

Plant Parasitic
nematodes of
Australia
recorded from
grain crops and
their occurrence
by state, plant
species and
nematode family

Compiled 2003

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Record collections from the Queensland Museum, University of Adelaide Waite Institute are acknowledged as major sources of information. Information has also been obtained from the diagnostic service supplied by the Field Crops Pathology Unit Nematology section and published papers.

Graham Stirling (Biological Crop Protection), Grant Holloway (VIDA, Horsham), Ian Riley (University of Adelaide), John Lewis (SARDI), Sharyn Taylor (SARDI) and Vivien Vanstone (Department of Agriculture Western Australia) have all contributed to the compilation of this new edition of "Plant Parasitic Nematodes of Australia – grain crops".

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Abbreviations used in the lists

MIA = Murrumbidgee Irrigation Area
 ssp = sub species
 var = variety
 ACT or A = Australian National Territory
 NSW or N = New South Wales
 NT = Northern Territory

QLD or Q = Queensland
 SA or S = South Australia
 TAS or T = Tasmania
 VIC or V = Victoria
 WA or W = Western Australia

Introduction

The following publications were used to compile plant parasitic nematodes present in Australia on grain crops :-

- Johnson T. H. (1938)** – A census of the free-living and plant parasitic nematodes recorded as occurring in Australia. *Transactions of the Royal Society of Australia* **62**: 149 – 167
- Goss O. M. (1958)** – List of plant parasitic eelworms recorded in Western Australia. *Journal of Agriculture Western Australia* **7**: 317
- Blake C. D. (1963)** – Identification and distribution of root knot nematodes (*Meloidogyne*) in New South Wales with special references to the Richmond-Tweed region. *Proceedings of the Linnean Society New South Wales* **88**: 373 – 378
- Colbran R. C. (1964)** – Studies of plant and soil nematodes. 7. Queensland records of the order Tylenchida and the genera *Tricodorus* and *Xiphinema*. *Queensland Journal of Agricultural Science* **21**: 77 – 123
- Stirling G. R. (1972)** – *Plant parasitic nematodes in South Australia*. Adelaide, Government Printer
- McLeod R. W (1979)** – *Plant and soil nematodes found in New South Wales*. Science Bulletin 87, Department of Agriculture New South Wales
- Khair G. T. (1981)** - *List of plant parasitic nematodes of Australia*. Australian Plant Quarantine Service, Canberra
- Khair G. T. (1986)** – *List of plant parasitic nematodes of Australia*. Third Edition, Department of Primary Industries, Canberra
- Price L. K. (1986)** – *Plant pathogenic nematodes in Western Australia 1898 – 1986*. 30 pp
- McLeod R., Reay F. and Smyth J. (1994)** – *Plant Nematodes of Australia listed by plant and by genus*. RIRDC. 201 pages
- Stirling G., Nicol J. & Reay F. (1999)** – *Advisory Services for Nematode Pests*. Operational Guidelines. RIRDC publication No 99/41.
- Riley I.T. and Wouts W.W. (2001)** – *Pratylenchus and Radopholus* species in agricultural soils and native vegetation in southern Australia. *Transactions of the Royal Society of South Australia* **125** (2), 147 – 153.
- Subbotin S.A., Sturhand D., Rumpfenhorst H.J. & Moens M. (2002)** – Description of the Australian cereal cyst nematode *Heterodera australis* sp. n. (Tylenchida: Heteroderidae). *Russian J. Nematology* **10** (2), 139 – 148.

This publication includes records of nematodes associated with plants or soil extracts received for diagnostic or research purposes as well as those published as new descriptions and research papers. Identifications of host were compiled based on the predominant plant type or grain crop present at sampling and, therefore, may not indicate the primary host for the nematode species. Australian common names for hosts and nematodes are also provided.

This edition provides information concerning the grains plant parasitic nematodes recorded from each Australian state. It also provides records of the grains plant parasitic nematodes and where they occur within states by grains crop. All lists are arranged in alphabetical order using scientific name.

No attempt has been made to authenticate the identifications. If specimens are required, contact needs to be made first with the relevant State Department of Agriculture, then the main collections of nematodes held in Brisbane (Queensland Museum, Queensland), Knoxfield (Victorian Agriculture, Victoria), Canberra (Division of Entomology, Australian Capital Territory) or Waite (University of Adelaide, South Australia).

Many of the most damaging species of plant parasitic nematodes to grain crops have been recorded from Australia. Some of the exceptions are *Heterodera filipjevi*, *H. zaeae*, *H. glycines* and *H. goettingiana* as well as *Meloidogyne graminocola*, *M. chitwoodii* and *H. naasi*. Within this publication there are many records which do not identify specimens to species level and require more thorough identification.

The naming of nematodes has been based upon information from *The Catalog of the Order of Tylenchida (Nematoda)* by E.B. Ebsary (1991), Agriculture Canada for the members of the Tylenchida and *Aphelenchida, Longidoridae and Trichodoridae* by D.J. Hunt (1993), CAB International, for the Longidoridae, Trichodoridae and Aphelenchidae. Where possible the common name has been included in the lists.

Naming of plants has been based upon information from *CSIRO handbook of Economic plants of Australia* edited by L. Lazarides and B. Hince CSIRO publications (1993) and the *Australian Plant Name Index Australian Flora and Fauna Series* by A.D. Chapman, Australian Government Publishing Service (1992). Where possible the common name has also been included in the list.

Naming of localities has been based upon *Australian 1:250,000 Map Series Gazetteer* published by the Australian Government Publishing Service, 1975.

Funding for this publication has been provided through the Grains Research and Development Corporation, project number DAS281. This publication has been prepared in good faith on the basis of information available at the date of publication. While every effort has been made to ensure the accuracy of this information, the South Australian Research and Development Institute (SARDI) and Grains Research and Development Corporation (GRDC) do not guarantee or warrant the information nor its usefulness in achieving any purpose. SARDI and GRDC will not be liable for any loss, damage, cost or expense incurred or arising from the use or reliance on information in this product.

List 1 : Species of plant parasitic and plant associated nematodes identified from grain crops in Australia (and initial of state where recorded).

