1
	POWDERY MILDEW	- <u>OIDIUM</u>	1	0	1
AJUGA (<u>Ajuga</u>)					
	CROWN ROT	- <u>SCLEROTIUM</u>	4	0	4
	INADEQUATE, NO DISEASE		1	0	1
BEGONIA (<u>Begonia</u>)					
	INADEQUATE, NO DISEASE		3	0	3
	INSECT INJURY		0	1	1
	LEAF ROT	- <u>RHIZOCTONIA</u>	1	0	1
	LEAF SCORCH		1	0	1
	POWDERY MILDEW	- <u>OIDIUM</u>	1	0	1
	ROOT ROT	- <u>RHIZOCTONIA</u>	2	0	2
BENJAMIN FIG (<u>Ficus</u>)					
	CANKER	- <u>PHOMOPSIS</u>	1	0	1
	CULTURAL		2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
CACTUS (Various)					
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	ROOT ROT	- <u>PYTHIUM</u>	1	0	1
	ROOT/STEM ROT	- <u>FUSARIUM</u>	1	0	1
CHRYSANTHEMUM (<u>Chrysanthemum</u>)					
	NUTRITIONAL	- GENERAL	1	1	2

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
CHRYSANTHEMUM (cont)					
		- SOLUBLE SALTS	3	0	3
	ROOT ROT	- <u>PYTHIUM</u>	1	1	2
	ROOT/STEM ROT	- <u>RHIZOCTONIA</u>	1	1	2
CITRUS (<u>Citrus</u>)					
	INSECT INJURY		1	0	1
	SOOTY MOLD		1	0	1
CLEMATIS (<u>Clematis</u>)					
	LEAF SCORCH		1	0	1
	LEAF SPOT	- FUNGAL	1	0	1
COSMOS (<u>Cosmos</u>)					
	DODDER	- <u>CUSCUTA</u>	1	0	1
CRAPEMYRTLE (<u>Lagerstroemia</u>)					
	POWDERY MILDEW	- <u>SPHAEROTHECA</u>	1	0	1
CROTON (<u>Codiaeum</u>)					
	ROOT ROT	- <u>PYTHIUM</u>	1	0	1
DRACAENA (<u>Dracaena</u>)					
	CULTURAL		5	0	5
EPISCIA (<u>Episcia</u>)					
	CULTURAL		0	1	1
	ROOT ROT	- <u>PYTHIUM</u>	1	0	1
EXACUM (<u>Exacum</u>)					
	ROOT ROT	- <u>PYTHIUM</u>	1	0	1
FERN (Various)					
	CULTURAL		3	1	4
	INSECT INJURY		1	0	1
	ROOT ROT	- <u>PYTHIUM</u>	1	0	1
FIG (<u>Ficus</u>)					
	LEAF SPOT	- UNKNOWN	1	0	1
GAZANIA (<u>Gazania</u>)					
	CROWN ROT	- <u>RHIZOCTONIA</u>	1	0	1
GERANIUM (<u>Pelargonium</u>)					
	BACTERIAL BLIGHT	- <u>XANTHOMONAS</u>	2	0	2
	BLACK LEG	- <u>PYTHIUM</u>	5	0	5
	CULTURAL	- <u>OEDEMA</u>	1	2	3
	NO DISEASE		3	0	3

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
GERANIUM (cont)	NUTRITIONAL		4	1	5
GERBERA (<u>Gerbera</u>)	ROOT ROT	- <u>PYTHIUM</u>	1	0	1
GLADIOLUS (<u>Gladiolus</u>)	BROWN ROT	- <u>FUSARIUM</u>	3	0	3
IMPATIENS (<u>Impatiens</u>)	CHEMICAL INJURY		1	0	1
	CULTURAL		2	0	2
	GRAY MOLD	- <u>BOTRYTIS</u>	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		6	0	6
	ROOT ROT	- <u>RHIZOCTONIA</u>	1	0	1
	STEM DECAY	- <u>FUNGAL</u>	1	0	1
	STEM/LEAF ROT	- <u>BACTERIAL</u>	1	0	1
IRIS (<u>IRIS</u>)	BACTERIAL SOFT ROT	- <u>ERWINIA</u>	4	0	4
	LEAF SPOT	- <u>DIDYMELLINA</u>	1	0	1
IVY (<u>Various</u>)	CULTURAL, ENVIRONMENTAL		3	0	3
	INSECT INJURY		1	0	1
	LEAF SPOTS	- <u>COLLETOTRICHUM,</u> <u>PHYLLOSTICTA</u>	1	1	2
	ROOT ROT	- <u>PYTHIUM</u>	0	1	1
	ROOT/STEM ROT	- <u>RHIZOCTONIA</u>	3	0	3
JADE PLANT (<u>Crassula</u>)	CULTURAL		3	0	3
LANTANA (<u>Lantana</u>)	ROOT ROT	- <u>PYTHIUM</u>	1	0	1
LAVATERA (<u>Lavatera</u>)	ROOT ROT	- <u>PYTHIUM, RHIZOCTONIA</u>	1	1	2
LILY (<u>Lilium</u>)	CULTURAL, NO DISEASE		2	0	2
	LEAF SPOT	- <u>COLLETOTRICHUM</u>	1	0	1
	ROOT PROBLEM		1	0	1
MARIGOLD (<u>Tagetes</u>)	AIR POLLUTION	- <u>ETHYLENE</u>	1	0	1
	CHEMICAL INJURY		1	0	1
	COLLAR ROT	- <u>PYTHIUM</u>	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
MARIGOLD (cont)					
	CROWN GALL	- <u>AGROBACTERIUM</u>	1	0	1
	CULTURAL, ENVIRONMENTAL		2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	INSECT INJURY		2	0	2
	LEAF SPOT	- <u>ALTERNARIA</u>	1	0	1
	ROOT ROT	- <u>RHIZOCTONIA</u>	1	0	1
ORCHID (Various spp.)					
