

From	Description	To
0	Plant feeding Nematode Specimen	1
1	Stylet absent	Not a plant feeder
1	Stylet or spear present	2
2	2-part esophagus, anterior slender, posterior glandular and muscular, spear, no metacarpus with valve	3
2	3-part esophagus, metacarpus with valve, slender isthmus, glandular postcorpus, stylet usually with knobs	7
3	Spear short and curved, body thick, anus almost terminal	4
3	Spear long with long extension, body long and slender	5
3	Spear short and straight	Not a plant feeder
4	Diovarial females, males without caudal alae	Trichodorus
4	Diovarial females, males with caudal alae	Paratrichodorus
4	Monovarial females, males without caudal alae	Monotrichodorus
4	Monovarial females, males without caudal alae	Allotrichodorus
5	Spear extension with basal flanges, guiding ring near base of	Xiphinema
5	Spear extension without basal flanges, guiding ring near tip of spear	6
6	Amphid openings small and slit-like	Longidorus
6	Amphid openings wide, posterior to lips	Paralongidorus
7	DEGO in metacarpus and difficult to see; metacarpus usually nearly as large as body diameter	8
7	DEGO in procorpus; metacarpus usually less than 75% of body width	10
8	Vulva with overlapping flap, vagina curved, male with small bursa at tail tip	Bursaphelenchus
8	Vulva without flap, vagina not curved	9
9	Female tail bluntly rounded, lateral field with 6-15 lines, male with bursa and gubernaculum	Aphelenchus
9	Female tail usually conoid and mucronate, lateral field with 3-5 lines, male without bursa or gubernaculum	Aphelenchoides
10	Head with setae, no plant feeders	74
10	Head without setae, mainly plant feeders	11
11	Metacarpus absent or reduced, no valve.	Nothanguina, Nothotylenchus
11	Metacarpus with valve	12

12	Mature females greatly enlarged (pear-shaped, kidney-shaped), embedded or attached to plant roots, or free in soil as cysts	13
12	Mature females vermiform, slender to slightly swollen	24
13	Mature female body elongate-saccate or kidney shape and not hardened into a cyst	14
13	Mature female body pear-, lemon-shaped or spherical, may be hardened into a cyst	19
14	Female diovarial	Rotylenchulus
14	Female monovarial	15
15	Excretory pore in esophageal region, near nerve ring	16
15	Excretory pore posterior to nerve ring	17
16	Mature female subspherical, may have a protruding vulva, cuticle marked with coarse reticulate pattern	Sphaeronema
16	Mature female a thick spiral, without protruding vulva	Trophonema
17	Lip region elevated in females and juveniles	Trophotylenchulus
17	Lip region not elevated, continuous with body contour	18
18	Excretory pore in posterior third of body, near vulva	Tylenchulus
18	Excretory pore near basal region of esophagus	Nacobbus
19	Females with perineal pattern, excretory pore close to level of stylet, lip region with 2 lateral lips and 4 smaller sublateral lips, weak head frame, J2 stylet < 20 µm, host roots usually galled	Meloidogyne
19	Females without perineal pattern, excretory pore posterior to metacarpus, lip region with 2 lateral lips smaller than 4 sublateral lips, J2 stylet > 20 µm, host roots not galled	20
20	V > 50% but well anterior to anus, cuticle striated	Meloidodera
20	Vulva terminal or subterminal, cuticle striated or lace-patterned	21
21	Cuticle striated	Cryphodera
21	Cuticle lace-patterned	22
22	Female body hardens to cyst, vulva terminal or on a terminal vulval cone, anus dorsal to vulva	23

22	Female body does not harden to cyst, vulva and anus on terminal prominence	Atalodera
22	Female body does not harden to cyst, vulva sunken into terminal vulval cone with anus on upper side of dorsal vulva lip, J2 stylet >38 μ m	Sarisodera
23	Cysts generally lemon-shaped, vulva on terminal vulval cone with fenestration, bullae present or absent, J2 stylet <30 μm	Heterodera
23	Cyst spherical or subspherical, bullae absent, J2 with 5 lines in lateral field	Globodera
24	c' \geq 6, filiform with pointed or clavate terminus	25
24	c' generally < 6, but if longer it is cylindroid rather than filiform	29
25	Female diovarial	26
25	Female monovarial	27
26	Stylet without knobs, no cephalic sclerotization, tail filiform, usually with clavate terminus	70
26	Stylet with knobs, heavy cephalic sclerotization, tail filiform with pointed terminus	Brachydorus
27	Esophagus criconematoid with swollen procorpus continuous with metacarpus, cuticle thick and coarsely striated	Caloosia
27	Esophagus tylenchoid, procorpus not swollen,, cuticle thin, not coarsely striated	28
28	Esophagus terminating in a bulb that abuts the intestine; non-overlapping	67
28	Esophageal postcorpus glandular region slightly to distinctly overlapping intestine	29
29	Monovarial, vulva in posterior third of body	30
29	Monovarial, V near 50%, lip region conical and not striated, female tail tip rounded, cuticle of tail swollen	Trophurus
29	Diovarial, V near 50%	45
30	Procorpus not swollen and combined into metacarpus or, if swollen, offset from metacarpus by a constriction	31
30	Procorpus swollen and continuous with metacarpus	38
31	Stylet delicate, \leq 15 μ m, tail acute or subacute	32
31	Stylet strong, >15 μ m, tail tapering or bluntly rounded	34