- Anguina tritici* S, T, W
Aphelenchoides besseyi NT, Q
Aphelenchoides coffeae N, Q
Aphelenchoides blastophthorus N
Aphelenchoides sp W
Aphelenchus avenae N, W
Basiria graminophila Q
Basiria tumida Q
Basiria sp Q
Boleodorus sp Q
Criconema mutabile N, Q
Discocriconemella limitanea Q
Ditylenchus anchilosposoma W
Ditylenchus dipsaci N,S,W
Ditylenchus triformis N
Ditylenchus sp Q,W
Filenchus exiguus Q
Filenchus filiformis S
Filenchus micoletskyi N
Filenchus sp N, Q, V, W
Gracilacus mutabilis Q
Gracilacus peperpotti N
Gracilacus sp. N, NT, Q, S, V, W
Helicotylenchus digonicus N
Helicotylenchus dihystrera Q
Helicotylenchus erythrinae Q
Helicotylenchus multicinctus Q
Hemicriconemoides mangiferae Q
Hemicriconemoides obtusus N, NT, Q, S, W
Hemicyclophora sp N, Q
Heterodera australis S, V, N
Heterodera avenae N, S, T, V, W
Heterodera schachtii V
Hexatylus sp Q
Lelenchus leptosoma N
Macroposthonia onoensis Q
Macroposthonia ornata Q
Macroposthonia similis N, Q, S, V, W
Macroposthonia xenoplax N, Q, S, V, W
Macroposthonia sp Q
Meloidogyne arenaria N
Meloidogyne hapla N,Q
Meloidogyne incognita N,NT,Q,S,V
Meloidogyne javanica N,Q,S,W
Meloidogyne thamesi Q
Meloidogyne sp S,T
Merlinius brevidens N,Q,S,V
Merlinius nothus N
Merlinius sp W
Morulaimus sclerus V
Nagelus obscurus N
Neopsilenchus magnidens Q
Neopsilenchus sp Q
Paralongidorus australis Q
Paralongidorus eucalypti N,NT,Q,S,V,W
Paralongidorus sacchari Q, S
Paratrichodorus lobatus S
Paratrichodorus minor Q
Paratrichodorus sp N, Q, S, T, V, W
Paratrophurus dissitus Q
Paratrophurus sp Q
Paratylenchus nainianus N, Q
Paratylenchus nanus Q
Paratylenchus projectus Q
Paratylenchus sp N
Pateracephalanema australe N, Q
Paurodontus apiticus Q
Paurodontus sp N, Q
Pratylenchus brachyurus N,Q,W
Pratylenchus coffeae N
Pratylenchus crenatus V,T
Pratylenchus flakkensis T
Pratylenchus hexincisus N
Pratylenchus neglectus N,Q,S,T,V,W
Pratylenchus penetrans Q,S
Pratylenchus pinguicaudatus N
Pratylenchus teres V,W
Pratylenchus thornei N,Q,S,V
Pratylenchus vulnus Q
Pratylenchus zaeae N,Q,V,W
Pratylenchus sp N, Q, S, T, V, W
Psilenchus sp Q
Radopholus similis Q
Radopholus sp. N, NT, Q, T, V, W
Rotylenchulus parvus Q
Rotylenchulus reniformis Q
Rotylenchus brevicudatus Q
Rotylenchus sp N, Q
Sakia sp N, W
Scutellonema brachyurus N,Q
Scutellonema impar N, NT, Q, S
Scutellonema sp N, NT, Q, S, V, W
Trophurus sp Q
Tylenchorhynchus annulatus N, Q, V
Tylenchorhynchus brevilineatus N, W
Tylenchorhynchus capitatus Q
Tylenchorhynchus clarus Q
Tylenchorhynchus curvus Q
Tylenchorhynchus ewingi Q
Tylenchorhynchus mashoodi Q
Tylenchorhynchus striatus N
Tylenchorhynchus sp N,Q,W
Tylenchus sp N
Xiphinema americanum N, NT, Q, S, V, W
Xiphinema radicumicola N, NT, Q, S, V, W

List 2 : Grain Crops and related species and the plant parasitic nematodes recorded with state indicated.

***Avena fatua* – Wild or black oats**

Paratylenchus sp V

***Avena sativa* – Oats**

Discocriconemella limitanea Q

Ditylenchus dipsaci S, W

Helicotylenchus dihystera Q

Heterodera avenae N, S, V, W

Meloidogyne javanica N, Q

Pratylenchus crenatus N, W

Pratylenchus neglectus S, V

Pratylenchus penetrans Q

Pratylenchus teres W

Pratylenchus thornei S

Pratylenchus sp V

Scutellonema brachyurum W

Tylenchorhynchus sp. W

***Avena sterilis* – Wild Oats**

Hemicycliophora sp. Q

Paratylenchus projectus Q

Pratylenchus sp. Q

Xiphinema americanum Q

***Brassica napus* – Canola**

Pratylenchus teres W

Pratylenchus thornei N

***Cajanus cajan* – Pigeon Pea**

Helicotylenchus dihystera Q

Meloidogyne hapla Q

Meloidogyne incognita Q

Radopholus similis Q

Rotylenchulus parvus Q

Rotylenchulus reniformis Q

***Carthamus tinctorius* – Safflower**

Meloidogyne sp. N

***Cicer arietinum* – Chick Pea**

Ditylenchus dipsaci S

Meloidogyne thamesi Q

Pratylenchus brachyurus Q

Pratylenchus neglectus S

Pratylenchus thornei N, S

***Glycine max* – Soybean**

Basiria sp Q

Helicotylenchus dihystera Q

Hemicriconemoides mangiferae Q

Macroposthonia onoensis Q

Macroposthonia sp Q

Meloidogyne hapla Q

Meloidogyne incognita N

Meloidogyne javanica Q, S

Merlinius brevidens Q

Neopsilenchus sp. Q

Pratylenchus brachyurus Q

Pratylenchus neglectus Q

Pratylenchus penetrans Q

Pratylenchus thornei Q, V

Pratylenchus zaeae Q

Pratylenchus sp Q

Rotylenchus brevicaudatus Q

Scutellonema brachyurum Q

Trophurus sp Q

Tylenchorhynchus clarus Q

Tylenchorhynchus curvus Q

Tylenchorhynchus mashoodi Q

Tylenchorhynchus sp Q

***Helianthus annuus* – Sunflower**

Helicotylenchus dihystera Q

Meloidogyne sp N

Pratylenchus brachyurus Q

Pratylenchus thornei Q

Pratylenchus sp Q

Tylenchorhynchus clarus Q

Tylenchorhynchus mashoodi Q

Tylenchorhynchus sp Q

***Hordeum leporinum* – Barley Grass**

Heterodera avenae N,V

Pratylenchus neglectus V

Hordeum marinum – Sea Barley

Pratylenchus neglectus S

Hordeum vulgare – Barley

Helicotylenchus dihystra Q
Helicotylenchus erythrinae Q
Heterodera avenae N, S, T, V
Nagelus obscurus N
Paratylenchus nanus Q
Pateracephalanema australe Q

Meloidogyne javanica Q
Merlinius brevidens S
Morulaimus sclerus V
Pratylenchus neglectus S
Pratylenchus thornei S
Pratylenchus sp W

Lupinus albus – White lupins

Pratylenchus brachyurus Q

Lupinus angustifolius – Lupins

Coslenchus costatus Q
Discocriconemella limitanea Q
Helicotylenchus dihystra Q
Meloidogyne javanica N
Meloidogyne sp T