	CULTURAL		1	0	1
	VIRUS	- UNKNOWN	1	0	1
PACHYSANDRA (Pachysandra)					
	LEAF/STEM BLIGHT	- <u>VOLUTELLA</u>	8	0	8
PANSY (Viola)					
	STEM ROT	- <u>RHIZOCTONIA</u>	1	0	1
PEONY (Paeonia)					
	BLIGHT	- <u>BOTRYTIS</u>	3	0	3
	BUD BLAST	- ENVIRONMENTAL	1	0	1
	BUD/STEM BLAST	- <u>DIPLODIA</u>	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		1	0	1
	INSECT INJURY		1	0	1
PETUNIA (Petunia)					
	INSECT INJURY		1	0	1
	NO DISEASE		1	0	1
	ROOT ROT	- <u>PYTHIUM, RHIZOCTONIA</u>	2	0	2
POINSETTIA (Euphorbia)					
	BACTERIAL STEM ROT	- <u>ERWINIA</u>	1	0	1
	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	ROOT ROT	- <u>PYTHIUM, RHIZOCTONIA</u>	2	1	3
	STEM ROT	- <u>ERWINIA</u>	1	0	1
RUBBER PLANT (Ficus)					
	CULTURAL	- GENERAL	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	NUTRITIONAL	- N DEFICIENCY	1	0	1
SCHEFFLERA (Brassaia)					
	CULTURAL	- OEDEMA, OTHER	5	1	6
	INADEQUATE SPECIMEN, NO DISEASE		1	0	1
	INSECT INJURY		1	1	2
SNAPDRAGON (ANTIRRHINUM)					
	BLACK ROOT ROT	- <u>THIELAVIOPSIS</u>	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
SNAPDRAGON (cont)					
	ROOT ROT	- <u>PYTHIUM</u>	1	0	1
	ROOT/STEM ROT	- <u>RHIZOCTONIA</u>	1	0	1
SPATHIPHYLLUM (SPATHIPHYLLUM)					
	ROOT ROT	- CHYTRID, <u>RHIZOCTONIA</u>	1	1	2
VINCA (<u>Vinca</u>)					
	CANKER/DIEBACK	- <u>PHOMA</u>	4	0	4
	NO DISEASE		1	1	2
	ROOT ROT	- <u>PELLICULARIA</u>	1	0	1
	ROOT/STEM ROT	- <u>RHIZOCTONIA</u>	1	1	2
	SOUTHERN BLIGHT	- <u>SCLEROTIUM</u>	1	0	1
ZINNIA (<u>Zinnia</u>)					
	NO DISEASE		1	0	1
	NUTRITIONAL		2	0	2
	ROOT ROT, STEM ROT	- <u>RHIZOCTONIA</u> , OTHER	2	0	2
MISCELLANEOUS HERBACEOUS ORNAMENTALS					
	CHEMICAL INJURY		2	0	2
	CULTURAL, ENVIRONMENTAL		15	3	18
	INADEQUATE SPECIMEN, NO DISEASE		11	0	11
	INSECT INJURY		7	0	7

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
<u>Turfgrass</u>					
BENTGRASS (<u>Agrostis</u>)					
	ANTHRACNOSE	- <u>COLLETOTRICHUM</u>	1	0	1
	BLIGHT	- <u>PYTHIUM</u>	1	0	1
	CHEMICAL INJURY		1	0	1
	ENVIRONMENTAL STRESS		1	0	1
	FADING-OUT	- <u>CURVULARIA</u>	1	1	2
	NUTRITIONAL	- <u>N DEFICIENCY</u>	1	0	1
	YELLOW PATCH	- <u>RHIZOCTONIA</u>	1	0	1
BLUEGRASS (<u>Poa</u>)					
	BROWN PATCH	- <u>RHIZOCTONIA</u>	2	0	2
	CULTURAL		3	0	3
	DOLLAR SPOT	- <u>LANZIA MOELLERODISCUS</u>	1	2	3
	GRAY SNOW MOLD	- <u>TYPHULA</u>	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		6	0	6
	LEAF SPOTS	- <u>ASCOCHYTA, DRECHSLERA</u>	0	2	2
	NECROTIC RING SPOT	- <u>LEPTOSPHERIA</u>	4	0	4
	POWDERY MILDEW	- <u>ERYSIPHE</u>	1	0	1
	RED THREAD	- <u>LAETISARIA</u>	3	0	3
	RUST	- <u>PUCCINIA</u>	1	0	1
	YELLOW PATCH	- <u>RHIZOCTONIA</u>	1	0	1
FESCUE (<u>Festuca</u>)					