32	Ovary with oocytes in one or two rows, not arranged around central rachis, mature female slender to stout	33
32	Ovary with multiple rows of oocytes arranged around central rachis, mature female usually obese, in seed, leaf or flower galls	Anguina
33	Ovary with one or two flexures, female moderately stout, in root galls of Graminae	Subanguina
33	Ovary outstretched, female slender, in bulbs, stems, leaves, tubers	Ditylenchus
34	$s \geq 1.5$, $c' \leq 1.5$	Rotylenchoides
34	$s < 1.5$, $c' > 1.5$	35
35	Esophagus overlaps intestine ventrally	Pratylenchus
35	Esophagus overlaps intestine dorsally	36
36	Lip region low, generally rounded, stylet knobs flattened anteriorly, sexual dimorphism	Radopholoides
36	Lip region high, conoid, stylet knobs sloping anteriorly or indented, males present or absent	37
37	Female body swollen, stylet knobs sloping anteriorly, sexual dimorphism	Acontylus
37	Female body slender, stylet knobs tapering anteriorly to a dentate tip, males absent	Hoplotylus
38	Mature female without extra cuticle or sheath	39
38	Mature female with extra cuticle or sheath	41
39	Cuticle with prominent retrorse striations	40
39	Cuticle without prominent retrorse striations	42
40	Cuticular striations of female with spines, scales, plates or stalks on posterior margins	Criconema
40	Cuticular striations of female with smooth or crenate posterior margins	Criconemoides
41	Stylet knobs rounded, sloping anteriorly, usually <200 striations on cuticle	Hemicriconemoides
41	Stylet knobs anchor-shaped, usually >200 striations on cuticle	Hemicycliophora
42	Cuticular striations of female with membranous structures on posterior margins	Bakernema

42	Cuticular striations of female without membranous structures on posterior margins	43
43	Cuticle of female with minute tubercles	Cacopaurus
43	Cuticle of female without minute tubercles	44
44	Female stylet $\leq 36 \mu\text{m}$	Paratylenchus
44	Female stylet 45-120 μm	Gracilacus
45	s ≥ 2.5	46
45	s generally < 2.5	50
46	Esophageal glands not enclosed in a bulb, usually unequal in length, overlapping intestine	47
46	Esophageal glands enclosed in a bulb, usually butting intestine	48
47	Average adult body length $\geq 1.75\text{mm}$	Belonolaimus
47	Average adult body length $< 1.75\text{mm}$	49
48	Lip region continuous with body contour	Macrotrophurus
48	Lip region offset from body contour by a constriction	Dolichodorus
49	Lateral field with 5 lines	Morulaimus
49	Lateral field with 3 lines	Carphodorus
50	Phasmids absent	Aphasmatylenchus
50	Phasmids present	51
51	c' < 1.5	62
51	c' ≥ 1.5	52
52	Esophageal glands usually unequal in length, overlapping intestine dorsally or lateroventrally	53
52	Esophageal glands enclosed in a bulb or equal in length, usually butting intestine	60
53	Weak to moderate cephalic framework, female head not low or flattened	54
53	Well-developed cephalic framework, female head low , rounded or flattened	57
54	Well-developed stylet, lateral field with 5 lines	55
54	Stylet slender with diverging knobs, lateral field with 4 lines	Trichotylenchus
55	Female tail cylindroid with rounded terminus	56
55	Female tail elongate-conoid with blunt terminus	Telotylenchus
56	Stylet cone asymmetrical, c' around 2, tail with broadly rounded terminus	Histotylenchus

56	Stylet cone symmetrical, female tail with broadly rounded to bulbous terminus and strongly thickened cuticle	Telotylenchoides
57	Esophagus overlapping intestine dorsally	58
57	Esophagus overlapping intestine ventrally	59
58	Short overlap, no obvious sexual dimorphism	Pratylenchoides
58	Long overlap, distinct sexual dimorphism	Radopholus
59	Tail tip mucronate	Hirschmanniella
59	Tail tip not mucronate	Zygotylenchus
60	Lateral field with 4 lines, female tail not acute	61
60	Lateral field with 6 lines, female tail acute or subacute	Merlinius
61	Female tail conoid with terminus bluntly rounded	Tylenchorhynchus
61	Female tail cylindroid, tail with broadly rounded terminus and thick cuticle	Paratrophurus
62	Phasmids small, pore-like	63
62	Phasmids enlarged	64
63	Esophagus overlapping intestine dorsally and laterally, lip region with or without striation, DEGO <0.25 of stylet length behind knobs	Rotylenchus
63	Esophagus overlapping intestine ventrally, lip region without longitudinal striation, DEGO ≥0.25 of stylet length behind knobs	Helicotylenchus
64	Both phasmids posterior to vulva	65
64	One phasmid anterior and one posterior to vulva	66
65	Phasmids nearly opposite each other in region of anus, lip region with transverse striations	Scutellonema
65	Phasmids anterior to anus, not opposite each other, lip region without striations	Peltamigratus
66	Stylet knobs with anterior projections, <5 lines in lateral field, lateral field areolated throughout length	Hoplolaimus
66	Stylet knobs rounded and without anterior projections, 5 lines in lateral field, lateral field areolated at phasmids and in anterior	Aorolaimus
67	Females diovarial	68
67	Females monovarial	71
68	Tail short, subcylindrical, rounded; stylet very long (90-110 µm)	Macrotrophurus