Paratylenchus nainianus Q
Pratylenchus brachyurus Q
Pratylenchus neglectus V
Pratylenchus penetrans Q,W

Lupinus digitatus

Meloidogyne sp W
Tylenchorhynchus sp. W

Lupinus luteus – Yellow Lupin

Helicotylenchus dihystra N
Meloidogyne sp W

Lupinus sp

Pratylenchus neglectus S, W

Oryza sativa – rice

Aphelenchoides besseyi NT
Aphelenchoides coffeae N
Aphelenchoides sp N
Basiria sp N
Ditylenchus anchilispomosus N
Ditylenchus triformis N
Ditylenchus sp N
Filenchus sp N
Helicotylenchus digonicus N
Paralongidorus australis Q

Paralongidorus sacchari Q
Paurodontus sp N
Pratylenchus pinguicaudatus N
Pratylenchus zeae N
Pratylenchus sp N
Sakia sp N
Tylenchorhynchus annulatus Q
Tylenchorhynchus sp N
Tylenchus sp N

Phaseolus bracteatus = Macroptilium bracteatum

Meloidogyne javanica Q

Phaseolus coccineus – scarlet runner bean

Meloidogyne hapla N

Phaseolus vulgaris – Field beans

Aphelenchoides sp W
Aphelenchus avenae W
Ditylenchus dipsaci N
Ditylenchus sp W
Filenchus exiguus Q
Helicotylenchus dihystra Q
Meloidogyne arenaria N

Meloidogyne hapla N
Meloidogyne incognita N, NT, S
Meloidogyne javanica N, NT, Q, S, W
Meloidogyne thamesi Q
Pratylenchus brachyurus Q
Pratylenchus penetrans Q, W
Pratylenchus vulnus Q, S

Pratylenchus sp W
Phaseolus vulgaris – Field beans cont
Tylenchorhynchus capitatus Q

Tylenchorhynchus brevilineatus W

Phaseolus sp
Aphelenchus avenae W
Ditylenchus anchilisosomus W

Pisum sativum – Field Pea
Ditylenchus dipsaci S
Ditylenchus sp Q
Filenchus exiguus Q
Helicotylenchus dihystera Q
Meloidogyne hapla N
Meloidogyne incognita Q, S
Meloidogyne javanica N, Q, V, W

Meloidogyne sp S, T, W
Paratrichodorus lobatus S
Paratrichodorus minor Q
Paurodontus apiticus Q
Pratylenchus neglectus S
Pratylenchus penetrans Q
Pratylenchus thornei V

Secale cereale – Rye
Helicotylenchus dihystera Q
Heterodera avenae N, S
Meloidogyne javanica Q
Paratrichodorus minor Q

Pratylenchus neglectus S
Pratylenchus penetrans Q
Pratylenchus thornei S

Sorghum bicolor – Grain Sorghum
Boleodorus sp Q
Criconema mutabile Q
Helicotylenchus dihystera Q
Meloidogyne javanica Q
Pratylenchus brachyurus Q

Pratylenchus zeae Q
Pratylenchus sp Q
Rotylenchulus parvus Q
Tylenchus sp Q

Sorghum intrans
Hemicriconemoides obtusus NT
Rotylenchus sp NT

Scutellonema sp NT
Xiphinema americanum NT

Sorghum plumosum
Gracilacus sp NT
Hemicriconemoides obtusus NT
Paralongidorus eucalypti NT
Radopholus sp NT

Rotylenchus sp NT
Scutellonema impar NT
Xiphinema radicum NT

Sorghum stipoideum
Scutellonema impar NT
Xiphinema radicum NT

Sorghum sudanense
Helicotylenchus dihystera Q
Meloidogyne javanica Q

Pratylenchus brachyurus Q
Radopholus similis Q

Triticum secale – Triticale
Pratylenchus neglectus S
Pratylenchus thornei S

Triticum aestivum – Wheat
Anguina tritici S, T, V, W
Aphelenchoides blastophthorus N
Aphelenchus avenae N
Basiria graminophila Q
Basiria tumida Q
Ditylenchus dipsaci W
Filenchus exiguus Q

Filenchus micoletzkyi N
Gracilacus peperpotti N
Helicotylenchus dihystera Q
Heterodera australis N, V, S
Heterodera avenae N, S, V, W
Lelenchus leptosoma N
Meloidogyne incognita V

- Meloidogyne javanica* Q, S
Merlinius brevidens N, Q, V
- Triticum aestivum – Wheat cont**
Merlinius nothus N
Merlinius sp W
Nagelus obscurus N
Paratrichodorus sp V
Paratrophurus dissitus Q
Paratrophurus sp Q
Pratylenchus brachyurus N,W
Pratylenchus coffeae N
Pratylenchus flakkensis T
- Triticum durum – Durum wheat**
Pratylenchus neglectus S
Pratylenchus thornei S
- Vicia benghalensis – purple vetch**
Meloidogyne hapla N
- Vicia faba – Broad Bean / Faba Bean**
Ditylenchus dipsaci N, S
Meloidogyne hapla N
Meloidogyne incognita N
Meloidogyne sp W
- Vicia narboensis**
Ditylenchus dipsaci S
- Vicia sativa – Vetch**
Ditylenchus dipsaci S
Meloidogyne incognita N
Meloidogyne javanica Q
- Vicia villosa ssp dasycarpa – woolly pod vetch**
Ditylenchus dipsaci S
- Vicia sp**
Pratylenchus neglectus S
- Vigna luteola**
Meloidogyne javanica N
- Vigna marina**
Helicotylenchus dihystera Q
Meloidogyne javanica Q
- Vigna mungo – Black gram**
Pratylenchus brachyurus Q
- Vigna parkeri ssp maranguensis – creeping vetch**
Meloidogyne javanica Q
- Vigna radiata – Mung Bean**
Meloidogyne javanica N
- Vigna umbellata - Rice Bean**
Meloidogyne thamesi V
- Pratylenchus hexincisus* N
Pratylenchus neglectus N, Q, S, V, W
Pratylenchus teres W, V
Pratylenchus thornei N, Q, S
Pratylenchus zae N, Q
Pratylenchus sp V
Psilenchus sp Q
Tylenchorhynchus brevilineatus N
Tylenchorhynchus capitatus N
Tylenchorhynchus ewingi Q
Tylenchorhynchus striatus N
Tylenchorhynchus sp N, W
- Merlinius brevidens* N
Pratylenchus crenatus T
Pratylenchus thornei S
Scutellonema brachyurum Q
- Meloidogyne* sp S
Pratylenchus projectus Q
Pratylenchus neglectus V
- Radopholus similis* Q
- Radopholus similis* Q