	ANTHRACNOSE	- <u>COLLETOTRICHUM</u>	1	0	1
	BROWN PATCH	- <u>RHIZOCTONIA</u>	4	1	5
	CULTURAL, ENVIRONMENTAL		6	2	8
	DAMPING-OFF	- <u>RHIZOCTONIA</u>	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	LEAF SPOTS	- <u>ASCOCHYTA</u>			
		- <u>DRECHSLERA, RHIZOCTONIA</u>	5	2	7
RYEGRASS (<u>Lolium</u>)					
	DAMPING-OFF	- <u>RHIZOCTONIA</u>	1	0	1
TURF (<u>Various</u>)					
	CULTURAL, ENVIRONMENTAL		5	0	5
	DOLLAR SPOT	- <u>LANZIA, MOELLERODISCUS</u>	2	0	2
	FADING-OUT	- <u>CURVULARIA</u>	0	2	2
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	INSECT INJURY		1	0	1
	SLIME MOLD	- <u>PHYSARUM</u>	3	0	3

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
<u>Woody Ornamentals</u>					
ARBORVITAE	(<u>Thuja</u>)				
	ENVIRONMENTAL STRESS		5	0	5
	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	INSECT INJURY		3	1	4
	NORMAL NEEDLE DROP		1	0	1
	TRANSPLANT SHOCK		1	0	1
ASH	(<u>Fraxinus</u>)				
	ANTHRACNOSE	- <u>GLOEOSPORIUM</u>	3	0	3
	ENVIRONMENTAL STRESS		2	0	2
	INSECT INJURY		2	0	2
AZALEA	- See RHODODENDRON				
BARBERRY	(<u>Berberis</u>)				
	CUTTING ROT	- <u>FUSARIUM</u>	1	0	1
	NO DISEASE		1	0	1
BIRCH	(<u>Betula</u>)				
	CHEMICAL	- GROWTH REGULATOR	1	0	1
	ENVIRONMENTAL STRESS		3	1	4
	INSECT INJURY		3	0	3
	LEAF SPOT	- <u>GLOEOSPORIUM</u>	1	0	1
	NO DISEASE		5	0	5
	TRANSPLANT SHOCK		2	0	2
	VIRUS	- LINE PATTERN MOSAIC	1	0	1
BOXWOOD	(<u>Buxus</u>)				
	CANKER	- <u>PSEUDONECTRIA</u>	3	0	3
	ENVIRONMENTAL STRESS		4	1	5
	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	LEAF SPOT	- <u>MACROPHOMA</u>	0	1	1
	TRANSPLANT SHOCK		1	0	1
COTONEASTER	(<u>Cotoneaster</u>)				
	INSECT INJURY		1	0	1
	ROOT PROBLEM		1	0	1
	ROOT ROT	- <u>PHYTOPHTHORA, RHIZOCTONIA</u>	1	1	2
CRABAPPLE	(<u>Malus</u>)				
	CANKER	- FUNGAL	1	0	1
	ENVIRONMENTAL STRESS		1	1	2
	FIRE BLIGHT	- <u>ERWINIA</u>	13	0	13
	INADEQUATE SPECIMEN, NO DISEASE		4	0	4
	LEAF SPOT	- FUNGAL	1	0	1
	SCAB	- <u>VENTURIA</u>	4	1	5

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
CRABAPPLE (cont)	TRANSPLANT SHOCK		2	1	3
DOGWOOD (<u>Cornus</u>)	ENVIRONMENTAL STRESS		14	2	16
	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	LEAF SPOT	- <u>PHYLLOSTICTA</u>	1	0	1
	ROOT ROT	- <u>PYTHIUM</u>	1	0	1
ELM (<u>Ulmus</u>)	DUTCH ELM DISEASE	- <u>CERATOCYSTIS</u>	6	0	6
	ENVIRONMENTAL STRESS		2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		1	0	1
	LEAF SPOT	- <u>GNOMONIA</u>	1	0	1
EUONYMUS (<u>Euonymus</u>)	CHEMICAL INJURY	- GROWTH REGULATOR	1	0	1
	ENVIRONMENTAL STRESS		2	0	2
	INSECT INJURY	- SCALE	2	0	2
	NO DISEASE		2	0	2
	SOOTY MOLD		1	0	1
	TRANSPLANT SHOCK, OTHER ROOT PROBLEMS		2	0	2
