

2005 ANNUAL REPORT  
 NEMATODE TESTING SERVICE  
 DEPARTMENT OF BOTANY AND PLANT PATHOLOGY  
 OREGON STATE UNIVERSITY

Kathy Merrifield, Extension Nematologist  
 Short Version. Sole Version.

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TABLE 1. TOTAL NEMATODE SAMPLES BY YEAR

<u>Year</u>	<u>Samples</u>		<u>Year</u>	<u>Samples</u>
1993	669		1999	976
1994	803		2000	1014
1995	812		2001	1367
1996	657		2002	1547
1997	599		2003	985
1998	402		2004	1144
		2005	674	

TABLE 2. 2005 SAMPLES RECEIVED BY MONTH

<u>Month</u>	<u>Samples</u>	<u>Month</u>	<u>Samples</u>
Jan	6	Jul	34
Feb	46	Aug	73
Mar	60	Sep	159
Apr	41	Oct	90
May	55	Nov	31
Jun	49	Dec	30

TABLE 3. SAMPLES LISTED BY CROP

FRUITS		ORNAMENTALS AND TURF	
Grape	10	Miniature roses	4
Raspberry	8	Peony	11
Blackcap	4	Japanese anemone	2
Cherry	7	Lily (non-Easter)	1
Pear	2	Mix of annuals	2
Apple	3	Unspecified nursery	15
Strawberry	4	Christmas trees	4
Blueberry	<u>14</u>	Golf green turf	<u>14</u>
TOTAL	62	TOTAL	53
VEGETABLES		WOOD	
Onion	16	Western red-cedar	1
Carrot	10	Sitka spruce/western hemlock	1
Cabbage	2	Paper birch	1
Lettuce	2	Unknown	<u>1</u>
Arugula	<u>2</u>	TOTAL	4
TOTAL	32		
POTATO	56	UNKNOWN	49
POTATO-GRAIN ROTATION	298		
FIELD AND FORAGE			
Peppermint	67		
Alfalfa	2		
Mustard	2		
Wheat	2		
Annual ryegrass	12	<b>GRAND TOTAL</b>	<b>674</b>
Perennial ryegrass	8		
Kentucky bluegrass	4		
Unknown grass	<u>23</u>		
TOTAL	120		

TABLE 4. 2005 SAMPLES BY SUBMITTER CATEGORY

<u>Submitter</u>	<u>Samples</u>
Agricultural service field representatives (sell ag chemicals)	181
Private consultants (do not sell ag chemicals)	344
Extension and research	47
Growers	86
Government agencies	<u>16</u>
TOTAL	674

TABLE 5. 2005 SAMPLES BY LOCATION

OREGON		WASHINGTON	
Benton	13	Benton	9
Columbia	3	Douglas	3
Crook	9	Grant	11
Douglas	4	King	2
Jefferson	33	Okanagan	4
Lane	13	Skagit	12
Linn	48	Walla Walla	4
Marion	38	Washougal	5
Multnomah	9	<u>Unknown</u>	<u>1</u>
Polk	7	WASHINGTON TOTAL	51
Umatilla	34	ALASKA	3
Union	6	COLORADO	135
Washington	26	FLORIDA	2
Yamhill	7	IDAHO	3
<u>Unknown</u>	<u>9</u>	UTAH	10
OREGON TOTAL	259	<u>ANOTHER STATE*</u>	<u>211</u>
		OTHER STATES TOTAL	364
		<b>GRAND TOTAL</b>	<b>674</b>

\*Submitter requires complete confidentiality

TABLE 6: MATERIALS SUBMITTED

<u>Material</u>	<u>Samples</u>
Soil	530
Roots	109
Leaves or bulbs (the scales of which, as you know, are modified leaves)	6
Tubers	8
Wood chips	3
Nematodes already extracted, ready for examination	10
Entomopathogenic nematodes inside of beetle pupae	<u>1</u>
GRAND TOTAL	674

TABLE 7: SPECIES IDENTIFICATIONS

<i>Pratylenchus</i>	
Oregon	60
Washington	15
Colorado	20
Florida <sup>1</sup>	<u>1</u>
TOTAL	96
<i>Meloidogyne</i> from second-stage juveniles	
Oregon	34
Washington	3
Colorado	13
Florida	2
Another state <sup>2</sup>	<u>123</u>
TOTAL	175
<i>Meloidogyne</i> from perineal patterns	
Oregon	2
Washington	2
Colorado	<u>4</u>
TOTAL	8
<i>Trichodorus sensu lato</i>	
Oregon	4
Washington	1
Florida	<u>1</u>
TOTAL	6
<i>Xiphinema</i>	
Oregon	2
Florida	<u>1</u>
TOTAL	3
<i>Helicotylenchus</i>	
Oregon	1
Washington	1
Idaho	<u>1</u>
TOTAL	3

TOTAL SPECIES IDENTIFICATIONS: 291

<sup>1</sup>A Colorado grower who owns land in several states sent samples from his Florida farm.