68	Tail elongate, attenuated; stylet < 20 µm	69
69	Cephalic framework sclerotized; vulva with lateral membranes; male cloaca with hypopygium	Antarctenchus
69	Cephalic framework not sclerotized; vulva without lateral membranes; male cloaca without hypopygium	70
70	Head high, amphidial slit obvious; metacarpus posterior to middle of esophagus	Psilenchus
70	Head low, amphidial slit indistinct; metacarpus anterior to middle of esophagus	Atetylenchus
71	Stylet very long (76-104 µm)	Tylodorus
71	Stylet long (38-52 µm)	Epicharinema
71	Stylet moderate (22-34 µm)	72
71	Stylet short (<22 µm)	73
72	Cuticle with longitudinal ridges	Campbellenchus
72	Cuticle without longitudinal ridges	Gracilancea
73	Head with setae	74
73	Head without setae	75
74	Vulva covered by longitudinal flap; male without caudal alae; male cloaca with hypopygium	Atylenchus
74	Vulva with lateral flaps; male with caudal alae; male cloaca raised	Eutylenchus
75	Cuticle with longitudinal ridges	76
75	Cuticle without longitudinal ridges	80
76	Cone about 1/3 of stylet length	77
76	Cone almost 1/2 of stylet length	79
77	Transverse striations not visible through longitudinal ridges	Basirienchus
77	Transverse striations and longitudinal ridges form block (tessellate) pattern; lateral field with 4 lines	78
78	Lip region with 2-3 striations, stylet without knobs	Neothada
78	Lip region with 6-7 striations, stylet without knobs	Basirienchus
79	Vulva covered by longitudinal flap; stylet 17-19 µm	Pleurotylenchus
79	Vulva with lateral flaps; stylet < 15 µm	Coslenchus
80	Cone about 1/3 of stylet length	81
80	Cone almost 1/2 of stylet length	94
81	Head high, with distinct lateral amphid slits	82

81	Head variously shaped, amphid slit longitudinal	85
82	Female body ventrally curved or spiral; female with offset spermatheca and oocytes in multiple rows	Boleodorus
82	Female body straight; oocytes not in multiple rows	83
83	Tail bent or hook-shaped near tip	Basirienchus
83	Tail more or less straight	84
84	Stylet without knobs, anterior part with wide lumen	Neopsilenchus
84	Stylet with or without knobs, anterior conical with narrow lumen	Basiria
85	Head with disc-like structure	86
85	Head with smooth contour	88
86	Head with small disc	87
86	Head with large dome-shaped structure	Cucullitylenchus
87	Very slender (a=62-76); caudal alae concave posteriorly	Mitranema
87	Less slender; caudal alae rounded	Filenchus
88	Very slender (a=60-180); caudal alae lobed	89
88	Body width variable; caudal alae rounded if present	90
89	Head quadrangular; pore-like amphid apertures; body constricted after vulva	Ecphyadophora
89	Head flattened; long amphid apertures; body not constricted after vulva	Ecphyadophoroides
90	Cuticle deeply incised	91
90	Cuticle not deeply incised	92
91	Head quadrangular; body striations with zigzag pattern; male without caudal alae	Miculenchus
91	Head flattened; male with caudal alae	Malenchus
92	Very slender; indistinct striation; head very flat; long, sinuous amphid aperture	Lelenchus
92	Larger body diameter; distinct striation; head quadrangular; aperture not sinuous	93
93	Head high with longitudinal amphid apertures lateral; clavate stylet knobs; DEGO > 1/2 stylet length behind knobs	Irantylenchus
93	Head quadrangular; distinct striation; round stylet knobs; DEGO < 1/2 stylet length behind knobs	Filenchus
94	Vulva with lateral flaps	95
94	Vulva without flaps	96

95	Lateral field with 2 lines; vagina thin; post-vulval sac short	Allotylenchus
95	Lateral field with 3 lines; vagina thickened; post-vulval sac short	Aglenchus
95	Lateral field with 4-6 lines; vagina not thickened; post-vulval sac long	Cephalenchus
96	Lateral field and striations inconspicuous; caudal alae very small	Polenchus
96	Lateral field and striations distinct; caudal alae distinct	Tylenchus