FIR (<u>Abies</u>)	REFERRA TO HORTICULTURE		1	0	1
	TRANSPLANT SHOCK, OTHER ABIOTIC PROBLEMS		3	0	3
HAWTHORN (<u>Crataegus</u>)	CEDAR-HAWTHORN RUST	- <u>GYMNOSPORANGIUM</u>	2	0	2
	INSECT INJURY		2	1	3
	LEAF SCORCH		1	0	1
HEMLOCK (<u>Tsuga</u>)	ENVIRONMENTAL STRESS		4	0	4
	INADEQUATE SPECIMEN, NO DISEASE		5	0	5
	INSECT INJURY		5	1	6
HICKORY (<u>Carya</u>)	INADEQUATE SPECIMEN, INSECT INJURY, NO DISEASE		3	0	3
	ROOT ROT	- PYTHIACEOUS	1	0	1
HOLLY and INKBERRY (<u>Ilex</u>)	BLACK ROOT ROT	- <u>THIELAVIOPSIS</u>	5	0	5
	CULTURAL, ENVIRONMENTAL		4	0	4
	CUTTING ROT	- <u>FUSARIUM</u>	1	0	1
	INSECT INJURY		1	2	3
	LEAF SPOTS	- <u>PHYLLOSTICTA</u> , OTHER	2	0	2
	NO DISEASE		4	0	4

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
HOLLY and INKBERRY (cont)					
	PURPLE LEAF BLOTCH	- PHYSIOLOGICAL	2	0	2
	ROOT PROBLEM		2	0	2
	ROOT ROT	- <u>PYTHIACEOUS, RHIZOCTONIA</u>	4	0	4
JUNIPER (<u>Juniperus</u>)					
	CEDAR-APPLE RUST	- <u>GYMNOSPORANGIUM</u>	4	0	4
	CULTURAL, ENVIRONMENTAL		12	3	15
	CUTTING ROT	- <u>FUSARIUM, PYTHIUM</u>	1	1	2
	DIEBACK	- <u>PESTALOTIA</u>	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		23	1	24
	INSECT INJURY		13	6	19
	NEEDLE BLIGHT	- <u>PESTALOTIA</u>	0	1	1
	ROOT PROBLEM		6	1	7
	ROOT ROT	- <u>FUSARIUM</u>	0	1	1
		- <u>PHYTOPHTHORA</u>	3	0	3
		- <u>PYTHIUM, PYTHIACEOUS</u>	5	2	7
	TRANSPLANT SHOCK		3	0	3
	TWIG BLIGHT	- FUNGAL	1	0	1
		- <u>KABATINA</u>	13	0	13
		- <u>PHOMOPSIS</u>	5	0	5
LILAC (<u>Syringa</u>)					
	BACTERIAL BLIGHT	- <u>PSEUDOMONAS</u>	1	0	1
	LEAF SCORCH		1	0	1
	POWDERY MILDEW	- <u>MICROSPHAERA</u>	2	0	2
MAGNOLIA (<u>Magnolia</u>)					
	ENVIRONMENTAL	- COLD INJURY	4	1	5
		- OTHER	4	0	4
MAPLE and BOXELDER (<u>Acer</u>)					
	ANTHRACNOSE	- <u>GLOEOSPORIUM</u>	14	1	15
	BULLS-EYE SPOT	- <u>CRISTULARIELLA</u>	3	0	3
	CANKER	- <u>PHOMOPSIS, OTHER</u>	2	0	2
	CHEMICAL INJURY		4	0	4
	ENVIRONMENTAL STRESS		13	3	16
	INADEQUATE SPECIMEN, NO DISEASE		23	0	23
	INSECT INJURY		11	3	14
	LEAF SCORCH		18	0	18
	LEAF SPOTS	- <u>PHYLLOSTICTA</u>	4	0	4
		- PHYSIOLOGICAL	1	0	1
	MAPLE DECLINE		8	0	8
	NUTRITIONAL		2	0	2
	PHYSICAL INJURY		4	0	4
	POWDERY MILDEW	- <u>OIDIUM</u>	1	0	1
	REFERRAL		1	0	1
	ROOT PROBLEM		2	0	2
	TAR SPOT	- <u>RHYTISMA</u>	2	0	2

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
MAPLE	and BOXELDER (cont)				
	TRANSPLANT SHOCK		4	0	4
	WILT	- <u>VERTICILLIUM</u>	1	0	1
	WOOD DECAY	- <u>SCHIZOPHYLLUM</u>	1	0	1
MULBERRY	(<u>Morus</u>)				
	CANKER	- FUNGAL	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		1	0	1
OAK	(<u>Quercus</u>)				
	CANKER	- FUNGAL	1	0	1
	CANKER/DIEBACK	- <u>PHYSALOSPORA</u>	1	0	1