<sup>2</sup>Client requires complete confidentiality

TABLE 8. NOTEWORTHY GENUS AND SPECIES RECOVERIES, 2005

Nematode Genus	Nematode Species	Host	Nem/100g soil or nem/g fresh tissue; PCN No.; County; State; Comments
<i>Aphelenchoides</i>	sp.	Peony	272 sl, 0 tops; PCN 282; Jul; Skagit, WA.
<i>Helicotylenchus</i>	<i>digonicus</i>	Pear	79 sl; PCN 194; May; Okanagan, WA; with <i>P. neg</i> ; pin, <i>M. hapla</i> , other.
<i>Helicotylenchus</i>	<i>digonicus</i>	Grapes	489-781 sl; PCN 288-289; Jul; Canyon, ID; with others.
<i>Helicotylenchus</i>	<i>pseudorobustus</i>	Grass (golf green).	13-893 sl; PCN 81-82; Mar; King, WA.
<i>Helicotylenchus</i>	sp.	Grass (golf green).	72 sl; PCN 78; Mar, Cowlitz, WA; with 225 <i>Mel</i> and 524 <i>Cric</i> .
<i>Helicotylenchus</i>	sp.	Grass (golf green)	269-395 sl; PCN 579-580; Oct; with <i>M. naasi</i> , ring, 52-122 Diptera larvae.
<i>Hemicycliophora</i>	sp.	Sweet cherry	4 sl, PCN 198; May; with <i>P. neg</i> , <i>M. hapla</i> ; Benton, WA.
<i>Hemicycliophora</i>	sp.	Sweet cherry	11 sl, PCN 203; May; with <i>P. neg</i> , 322 ring; Douglas, WA.
<i>Longidorus</i>	<i>elongatus</i>	Peppermint	71 sl; +47 <i>P. pen</i> ; PCN 113; Mar; Linn, OR
<i>Longidorus</i>	<i>elongatus</i>	Peppermint	22-49 sl; PCN 353-356; Aug; Linn, OR; w/ pin.
<i>Meloidogyne</i>	<i>hapla</i>	Pear	20 sl; PCN 194-195; May; Okanagan, WA; with 511-1446 pin, 63-64 <i>P. neg</i> .
<i>Meloidogyne</i>	<i>hapla</i>	Sweet cherry	25-126 sl; PCN 198-199; May; Benton, WA; with 35-77 <i>P. neg</i> .
<i>Meloidogyne</i>	<i>hapla</i>	Grapes	23 sl; PCN 289; Jul; Canyon, ID; with 781 <i>H. digonicus</i> .
<i>Meloidogyne</i>	<i>naasi</i>	Grass (golf green).	225 sl, 0 rt; PCN 78, Mar; Cowlitz, WA; with 72 spiral and 524 <i>Cric</i> .
<i>Meloidogyne</i>	<i>naasi</i>	Apple orchard in prep	72-343 sl; PCN 79-80; Mar; w/ 21-36 <i>Prat</i> , 11-25 <i>Xiphinema</i>
<i>Meloidogyne</i>	<i>naasi</i>	Grass (golf green).	22 sl, 0 rt; PCN 82; Mar; King, WA; w/ spiral.
<i>Meloidogyne</i>	<i>naasi</i>	Annual ryegrass	23-223 sl; PCN 122-126; Apr; Linn, OR; with <i>P. crenatus</i>
<i>Meloidogyne</i>	<i>naasi</i>	Grass (golf green)	215 sl, 0 rts; PCN 339-340; Aug; Mult., OR; w/ P-trik.
<i>Meloidogyne</i>	<i>naasi</i>	Grass (golf green)	24-275 sl; PCN 579-580; Oct; Washougal, WA; with ring, spiral, 52-122 Diptera larvae.
<i>Mesocriconema</i>	sp.	Grass (golf green).	524 sl; PCN 78; Mar, Cowlitz, WA; with 225 <i>Mel</i> and 72 spiral.
<i>Mesocriconema</i>	sp.	Sweet cherry	322 sl; PCN 203; May; Douglas, WA; w/ <i>P. neg</i>
<i>Mesocriconema</i>	sp.	Grass (golf green)	3-347 sl; PCN 276-278; Jul; Multnomah, OR.
<i>Mesocriconema</i>	sp.	Grass (golf green)	49 sl; PCN 339; Aug; Mult., OR; w/ <i>Mel</i> , <i>P-trik</i> .
<i>Mesocriconema</i>	sp.	Onion	12-29 sl; PCN 505-507; Oct; Yuma, CO; with <i>Pratylenchus scribneri</i> ?
<i>Mesocriconema</i>	sp.	Grass (golf green)	251-560 sl; PCN 579-680; Oct; Washougal, WA; with spiral, ring, 52-122 Diptera larvae.
<i>Paratrichodorus</i>	<i>allius</i>	Sweet cherry	1-14 sl; PCN 198-199; May; Benton, WA; w/ <i>Prat</i> , <i>Mel</i>
<i>Paratrichodorus</i>	<i>allius</i>	Potato or rotation thereof	0-5 sl; PCN 265-270; Jun; Umatilla, OR; w/ <i>M. hapla</i> .
<i>Paratrichodorus</i>	<i>allius</i>	Grass (Golf green)	175 sl, PCN 339; Aug; Marion, OR; w/ <i>M. naasi</i> .