***Vigna unguiculata* ssp *unguiculata* – Cowpea**

Macroposthonia xenoplax N

Meloidogyne arenaria N

Meloidogyne incognita N, Q

Meloidogyne javanica NT

Pratylenchus brachyurus Q

Pratylenchus vulnus Q

***Vigna unguiculata* ssp *sesquipedalis* – Yardlong Bean**

Meloidogyne javanica W

Vigna vexillata

Meloidogyne incognita N

Meloidogyne javanica N

***Vigna* sp**

Macroposthonia similis N

***Zea mays* – maize**

Criconema mutabile N

Ditylenchus sp Q

Filenchus exiguus Q

Filenchus filiformis S

Gracilacus mutabilis Q

Helicotylenchus dihystra Q

Helicotylenchus multicinctus Q

Hemicycliophora sp N

Hexatyclus sp Q

Macroposthonia ornata Q

Meloidogyne javanica Q, S

Neopsilenchus magnidens Q

Paratrichodorus lobatus S

Paratrichodorus minor Q

Paratylenchus sp N

Pratylenchus brachyurus Q

Pratylenchus zeae Q

Radopholus similis Q

Rotylenchulus parvus Q

Tylenchus sp N

Part 3 : List of plant parasitic nematodes and their distribution according to host and location within each state.

A. Root knot and related nematodes (Meloidogynidae Skarbilovich, 1959)

Meloidogyne Goeldi, 1892. Root knot nematodes are widely associated with damage to crops.

Meloidogyne arenaria (Neal) Chitwood

Phaseolus vulgaris : NSW – Baulkham Hills, Tuncurry, Sydney

Vigna unguiculata ssp *unguiculata* (cow pea) : NSW - Coonabarabran

Meloidogyne hapla Chitwood

Cajanus cajan (pigeon pea) : QLD - Wooroolin

Glycine max (soybean) : QLD - Carney's Greed

Phaseolus coccineus (scarlet runner bean) : NSW – Seven Hills

Phaseolus vulgaris (field beans) : NSW – Gol Gol

Pisum sativum (field pea) : NSW - Narara

Vicia benghalensis (purple vetch) : NSW - Narara

Vicia faba (faba bean) : NSW – Eastwood

Meloidogyne incognita (Kofoid & White) Chitwood

Cajanus cajan (pigeon pea) : QLD - Redland Bay

Glycine max (soybean) : NSW – Kyogle, Casino

Phaseolus bracteatus (= *Macroptilium bracteatum*) : QLD – no location recorded

Phaseolus vulgaris : NSW – Richmond, Duranbah, Seven Hills

: NT – Darwin

: SA - Blanchtown

Pisum sativum (field pea) : QLD – Millaroo, Palmwoods

: SA – Blanchtown

Triticum aestivum (wheat) : VIC – Burnley

Vicia faba (faba bean) : NSW - Duranbah

Vicia sativa (vetch) : NSW - Bora Ridge

Vigna unguiculata ssp *unguiculata* (cow pea) : NSW – Lismore

: QLD – Bli Bli

Vigna vexillata : NSW – Lismore

Meloidogyne javanica (Treb) Chitwood

Avena sativa (oats) : NSW – Dorrigo

: QLD – St Mary's Falls (Killarney), Beerwah

Glycine max (soybean) : QLD – Nambour

: SA – no location recorded

Hordeum vulgare (barley) : QLD – Beerwah

Lupinus augustifolius (lupins) : NSW – Warriewood, Eldeslie

Phaseolus vulgaris : NSW – Baulkham Hills, Dareton, Glenfield, Taree

: NT – Darwin

: QLD – Kinkin

: SA – No location recorded

: WA - Fremantle

Pisum sativum (field peas) : NSW – Wollongbar

: QLD – Beerwah

: VIC – no location recorded

: WA – Bayswater

Secale cereale (rye) : QLD – Glasshouse Mountains

Sorghum bicolor (sorghum) : QLD – Beerwah, Nambour

Sorghum sudanense : QLD – Nambour

Triticum aestivum (wheat) : QLD – Beerwah

: SA – no location recorded

Vicia sativa (vetch) : QLD – Beerwah

Vigna luteola : NSW – Grafton

Vigna marima : QLD – Beerburrum

Vigna parkeri ssp *maranguensis* (creeping vigna) : QLD – Gympie

Vigna radiata (mung bean) : NSW – Nemingha

Vigna unguiculata ssp *unguiculata* (cow pea) : NT – Darwin

Meloidogyne javanica cont

- Vigna unguiculata* ssp *sesquipedalis* (yardlong bean) : WA – Mt Pleasant
Zea mays (maize) : QLD – Perwillowen
 : SA – no location recorded

Meloidogyne thamesi Chitwood in Chitwood, Specht & Havis

- Cicer arietinum* (chick pea) : QLD - Mt Mort
Phaseolus vulgaris : QLD - Boulia
Vigna umbellata (rice bean) : Keravat

Meloidogyne sp

- Carthamus tinctorius* (safflower) : NSW – Richmond
Helianthus annuus (sunflower) : NSW – Cobar
Lupinus angustifolius (lupins) : TAS – Launceston
Lupinus digitatus : WA – Bussleton
Lupinus luteus : WA – Witchcliffe
Pisum sativum (field peas) : SA – (cv Sugar Pod and Oregon) – Murray Bridge
 : TAS – North
 : WA – Witchcliffe
Vicia faba (faba bean) : WA – Swan
Vicia sativa (vetch) : SA – Hatherleigh

B. Cyst and related nematodes (Heteroderidae Filipjev & Schuurmans Stekhoven, 1941). Cyst nematodes cause damage in several crops. The most important is *Heterodera avenae* on winter cereals in south east Australia. *Heterodera australis* has been described recently from cereal crops in Australia. This new species is still being investigated to determine if it is valid.

***Heterodera* Schimdt, 1871**

***Heterodera australis* Subbotin, Sturhan, Rumpfenhorst & Moens**

- Triticum aestivum* : SA – Yorke Peninsula, no location recorded
 : VIC – Beulah

***Heterodera avenae* Wollenweber. Cereal Cyst Nematode**

- Avena sativa* (Oats) : NSW – Koraleigh
 : SA – Widespread in cereal growing areas
 : VIC – Sea Lake, Widespread in Mallee and Wimmera
 : WA – Beverley
Hordeum leporinum (Barley grass) : NSW – Koraleigh
 : VIC – widespread in Mallee and Wimmera
Hordeum vulgare (Barley) : NSW – Koraleigh, Somerton, Dubbo
 : SA – Widespread in cereal growing areas
 : TAS – North West region
 : VIC – Sea Lake, Widespread in Mallee and Wimmera
Secale cereale (Rye) : NSW – Koraleigh
 : SA – Widespread in cereal areas
Triticum aestivum (wheat) : NSW – Koraleigh, Winton, Loomberah, Manilla, Euston,
 Kyalite, Dubbo, Wellington
 : SA – Pinneroo, widespread in cereal growing areas
 : VIC – Widespread in Mallee and Wimmera
 : WA – Irishtown

C. Root lesion and related nematodes (Pratylenchidae). The root lesion nematodes (*Pratylenchus*) are among the most important plant parasitic nematodes in Australian grain growing crops. They cause extensive damage to cereal crops.