	CHEMICAL INJURY		1	1	2
	ENVIRONMENTAL STRESS		4	5	9
	INADEQUATE SPECIMEN, NO DISEASE		7	0	7
	INSECT INJURY		12	3	15
	LEAF SCORCH		4	0	4
	LEAF SPOT	- <u>ACTINOPELTE</u>	1	0	1
	NUTRITIONAL	- FE DEFICIENCY	7	1	8
	PHYSICAL INJURY	- CONSTRUCTION	1	0	1
	POWDERY MILDEW		6	0	6
	SOOTY MOLD		1	0	1
	TRANSPLANT SHOCK		3	0	3
	WOOD DECAY	- BASIDIOMYCETE	1	0	1
PEAR,	Ornamental (<u>Pyrus</u>)				
	CHEMICAL INJURY		1	0	1
	ENVIRONMENTAL, NUTRITIONAL		2	0	2
	FIRE BLIGHT	- <u>ERWINIA</u>	5	0	5
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		1	0	1
	TRANSPLANT SHOCK		1	0	1
PINE	(<u>Pinus</u>)				
	AIR POLLUTION	- OZONE	3	0	3
	BROWN SPOT	- <u>SCIRRHIA</u>	1	0	1
	CANKERS	- <u>ATROPELLIS</u> , OTHER	2	0	2
	CHEMICAL INJURY		1	0	1
	ENVIRONMENTAL STRESS		23	6	29
	INADEQUATE SPECIMEN, NO DISEASE		32	0	32
	INSECT INJURY		21	9	30
	NEEDLE RUST	- <u>COLEOSPORIUM</u>	2	0	2
	NORMAL NEEDLE DROP		5	0	5
	PHYSICAL INJURY		2	0	2
	PINEWOOD NEMATODE	- <u>BURSAPHELENCHUS</u>	3	0	3
	ROOT ROT, OTHER ROOT PROBLEMS		9	1	10
	SOOTY MOLD		6	0	6
	TIP BLIGHT	- <u>DIPLODIA</u>	19	0	19

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
PINE (cont)					
	TRANSPLANT SHOCK		12	1	13
	WOOD DECAY	- FUNGAL	1	0	1
	WHITE PINE DECLINE		8	0	8
PLUM, Ornamental (<u>Prunus</u>)					
	BLACK KNOT	- <u>DIBOTRYON</u>	3	0	3
	ENVIRONMENTAL STRESS		0	1	1
	INSECT INJURY		0	1	1
	TRANSPLANT SHOCK		1	0	1
POPLAR (<u>Populus</u>)					
	ENVIRONMENTAL STRESS		2	0	2
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	SOOTY MOLD		1	0	1
PYRACANTHA (<u>Pyracantha</u>)					
	NO DISEASE		2	0	2
	PHYSICAL INJURY		1	0	1
	SCAB	- <u>FUSICLADIUM</u>	1	0	1
REDBUD (<u>Cercis</u>)					
	CHEMICAL INJURY		1	0	1
	ENVIRONMENTAL	- DROUGHT	0	1	1
	INADEQUATE SPECIMEN, NO DISEASE		8	0	8
	INSECT INJURY		2	1	3
	LEAF SCORCH		0	1	1
	ROOT ROT, STEM DECAY	- <u>FUSARIUM</u>	2	0	2
	TRANSPLANT SHOCK		1	0	1
	WILT	- <u>VERTICILLIUM</u>	1	0	1
RHODODENDRON and AZALEA (<u>Rhododendron</u>)					
	CANKER, DIEBACK	- <u>PHOMOPSIS</u> , OTHERS	0	2	2
	CHEMICAL INJURY		1	0	1
	DIEBACK	- <u>BOTRYOSPHAERIA</u>	4	0	4
	ENVIRONMENTAL STRESS		6	4	10
	INADEQUATE SPECIMEN, NO DISEASE		15	0	15
	INSECT INJURY		4	0	4
	LEAF SCORCH		2	0	2
	LEAF SPOTS	- <u>SEPTORIA</u> , OTHER	2	0	2
	NUTRITIONAL		3	0	3
	PHYSICAL INJURY		1	0	1
	POWDERY MILDEW	- <u>MICROSPHAERA</u>	1	0	1
	ROOT PROBLEM		5	0	5
	ROOT ROT	- <u>PHYTOPHTHORA</u>	2	0	2
		- <u>PYTHIUM</u> , PYTHIACEOUS	5	2	7

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
RHODODENDRON and AZALEA (cont)					
	TRANSPLANT SHOCK		20	5	25
	WALNUT WILT	- <u>JUGLONE</u>	1	0	1
ROSE (<u>Rosa</u>)					
	BLACK SPOT	- <u>DIPLOCARPON</u>	2	0	2