<i>Paratylenchus</i>	-----	Peony preceeded by forest	307 sl; PCN 49; Feb; Washington, OR; some or all <i>Gracilicus</i>
<i>Paratylenchus</i>	-----	Peppermint	10-2679 sl, 0-3 rts; PCN 55; Mar; Linn, OR; with <i>Pratylenchus crenatus</i> .
<i>Paratylenchus</i>	-----	Apple, past and future	11-116 sl, with 21-36 <i>Prat</i> , 11-25 <i>Xiph</i> ; with <i>Gracilicus</i> . PCN 79,80; Mar.
<i>Paratylenchus</i>	-----	Peppermint	1964 sl, PCN 138; Apr; Lane, OR
<i>Paratylenchus</i>	-----	Walla Walla Sweet Onion	127-339 sl, PCN 274-275; Jul; Walla Walla; with 70-122 <i>Pratylenchus</i> sp.
<i>Paratylenchus</i>	-----	Peppermint	2725 sl, 7 rts; PCN 290, 291; Jul; Union, OR.
<i>Paratylenchus</i>	-----	Unknown	3697 sl; PCN 351; Aug; Jefferson, OR.
<i>Paratylenchus</i>	-----	Peppermint	1333-4288 sl, 6-14 rts; PCN 353-356; Aug; Linn, OR; with <i>Longidorus</i> , <i>Pratylenchus</i> .
<i>Paratylenchus</i>	-----	Peppermint	2809-6630 sl; 20-30 rts; PCN 357-360; Aug; Marion, OR; with <i>P. crenatus</i> .
<i>Paratylenchus</i>	-----	Carrot	1437 sl; PCN 409; Sept; Jefferson, OR.
<i>Paratylenchus</i>	-----	Peppermint	1125-20,410 sl, 0-69 rts; PCN 465-480; Sept; Marion, OR
<i>Pratylenchus</i>	<i>crenatus</i>	Grass	118 sl; PCN 6; Jan; Polk, OR.
<i>Pratylenchus</i>	<i>crenatus</i>	Peppermint	8-284 sl, 5-126 rts; PCN 53-62; Mar, Linn, OR; with pin.
<i>Pratylenchus</i>	<i>crenatus</i>	Annual ryegrass	165-384 sl, 249-1085 rts; PCN 122-126; Apr; Linn, OR; with <i>M. naasi</i>
<i>Pratylenchus</i>	<i>crenatus</i>	Grass	150-774 sl; PCN 188-193; May; Linn, OR; with <i>M. naasi</i> .
<i>Pratylenchus</i>	<i>crenatus</i>	Grass	29-798 rt; PCN 206-209; May; Linn, OR; rts of 188-193.
<i>Pratylenchus</i>	<i>crenatus</i>	Annual ryegrass	0-79 sl; 5-180 rts; PCN 213-217; Jun; Linn, OR.
<i>Pratylenchus</i>	<i>crenatus</i>	Red clover to Per. ryegrass	12 sl, 84 rts; PCN 231-232; Jun; Wash., OR.
<i>Pratylenchus</i>	<i>crenatus</i>	Blueberries	29-60 sl; PCN 295-297; Aug; Washington, OR.
<i>Pratylenchus</i>	<i>crenatus</i>	Blackcaps	60 sl; PCN 297Aug; Washington, OR.
<i>Pratylenchus</i>	<i>crenatus</i>	Blackcaps	36-37 sl; PCN 299-300; Aug; Wash., OR; disease with <i>Fusarium</i> and <i>Rhizoctonia</i> .
<i>Pratylenchus</i>	<i>crenatus</i>	Peppermint	33-50 sl, 9-27 rts, + <i>pen</i> ; PCN 357-360; Aug; Marion, OR; with high pin.
<i>Pratylenchus</i>	<i>crenatus</i>	Carrot-wheat rotation	264-37 sl; PCN 388-390; Sept; Jefferson, OR.
<i>Pratylenchus</i>	<i>crenatus</i>	Grass	16-270 sl; PCN 549-550; Oct; Lane, OR
<i>Pratylenchus</i>	<i>neglectus</i>	Fallow following potato	3-50 sl; PCN 70-77; Mar; Alberta, Canada.
<i>Pratylenchus</i>	<i>neglectus?</i>	Corn-onion-potato	43-286 sl; PCN 151-153; Apr; E. Colorado
<i>Pratylenchus</i>	<i>neglectus</i>	Pear	63-64 sl; PCN194, 195; May; Okanagan, WA; with 511-1446 pin, 20 <i>M. hapla</i> .
<i>Pratylenchus</i>	<i>neglectus</i>	Sweet cherry	35-77 sl; PCN 198-199; May; Benton, WA; with <i>M. hapla</i> .
<i>Pratylenchus</i>	<i>neglectus</i>	Sweet chery	11-55 sl; PCN 203-205; May; with <i>pen</i> , <i>vulnus</i> ; Douglas, WA.
<i>Pratylenchus</i>	<i>neglectus</i>	Kentucky bluegrass	192-291 sl, 177-240 rts; PCN 245-248; Jul; Union, OR.
<i>Pratylenchus</i>	<i>penetrans</i>	Peppermint	673 sl; 185 rts; PCN 115-116; Mar; Linn, OR
<i>Pratylenchus</i>	<i>penetrans</i>	Peppermint	384 rts; PCN 179; Jeff., OR; 162 <i>th/neg/cren</i> in rts; with 1762 pin; May.
<i>Pratylenchus</i>	<i>scribneri?</i>	Potato	137 sl, PCN 286; Jul; Yuma, Colorado
<i>Pratylenchus</i>	<i>scribneri?</i>	Onion	218 sl; PCN 287; Jul; Yuma. Colorado
<i>Pratylenchus</i>	<i>scribneri?</i>	Onion	114-191 sl; PCN 410-413; Sept; Yuma, CO. with <i>neglectus?</i>
<i>Pratylenchus</i>	<i>scribneri?</i>	Potato	77-356 sl; PCN 414-419Sept; Yuma, CO; with <i>P. neglectus</i> .