***Pratylenchus* Filipjev, 1936**

***Pratylenchus brachyurus* (Godfrey) Filipjev & Schuurmans Stekhoven)**

- Cicer arietinum* (chickpea) : QLD – Mt Mort
Glycine max (soybean) : QLD – Kingaroy, Jacobson Mount
Helianthus annuus (sunflower) : QLD – Wondai, Warrill View
Lupinus alba (white lupin) : QLD – Mt Mort
Lupinus angustifolius (Lupin) : QLD – Tolga
Phaseolus vulgaris : QLD – Kin Kin

Pratylenchus brachyurus cont*Sorghum bicolor* (sorghum) : QLD – Kingaroy*Sorghum sudanense* : QLD – Kamerung*Triticum aestivum* (wheat) : NSW – Koraleigh, Orange

: WA – Dongarra

Vigna mungo (black gram) : QLD – Ormiston*Vigna unguiculata* ssp *unguiculata* (cowpea) : QLD – Coominya, Charters Towers, Nambour, Ormiston.*Zea mays* (maize) : QLD – Kingaroy, Wondai, Koah**Pratylenchus coffeae** (Zimmerman) Filipjev & Schuurmans Stekhoven*Triticum aestivum* (wheat) : QLD – Koraleigh**Pratylenchus crenatus** Loof*Avena sativa* (oat) : WA – Bunbury*Triticum aestivum* (wheat) : VIC – in high rainfall areas*Vicia faba* (faba bean) : TAS – Sandford**Pratylenchus flakkensis** Seinhorst*Triticum aestivum* (wheat) : TAS – Kingsmeadow**Pratylenchus hexincisus** Taylor & Jenkins*Triticum aestivum* (wheat) : NSW – Warkton**Pratylenchus neglectus** (Rensch) Filipjev & Schuurmans Stekhoven*Avena sativa* (oat) : SA – Widespread in cropping areas

: VIC – Widespread in Mallee and Wimmera, Merbein

Glycine max (soybean) : QLD – Allora, Mulgowie*Hordeum leporinum* : VIC – Widespread in Mallee and Wimmera*Hordeum marinum* : SA – Eyre Peninsula*Hordeum vulgare* (barley) : SA – Widespread in cropping areas

: VIC – Widespread in Mallee and Wimmera

Lupinus augustifolius (lupin) : VIC – Benalla*Pisum sativum* (field peas) : SA – Eyre Peninsula*Secale cereale* (rye) : SA – Widespread in cropping areas*Triticum secale* (triticale) : SA – Widespread in cropping areas*Triticum aestivum* (wheat) : NSW – Warkton, Orange

: QLD – Runnymede, Boondoma, Jandowae

: SA – Widespread in cropping areas

: VIC – Widespread in Mallee and Wimmera

: WA – Northam

Triticum durum (durum wheat) : SA – Widespread in cropping areas*Vicia sativa* (Field bean/Broad Bean) : VIC – Swan Hill, Lalbert, Raywood, Chinkapook, Nyah

West, Manangatang, Mitiamo, Bulga, Piangil, Tooleybuc, Koraleigh, Kerang,

Hopetoun, Wemen.

Vicia sp : SA – Eyre Peninsula**Pratylenchus penetrans** (Cobb) Filipjev & Schuurmans Stekhoven*Avena sativa* (oat) : QLD – Woongoolba*Glycine max* (soybean) : QLD – Stanthorpe*Lupinus augustifolius* (lupin) : QLD – Stanthorpe, Wallangarra, Dalveen

: WA – 31° 23.142'S 116°33.583'E

Phaseolus vulgaris : QLD – Stanthorpe, Wallangarra, Dalveen*Secale cereale* (rye) : QLD – Granite Belt*Triticum aestivum* (wheat) : SA – Port Pirie**Pratylenchus pinguicaudatus** Corbett*Oryza sativa* (rice) : NSW – Leeton, Yanco**Pratylenchus teres** Khan & Singh*Avena sativa* : WA – 33°21.803'S 117°6.370'E*Brassica napus* : WA – 33°22.084'S 117°6.370'S*Triticum aestivum* : VIC – no location recorded

: WA – 33°20.502'S 117°2.605'E, 33°8.947'S 117°33.819'E

Pratylenchus thornei Sher & Allen*Avena sativa* (oat) : SA – Isolated pockets in cropping regions on Eyre Peninsula,

widespread in lower and mid north

Cicer arietinum (chickpea) : NSW – Moree, Tamworth, North west wheat areas, associated

***Pratylenchus thornei* cont**

with crop damage

Glycine max (soybean) : QLD – Darling Downs, Pittsworth, Brookstead, Cecil Plains, Lake
: QLD – Clarendon
: VIC – Benalla

Helianthus annuus (sunflower) : QLD – Allora

Hordeum vulgare (barley) : SA – isolated pockets in cropping areas on Eyre Peninsula,
widespread in lower and mid north

Pisum sativum (field pea) : VIC - Benalla

Secale cereale (rye) : SA - isolated pockets in cropping areas on Eyre Peninsula,
widespread in lower and mid north

Triticum secale (triticale) : SA - isolated pockets in cropping areas on Eyre Peninsula,
widespread in lower and mid north

Triticum aestivum (wheat) : NSW – Gunnedah, Dubbo, Narrabri, north west wheat areas,
associated with crop damage

Triticum durum (durum wheat) : SA - isolated pockets in cropping areas on Eyre Peninsula,
widespread in lower and mid north

Vicia faba (faba bean) : SA - isolated pockets in cropping areas on Eyre Peninsula,
widespread in lower and mid north

***Pratylenchus vulnus* Allen & Jensen**

Phaseolus vulgaris : QLD – Victoria Point
: SA – no location recorded

Vigna unguiculata ssp *unguiculata* (cowpea) : QLD – Eight Mile Plain

***Pratylenchus zeae* Graham**

Glycine max (soybean) : QLD – South Burnett, Kingaroy, Coominya, Rosedale, North Arm,
Mary Valley.