	CANKERS	- <u>LEPTOSPHAERIA</u> , <u>NECTRIA</u> , OTHER	3	0	3
	CHEMICAL INJURY		3	0	3
	ENVIRONMENTAL STRESS		1	2	3
	GRAY MOLD	- <u>BOTRYTIS</u>	0	1	1
	INADEQUATE SPECIMEN, NO DISEASE		10	0	10
	LEAF SCORCH	- UNKNOWN	1	0	1
	NUTRITIONAL		1	1	2
	POWDERY MILDEW	- <u>SPHAEROTHECA</u>	4	0	4
	ROOT ROT	- <u>PYTHIUM</u> , OTHER	3	1	4
	TRANSPLANT SHOCK		1	0	1
	VIRUS	- ROSE MOSAIC	3	2	5
SPRUCE (<u>Picea</u>)					
	CANKERS	- <u>BIATORELLA</u> , <u>CYTOSPORA</u>	2	0	2
	ENVIRONMENTAL STRESS		14	1	15
	INADEQUATE SPECIMEN, NO DISEASE		18	0	18
	INSECT INJURY		16	3	19
	NUTRITIONAL		1	1	2
	PHYSICAL INJURY		2	0	2
	ROOT ROT	- <u>PHYTOPHTHORA</u>	1	0	1
	SOOTY MOLD		1	0	1
	TRANSPLANT SHOCK		6	0	6
SWEETGUM (<u>Liquidamber</u>)					
	INSECT INJURY		2	0	2
	LEAF SCORCH		1	0	1
	LEAF SPOT	- <u>SEPTORIA</u>	1	0	1
	TRANSPLANT SHOCK		1	0	1
SYCAMORE (<u>Platanus</u>)					
	ANTHRACNOSE	- <u>GNOMONIA</u>	4	0	4
TAXUS (<u>Taxus</u>)					
	CHEMICAL INJURY		4	0	4
	ENVIRONMENTAL STRESS		14	2	16
	INADEQUATE SPECIMEN, NO DISEASE		14	0	14
	INSECT INJURY		3	0	3
	NUTRITIONAL	- ACID SOIL	1	0	1
	PHYSICAL INJURY		1	0	1
	ROOT OR TRUNK PROBLEM		3	1	4
	ROOT ROT	- <u>PHYTOPHTHORA</u> , <u>PYTHIUM</u>	4	2	6

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
TAXUS (cont)					
	SLIME MOLD		1	0	1
	TRANSPLANT SHOCK	- CULTURAL	5	0	5
	TWIG BLIGHT	- <u>PESTALOTIA</u>	1	0	1
TULIPTREE (<u>Liriodendron</u>)					
	ENVIRONMENTAL STRESS		4	0	4
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		4	0	4
VIBURNUM (<u>Viburnum</u>)					
	INADEQUATE SPECIMEN, NO DISEASE		3	0	3
	INSECT INJURY		1	0	1
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
	ROOT ROT	- <u>FUSARIUM</u>	1	0	1
	TWIG BLIGHT	- <u>BOTRYTIS</u>	1	0	1
WILLOW (<u>Salix</u>)					
	CANKERS	- <u>BOTRYOSPHERA</u> , <u>CYTOSPORA</u> , OTHER	5	0	5
	HAIRY ROOT	- <u>AGROBACTERIUM</u>	1	0	1
	INSECT INJURY		1	0	1
	NO DISEASE		1	1	2
	WOOD DECAY	- FUNGAL	1	0	1
MISCELLANEOUS WOODY ORNAMENTALS					
	CHEMICAL INJURY		5	0	5
	ENVIRONMENTAL STRESS		12	2	14
	INADEQUATE SPECIMEN, NO DISEASE		18	0	18
	INSECT INJURY		9	0	9
	TRANSPLANT SHOCK, OTHER ROOT RELATED PROBLEMS		7	0	7

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
VEGETABLES					
ASPARAGUS (<u>Asparagus</u>)					
	DODDER	- <u>CUSCUTA</u>	1	0	1
	ENVIRONMENTAL STRESS, INADEQUATE SPECIMEN		2	0	2
BEAN (<u>Phaseolus</u>)					
	BROWN SPOT	- <u>PSEUDOMONAS</u>	1	0	1
	CHEMICAL INJURY		1	0	1
	COTTONY LEAK	- <u>PYTHIUM</u>	1	0	1
	ENVIRONMENTAL STRESS		7	0	7
	INADEQUATE SPECIMEN, NO DISEASE		13	0	13
	INSECT INJURY		6	1	7
	LEAF SCORCH		3	0	3
	LEAF SPOT	- <u>CERCOSPORA</u>	1	0	1