<i>Pratylenchus</i>	<i>scribneri?</i>	Onion	4-16 sl; PCN 505-507; Oct; Yuma, CO ; with ring.
<i>Pratylenchus</i>	<i>thornei</i>	Carrot	149-1339 sl; Jefferson, OR; PCN 51-52; Feb; with 11-63 pin.
<i>Pratylenchus</i>	<i>thornei</i>	Peppermint	162 sl., with <i>neg, cren</i> ; PCN 178; May; Jeff., OR; 384 <i>pen</i> in rts; with 1762 pin.
<i>Pratylenchus</i>	<i>thornei</i>	Mustard after wheat	1845 sl; PCN 241; Jul; Jefferson, OR.
<i>Pratylenchus</i>	<i>thornei</i>	Carrot-wheat rotation	264-371 sl; PCN 388-390; Sept; Jefferson, OR; with <i>P. crenatus</i> .
<i>Pratylenchus</i>	<i>thornei</i>	Unknown	114-775 sl; PCN 483-486; Sept; Jefferson, OR.
<i>Pratylenchus</i>	<i>vulnus</i>	Sweet cherry	28 sl; ~67% with <i>pen</i> ; PCN 197; May; Okanagan, WA.
<i>Pratylenchus</i>	<i>vulnus</i>	Sweet cherry	with <i>P. pen</i> , 55 sl; PCN 205; May; Douglas, WA
<i>Pratylenchus</i>	<i>cren/pen</i>	Tomato	218-231 sl; PCN 2,3; Jan; Lane, OR.
<i>Pratylenchus</i>	<i>cren/pen</i>	Grass	70-462; PCN 345-350; Aug; Polk, OR.
<i>Pratylenchus</i>	<i>cren/thornei</i>	Fescue to beans	73 sl; PCN 294; Aug; Yamhill, OR.
<i>Pratylenchus</i>	<i>pen, cren,</i> <i>neglectus, thornei</i>	Apple, past and future	21-36 sl; PCN 79, 80; Mar; Washington, OR; with pin, <i>M. naasi, Xiphinema</i> .
<i>Xiphinema</i>	<i>americanum</i>	Apple, past and future	11-25 sl; PCN 79-80; Mar, with 21-36 <i>Prat</i> , 11-116 pin, including <i>Gracilicus</i>
<i>Xiphinema</i>	<i>pachtiachum</i>	Grapes	88 sl; PCN 288; Jul; Canyon, ID; with 489 <i>Helicotylenchus digonicus</i> , 27 <i>Prat</i> sp.
<i>Xiphinema</i>	<i>americanum</i>	Apple	24 sl; PCN 535; Oct; Washington, OR.