Oryza sativa (rice) : NSW – Yanco

Sorghum bicolor (sorghum) : QLD – Wondai

Triticum aestivum (wheat) : NSW – Koraleigh

: QLD – Coolabunia, Durong, Morlewood

Zea mays (maize) : QLD - Cooroy

***Pratylenchus* sp.**

Avena sativa (oat) : VIC – Salisbury

Avena sterilis (wild oats) : QLD - Woongoolba

Glycine max (soybean) : QLD – Christmas Creek

Helianthus annuus (sunflower) : QLD – Rosewood

Hordeum vulgare (barley) : WA – Katanning

Oryza sativa (rice) : NSW – Yanco

Phaseolus vulgaris : WA – Gosnells

Sorghum bicolor (sorghum) : QLD – Killarney, Stanthorpe

Triticum aestivum (wheat) : VIC – Millewa

***Radopholus* Thorne, 1949**

***Radopholus similis* (Cobb) Thorne**

Cajanus cajan (pigeon pea) : QLD – Nambour

Sorghum sudanense : QLD – Nambour

Vigna marina : QLD – Nambour

Vigna mungo (black gram) : QLD – Nambour

Zea mays (maize) : QLD – Nambour

***Radopholus* sp**

Sorghum plumosum : NT - Katherine

D. Spiral and related nematodes (Hoplolaimidae). Commonly found in tropical and subtropical regions. Not considered to be economically damaging unless in high numbers.

***Helicotylenchus* Steiner, 1945**

***Helicotylenchus digonicus* Perry in Perry, Darling & Thorne**

Oryza sativa (rice) : NSW - Finley

***Helicotylenchus dihystra* (Cobb) Sher**

Avena sativa (oats) : QLD – Beerwah

Cajanus cajan (pigeon pea) : QLD – Nambour

***Helicotylenchus dihystera* cont**

- Glycine max* (soybean) : QLD – Toogooloowah, Lowood
- Helianthus annuus* (sunflower) : QLD – Warrill View
- Hordeum vulgare* (barley) : QLD – Ravenshoe
- Lupinus augustifolius* (lupins) : QLD – Tolga
- Lupinus luteus* : NSW – Lismore
- Phaseolus vulgaris* : QLD – Frenchville, Gladstonberry
- Pisum sativum* (field peas) : QLD – Brisbane, Montville, Beerwah
- Secale cereale* (rye) : QLD – Beerwah
- Sorghum bicolor* (sorghum) : QLD – Beerwah
- Sorghum sudanense* : QLD – Nambour
- Triticum aestivum* (wheat) : QLD – Cobba-da-manna
- Vigna marina* : QLD – Nambour
- Zea mays* (maize) : QLD – Beerwah, Nambour, Koah, Cooroy

***Helicotylenchus erythrinae* (Zimmerman) Golden**

- Hordeum vulgare* (barley) : QLD – Stanthorpe

***Helicotylenchus multicinctus* (Cobb) Golden**

- Zea mays* (maize) : Qld - Beerwah

***Rotylenchus* Filipjev, 1936**

***Rotylenchus brevicaudatus* Colbran**

- Glycine max* (soybean) : QLD - Rockhampton, Toogooloowah

***Rotylenchus* sp**

- Sorghum intrans* : NT – Thorack R, Darwin
- Sorghum plumosum* : NT - Katherine

***Scutellonema* Andrassy, 1958**

***Scutellonema brachyurum* (Steiner) Andrassy**

- Avena sativa* (oats) : NSW – Rydalmere
- Glycine max* (soybean) : QLD – Laidley
- Vicia faba* (faba bean) : QLD – no location recorded

***Scutellonema impar* Phillips**

- Sorghum plumosum* : NT – Katherine
- Sorghum stipoideum* : NT – Katherine

***Scutellonema* sp**

- Sorghum intrans* : NT – Thorack R., Darwin

E. Stunt, awl and related nematodes (Dolichodoridae). Often found in soil extracts but not considered to cause crop damage unless in very high numbers.

***Merlinius* Siddiqi, 1970. Very commonly found in soil extracts from cereal crops.**

***Merlinius brevidens* (Allen) Siddiqi.**

- Glycine max* (soybean) : QLD – Pittsworth, Brookstead, Cecil Plains
- Hordeum vulgare* (barley) : SA – Marion Bay
- Triticum aestivum* (wheat) : NSW - Wagga Wagga, Moree
- : QLD – Darling Downs, Yandina
- : VIC – Sea Lake
- Vicia faba* (faba bean) : NSW – Moulamein