	NUTRITIONAL	- <u>ACID SOIL</u>	1	1	2
	ROOT ROT	- <u>FUSARIUM</u>	5	0	5
	ROOT/STEM ROT	- <u>RHIZOCTONIA</u>	9	2	11
		- <u>PYTHIUM</u>	2	0	2
		- <u>OTHER</u>	4	0	4
	RUST	- <u>UROMYCES</u>	1	0	1
	SOUTHERN BLIGHT	- <u>SCLEROTIUM</u>	2	0	2
	SOYBEAN CYST NEMATODE	- <u>HETERODERA</u>	1	0	1
	VIRUS	- <u>BEAN YELLOW MOSAIC</u>	5	1	6
	YEAST SPOT	- <u>NEMATOSPORA</u>	1	0	1
CRUCIFERS (Broccoli, Cabbage, Cauliflower, Collards, Kale, Mustard, Turnip - <u>Brassica</u>)					
	AIR POLLUTION		1	0	1
	BACTERIAL SOFT ROT	- <u>ERWINIA</u>	3	0	3
	BLACK ROT	- <u>XANTHOMONAS</u>	12	1	13
	BOTTOM ROT	- <u>RHIZOCTONIA</u>	1	0	1
	CHEMICAL INJURY		3	0	3
	DROP	- <u>SCLEROTINIA</u>	3	0	3
	ENVIRONMENTAL STRESS		7	1	8
	INADEQUATE SPECIMEN, NO DISEASE		6	0	6
	INSECT INJURY		4	2	6
	LEAF SCORCH		2	0	2
	LEAF SPOTS	- <u>CERCOSPORA</u>	1	0	1
		- <u>CERCOSPORELLA</u>	3	0	3
		- <u>OTHER</u>	1	0	1
	NUTRITIONAL		4	0	4
	REFERRAL		1	0	1
	ROOT PROBLEM		1	0	1
	WIRESTEM	- <u>RHIZOCTONIA</u>	2	1	3

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
CORN, <u>Sweet (Zea)</u>					
	INADEQUATE SPECIMEN, NO DISEASE		1	0	1
	INSECT INJURY		1	0	1
	NUTRITIONAL		1	0	1
	SMUT	- <u>USTILAGO</u>	1	0	1
	SOUTHERN CORN LEAF BLIGHT	- <u>COCHLIOBULUS</u>	1	0	1
	STEWART'S WILT	- <u>ERWINIA</u>	2	0	2
CUCURBITS (<u>Cantaloupe, Cucumber - Cucumis; Pumpkin, Squash - Cucurbita;</u> <u>Watermelon - Citrulus</u>)					
	ANTHRACNOSE	- <u>COLLETOTRICHUM</u>	2	0	2
	BACTERIAL SOFT ROT	- <u>ERWINIA</u>	2	0	2
	BACTERIAL WILT	- <u>ERWINIA</u>	13	0	13
	CHEMICAL INJURY		2	0	2
	ENVIRONMENTAL STRESS		5	0	5
	FRUIT DECAYS	- <u>CLADOSPORIUM, FUSARIUM</u>	1	1	2
	INADEQUATE SPECIMEN, NO DISEASE		22	0	22
	INSECT INJURY		11	2	13
	LEAF SPOT	- <u>ALTERNARIA</u>	1	0	1
	NUTRITIONAL, PHYSIOLOGICAL		3	0	3
	SCAB	- <u>CLADOSPORIUM</u>	0	1	1
	ROOT ROT	- <u>RHIZOCTONIA</u>	1	0	1
	VIRUS	- <u>WATERMELON MOSAIC,</u> <u>SQUASH MOSAIC</u>	2	0	2
	WILT	- <u>FUSARIUM</u>	1	0	1
EGGPLANT (<u>Solanum</u>)					
	ROOT/STEM ROT	- <u>RHIZOCTONIA</u>	1	0	1
	WILT	- <u>VERTICILLIUM</u>	1	0	1
LETTUCE (<u>Lactuca</u>)					
	BOTTOM ROT	- <u>RHIZOCTONIA</u>	1	0	1
	DROP	- <u>SCLEROTINIA</u>	1	0	1
	NO DISEASE		2	0	2
OKRA (<u>Hibiscus</u>)					
	BLACK ROOT ROT	- <u>THIELAVIOPSIS</u>	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		2	0	2
	INSECT INJURY		1	0	1
	LEAF SPOT	- <u>ALTERNARIA</u>	1	0	1
	ROOT ROT	- <u>FUSARIUM</u>	1	0	1
	WILT	- <u>VERTICILLIUM</u>	3	0	3
ONION (<u>Allium</u>)					
	NO DISEASE		1	0	1
	SMUT	- <u>UROCYSTIS</u>	1	0	1

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
PEA	(<u>Pisum</u>)				
	CHEMICAL INJURY		1	0	1
	ROOT/STEM ROT	- <u>RHIZOCTONIA</u> , OTHER	2	1	3
	VIRUS	- UNKNOWN	1	0	1
PEPPER	(<u>Capsicum</u>)				
	ANTHRACNOSE	- <u>GLOEOSPORIUM</u>	0	1	1
	BACTERIAL SOFT ROT	- <u>ERWINIA</u>	1	0	1
	BACTERIAL SPOT	- <u>XANTHOMONAS</u>	24	0	24
	BLOSSOM END ROT		3	1	4
	CHEMICAL INJURY		6	0	6
	CULTURAL, ENVIRONMENTAL		12	1	13
	FRUIT ROT	- <u>ALTERNARIA</u>	1	1	2
	INSECT INJURY		1	1	2
	LEAF SPOT	- <u>PHYLLUSTICTA</u>	3	1	4
	MUTATION	- GENETIC	2	0	2
	NO DISEASE		6	0	6
	NUTRITIONAL		4	0	4
	PHYSICAL INJURY		1	0	1
	REFERRAL TO HORTICULTURE		1	0	1
	ROOT PROBLEM		1	0	1
	ROOT ROT	- <u>PYTHIUM</u>	1	0	1
	ROOT/STEM ROT	- <u>FUSARIUM</u> , <u>RHIZOCTONIA</u>	5	0	5
	SOUTHERN BLIGHT	- <u>SCLEROTIUM</u>	2	0	2
	STEM ROT	- BACTERIAL	2	0	2
	TRANSPLANT SHOCK		1	0	1
	VIRUS	- TOBACCO, ETCH, OTHER	4	0	4
	POTATO	(<u>Solanum</u>)			
BLACK LEG		- <u>ERWINIA</u>	2	0	2
CANKER		- <u>RHIZOCTONIA</u>	1	0	1
CHEMICAL INJURY			4	0	4
CULTURAL, ENVIRONMENTAL			3	0	3
DRY ROT		- <u>FUSARIUM</u>	2	0	2
EARLY BLIGHT		- <u>ALTERNARIA</u>	1	0	1
GREENING		- LIGHT	1	0	1
INADEQUATE SPECIMEN, NO DISEASE			3	0	3
INSECT INJURY			1	0	1
MUTATION		- GENETIC	1	0	1
NUTRITIONAL			0	1	1
PINK ROT		- <u>PHYTOPHTHORA</u>	1	0	1
ROOT ROT		- CHITRID	1	0	1
ROOT/STEM ROT		- <u>RHIZOCTONIA</u>	2	0	2
SCAB		- <u>STREPTOMYCES</u>	2	0	2
SOUTHERN BLIGHT		- <u>SCLEROTIUM</u>	1	0	1
WILT		- <u>VERTICILLIUM</u>	1	1	2

CROP	DIAGNOSIS	CAUSAL AGENT	NO. OF PRIMARY DIAGNOSES	NO. OF SECONDARY DIAGNOSES	TOTAL
RADISH (<u>Raphanus</u>)	BLACK ROOT	- <u>APHANOMYCES</u>	3	0	3
RHUBARB (<u>Rheum</u>)	CROWN ROT	- <u>PYTHIUM, RHIZOCTONIA</u>	2	0	2
	NO DISEASE		2	0	2
SPINACH (<u>Spinacia</u>)	BACTERIAL SOFT ROT	- <u>ERWINIA</u>	0	1	1
	LEAF SPOT	- <u>CERCOSPORA</u>	1	0	1
SWEET POTATO (<u>Ipomoea</u>)	NUTRITIONAL		1	0	1
	SCURF	- <u>MONILOCHAETE</u>	1	0	1
	SURFACE ROT	- <u>FUSARIUM</u>	2	1	3
TOMATO (<u>Lycopersicon</u>)	AIR POLLUTION		1	0	1
	BLOSSOM END ROT		4	1	5
	CATFACING		1	0	1
	CHEMICAL INJURY		12	0	12
	CULTURAL		3	0	3
	EARLY BLIGHT	- <u>ALTERNARIA</u>	6	1	7
	ENVIRONMENTAL STRESS		5	1	6
	FRUIT POX	- PHYSIOLOGICAL	1	0	1
	INADEQUATE SPECIMEN, NO DISEASE		26	0	26
	INSECT INJURY		1	0	1
	LATE BLIGHT	- <u>PHYTOPHTHORA</u>	1	0	1
	LEAF MOLD	- <u>CERCOSPORA, CLADOSPORIUM</u>	2	0	2
	LEAF ROLL	- PHYSIOLOGICAL	1	0	1
	LEAF SPOT	- PHYSIOLOGICAL	1	0	1
		- <u>SEPTORIA</u>	7	1	8
	NUTRITIONAL		3	1	4
	PHYSICAL INJURY		1	0	1
	PITH NECROSIS	- <u>PSEUDOMONAS</u>	1	0	1
	ROOT PROBLEM		1	0	1
	SOUTHERN BLIGHT	- <u>SCLEROTIUM</u>	1	0	1
	STEM ROT	- <u>BOTRYTIS</u>	1	0	1
	VIRUS	- TOBACCO MOSAIC, TOMATO SPOTTED WILT	3	0	3
	WALNUT WILT	- JUGLONE	4	0	4
	WILT	- <u>FUSARIUM</u>	5	0	5
TOTALS			5125	393	5518