***Merlinius nothus* (Allen) Siddiqi**

- Triticum aestivum* (wheat) : NSW – Gunnedah

***Merlinius* sp**

- Triticum aestivum* (wheat) : WA - Mukinbudin

***Morulaimus* Sauer, 1966**

***Morulaimus sclerus* Sauer**

- Hordeum vulgare* (barley) : VIC – Laharum

Nagelus Thorne & Malek, 1968

Nagelus obscurus (Allen) Powers, Baldwin & Bell

Hordeum vulgare (barley) : NSW – Gunnedah, Moree

Triticum aestivum (wheat) : NSW – Gunnedah, Mudgee

Paratrophurus Arias, 1970

Paratrophurus dissitatus (Colbran) Siddiqi

Triticum aestivum (wheat) : QLD – Orion

Paratrophurus spp

Triticum aestivum (wheat) : QLD – Gwynne Range Jondaryan, Macalister

Trophurus Loof, 1956

Trophurus sp

Glycine max (soybean) : QLD – Rosewood

Tylenchorhynchus Cobb, 1913

Tylenchorhynchus annulatus (Cassidy) Golden

Oryza sativa (rice) : QLD – Burdekin River Basin, Mareeba

Tylenchorhynchus brevilineatus Williams

Phaseolus vulgaris : WA – Carnarvon

Triticum aestivum (wheat) : NSW – Hollywood

Tylenchorhynchus capitatus Allen

Phaseolus vulgaris : QLD - Amamoor

Triticum aestivum (wheat) : NSW – Koraleigh

Tylenchorhynchus clarus Allen

Glycine max (soybean) : QLD – Lowood

Helianthus annuus (sunflower) : QLD – Lowood

Tylenchorhynchus curvus Williams

Glycine max (soybean) : QLD – Lake Clarendon

Tylenchorhynchus ewingi Hopper

Triticum aestivum (wheat) : QLD – Brigalow

Tylenchorhynchus mashoodi Siddiqi & Basir

Glycine max (soybean) : QLD - Gatton, Laidley

Helianthus annuus (sunflower) : QLD – Rosewood

Tylenchorhynchus striatus Allen

Triticum aestivum (wheat) : NSW - Moree

Tylenchorhynchus sp

Avena sativa (oats) : WA – Wongan Hills

Glycine max (soybean) : QLD – Warwick

Helianthus annuus (sunflower) : QLD – Rosewood, Lowood

Lupinus digitatus : WA – Muresk

Oryza sativa (rice) : NSW – Wakool, Yanco

Triticum aestivum (wheat) : NSW – Terramungamine, Mogriguy

: WA – Northam

F. Ring, sheath, pin and related nematodes (Criconematina Siddiqi).

Criconema Hofmanner & Menzel, 1914

Criconema mutabile (Taylor) Raski & Luc

Zea mays (maize) : NSW – no location recorded

Discocriconemella de Grisse & Loof, 1965

Discocriconemella limitanea (Luc) de Grisse & Loof

Avena sativa (oats) : QLD – Woongoolba

Lupinus augustifolius : QLD – Applethorpe

Gracilacus Raski, 1962

Gracilacus mutabilis (Colbran) Raski

Zea mays (maize) : QLD – Beerburum

Gracilacus peperpotti Schoemaker

Triticum aestivum (wheat) : NSW – Narrabri

***Gracilacus* sp**

Sorghum plumosum : NT - Katherine

Hemicriconemoides Chitwood & Birchfield, 1957

Hemicriconemoides mangiferae Siddiqi

Glycine max (soybean) : QLD – Harlin

Hemicriconemoides obtusus Colbran

Sorghum intrans : NT – Thorack DR

Sorghum plumosum : NT – Manbullo

Hemicycliophora de Man, 1921

***Hemicycliophora* sp**

Avena sterilis : QLD - Woongoolba

Zea mays (maize) : NSW – no location recorded

Macroposthonia de Man, 1880

Macroposthonia onoensis (Luc) de Grisse & Loof

Glycine max (soybean) : QLD – Woodhill, Boonah, Aratula

Macroposthonia ornata (Raski) de Grisse & Loof

Zea mays (maize) : QLD – Koah

Macroposthonia similis (Cobb) de Grisse & Loof

Vigna sp : NSW – no location recorded

Macroposthonia xenoplax (Raski) de Grisse & Loof

Vigna unguiculata ssp *unguiculata* (cowpea) : NSW – no location recorded

***Macroposthonia* sp**

Glycine max (soybean) : QLD – Christmas Creek, Boonah

Paratylenchus Micoletzky, 1922 (Often found in grain soils but as 4th stage juveniles)

Paratylenchus arcuatus (syn *nainainus*) Luc & de Guiran

Lupinus augustifolius (lupin) : QLD – Applethorpe

Paratylenchus nanus Cobb

Hordeum vulgare (barley) : QLD – Oakey

Paratylenchus projectus Jenkins

Avena sterilis : QLD – Woongoolba

Vicia sativa (vetch) : QLD - Stanthorpe

***Paratylenchus* sp**

Avena fatua : VIC – many records in Mallee and Wimmera

Zea mays (maize) : NSW – no location recorded

Pateracephalanema Mehta & Raski, 1971

Pateracephalanema australe

Hordeum vulgare (barley) : QLD - Cecil Plains

Rotylenchulus Linford & Oliveira, 1940

Rotylenchulus parvus (Williams) Sher

Cajanus cajan (pigeon pea) : QLD - Wooroolin

Sorghum bicolor (sorghum) : QLD – Wondai, Kingaroy

Zea mays (maize) : QLD – Wooroolin, Kingaroy

Rotylenchulus reniformis Linford & Oliviera

Cajanus cajan (pigeon pea) : QLD – Kamerunga

G. Stubby root and related nematodes (Trichodoridae). These nematodes can cause considerable damage to crops.

Paratrichodorus Siddiqi, 1974

Paratrichodorus lobatus (Colbran) Siddiqi

Pisum sativum (field pea) : SA – no location recorded

***Paratrichodorus lobatus* cont**

Zea mays (maize) : SA – no location recorded

Paratrichodorus minor (Colbran) Siddiqi

Pisum sativum (field pea) : QLD – Millaroo

Secale cereale (rye) : QLD – Calavos

Zea mays (maize) : QLD – Koah

***Paratrichodorus* sp**

Triticum aestivum (wheat) : VIC – Lower Norton

H. Dagger and related nematodes (Longidoridae)

Paralongidorus Siddiqi, Hooper & Khan, 1963

Paralongidorus australis

Oryza sativa : QLD – Burdekin River Basin, Crop damage associated

Paralongidorus eucalypti Fisher

Sorghum plumosum : NT – Katherine

Paralongidorus sacchari Siddiqi, Hooper & Khan

Oryza sativa (rice) : QLD – Ayr

Xiphinema Cobb, 1913

Xiphinema americanum Cobb

Avena sterilis : QLD - Nambour

Sorghum intrans : NT – Thorack R Darwin

Xiphinema radicum Goodey

Sorghum plumosum : NT – Katherine

Sorghum stipoides : NT - Katherine

I. Stem, bulb and related nematodes. Contain important plant parasites nematode species of aerial parts of plants as well as soil borne fungal feeders.

Anguina Scopoli, 1977

Anguina tritici (Steinbuch) Chitwood

Triticum aestivum (wheat) : SA – Recorded but now rare

: TAS – Low incidence in wheat growing areas

: VIC – Recorded but now rare

: WA – Northern wheat areas

Aphelenchoides Fischer, 1894

Aphelenchoides besseyi Christie (Rice white tip nematode)

Oryza sativa (rice) : NT – Adelaide River

Phaseolus vulgaris : WA - Carnarvon

Aphelenchoides blastophthorus Franklin

Triticum aestivum (wheat) : NSW – Orange

Aphelenchoides coffeae (Noak) Filipjev – species inquirende vel incertae sedis (status unclear)

Oryza sativa (rice) : NSW – Griffith

***Aphelenchoides* sp**

Oryza sativa (rice) : NSW – Wakool, Yanco, Finley, Leeton, Griffith

Aphelenchus Bastian, 1865

***Aphelenchus avenae* Bastian.** Is a fungal feeder rather than a plant parasite and is widely distributed throughout Australia.

Ditylenchus Filipjev, 1936

Ditylenchus anchilospomosus (Tarjan) Fortuner

Phaseolus sp : WA – no location recorded

Oryza sativa (rice) : NSW – Yanco

Ditylenchus dipsaci (Khun) Filipjev

Avena sativa (oat) : SA – Curramulka, Northfield, Roseworthy, Upper Yorke Peninsula,

Eudunda, Willunga, Milang. Crop damage associated.

Cicer arietinum (chickpea) : SA – Freeling, Eudunda

***Ditylenchus dipsaci* cont**

Phaseolus vulgaris : NSW – Matcham

Pisum sativum (field pea) : SA – Widespread in mid north, crop damage associated.

Triticum aestivum (wheat) : SA – found to cause damage but no reproduction of nematode

Triticum aestivum (wheat): WA – Bodallin

Vicia faba (faba bean) : NSW – Gosford

: SA – Eudunda, crop damage associated

Vicia narboensis : SA – Tanunda

Vicia villosa ssp *dasycarpa* : SA – Netherton

***Ditylenchus triformis* Hirschmann & Sasser**

Oryza sativa (rice) : NSW - Yanco

***Ditylenchus* sp**

Oryza sativa (rice) : NSW – Yanco, Finley

Phaseolus vulgaris : WA – Carnarvon

Pisum sativum (field pea) : QLD – Yeppoon

Zea mays (maize) : QLD – Coolum

J. Tylenchidae (mainly fungal feeders)

***Basiria* Siddiqi, 1959**

***Basiria graminophila* Siddiqi**

Triticum aestivum (wheat) : QLD – Cecil Plains

***Basiria tumida* (Colbran) Geraert**

Triticum aestivum (wheat) : QLD - Kingaroy

***Basiria* sp**

Glycine max (soybean) : QLD – Warwick, Allora

Oryza sativa (rice) : NSW – Wakool, Yanco

***Boleodorus* Thorne, 1941**

***Boleodorus* sp**

Sorghum bicolor (sorghum) : QLD - Killarney

***Filenchus* Andrassy, 1954**

***Filenchus exiguus* (de Man) Ebsary – species inquirende (Ebsary, 1991)**

Phaseolus vulgaris : NSW – Manly, Ipswich

Pisum sativum (field pea) : QLD – Yeppoon

Triticum aestivum (wheat) : QLD – Thulimbah

Zea mays (maize) : Beerwah

***Filenchus filiformis* (Butschli) Ebsary**

Zea mays (maize) : SA – Urrbrae

***Filenchus micoletzky* (Andrassy) Ebsary – species inquirende**

Triticum aestivum (wheat) : NSW – Tomingley

***Filenchus* sp**

Oryza sativa (rice) : NSW – Wakool, Finley, Yanco

***Lelenchus* Andrassy, 1954**

***Lelenchus leptosoma* (de Man) Andrassy**

Triticum aestivum (wheat) : NSW - Wellington

***Neopsilenchus* Thorne & Malek, 1968**

***Neopsilenchus magnidens* (Thorne) Thorne & Malek**

Zea mays (maize) : QLD - Coolum

***Neopsilenchus* sp**

Glycine max (maize) : QLD – Warwick

***Psilenchus* de Man, 1921**

***Psilenchus* sp**

Triticum aestivum (wheat) : QLD – Condamine

Sakia Khan, 1964 – genus dubium

Sakia sp

Oryza sativa (rice) : NSW - Yanco

Tylenchus Bastian, 1865

Tylenchus sp

Oryza sativa (rice) : NSW – Wakool, Finley, Yanco

Zea mays (maize) : NSW – Bathurst

L. The suborder Hexatylinea (mainly fungal feeding with possible insect-parasitic cycle).

Hexatyilus Goodey, 1926

Hexatyilus sp

Zea mays (maize) : QLD – no location recorded

Paurodontus Thorne, 1941

Paurodontus apitiicus Thorne

Pisum sativum (field peas) : QLD – Yeppoon

Paurodontus sp

Oryza sativa (rice) : NSW – Wakool

List 4 : All plant parasitic nematode species recorded from Australia grouped by state.

Australian National Territory

Criconema eucalypti
Eutylenchus setiferus

Fergusobia tumefaciens
Meloidogyne javanica

Ogma australis

New South Wales

Acontylus sp
Aglenchus agricola
Anguina microlaenae
Anguina sp
Aphelenchoides bicaudatus
Aphelenchoides blastophorus
Aphelenchoides coffeae
Aphelenchoides composticola
Aphelenchoides fragariae
Aphelenchoides limberi
Aphelenchoides parietinus
Aphelenchoides ritzemabosi
Aphelenchoides saprophilus
Aphelenchoides sp
Aphelenchus avenae
Arboritynchus simpsonii
Basiria sp
Belonolaimus lolii
Belonolaimus longicaudatus
Belonolaimus sp
Blandicephalanema bossi
Boleodorus sp
Cactodera cacti
Caloosia nudata
Carphodorus bilineatus
Cephalenchus brevicaudatus
Cephalenchus emarginatus
Cephalenchus sp
Coslenchus costatus
Criconema lanxifrons
Criconema mutabile
Criconema pasticum
Criconema sp
Criconemella avicenniae
Criconemoides sp
Cryphodera sp
Discocriconemella limitanea
Discocriconemella sp
Ditylenchus anchilispomosus
Ditylenchus australiae
Ditylenchus dipsaci
Ditylenchus intermedius
Ditylenchus myceliophagus
Ditylenchus triformis
Ditylenchus sp
Ecphyadophora tenuissima
Eutylenchus africanus

Eutylenchus setiferus
Fergusobia tumefaciens
Filenchus exiguus
Filenchus infirmus
Filenchus microletzkyi
Filenchus minutus
Filenchus polyhypnus
Filenchus unifromis
Filenchus sp
Gracilacus peperpotti
Gracilacus steineri
Gracilacus sp
Helicotylenchus digonicus
Helicotylenchus dihystra
Helicotylenchus exallus
Helicotylenchus minzi
Helicotylenchus multicinctus
Helicotylenchus variabilis
Helicotylenchus varicaudatus
Helicotylenchus sp
Hemicriconemoides coronatus
Hemicriconemoides insignis
Hemicriconemoides mangiferae
Hemicriconemoides minor
Hemicriconemoides obtusus
Hemicycliophora arenaria
Hemicycliophora brevicauda
Hemicycliophora iwia
Hemicycliophora labiata
Hemicycliophora natalensis
Hemicycliophora ovata
Hemicycliophora thornei
Hemicycliophora truncata
Hemicycliophora vitiensis
Hemicycliophora sp
Heterodera avenae
Heterodera fici
Heterodera graminis
Heterodera schachtii
Heterodera trifolii
Heterodera sp
Hoplolaimus sp
Lelenchus leptosoma
Longidorus sp
Macroposthonia curvata
Macroposthonia ornata
Macroposthonia similis
Macroposthonia teres

Macroposthonia xenoplax
Macroposthonia sp
Malenchus bryophilus
Meloidogyne arenaria
Meloidogyne exigua
Meloidogyne hapla
Meloidogyne incognita
Meloidogyne javanica
Meloidogyne thamesi
Meloidogyne trifoliophila
Meloidogyne sp
Merlinius brevidens
Merlinius nothus
Morulaimus arenicolus
Morulaimus geniculatus
Morulaimus simplex
Morulaimus whitei
Nagelus obscurus
Neodolichodorus adelaidensis
Neodolichodorus cassati
Neodolichodorus obtusus
Neodolichodorus sp
Neopsilenchus magnidens
Neopsilenchus minor
Ogma civellae
Ogma octangulare
Ogma sp
Paralongidorus eucalypti
Paraphelenchus pseudoparietinus
Paratrichodorus lobatus
Paratrichodorus minor
Paratrichodorus mirzai
Paratrichodorus porosus
Paratrichodorus sp
Paratylenchus coronatus
Paratylenchus lepidus
Paratylenchus nanus
Paratylenchus nainianus
Paratylenchus projectus
Paratylenchus vandenbrandei
Paratylenchus sp
Pateracephalanema alticola
Pateracephalanema australe
Pateracephalanema imbricatum
Pateracephalanema pectinatum

New South Wales Cont

Paterocephalanema pellitum
Paurodontus sp
Pratylenchoides leiocauda
Pratylenchus allenii
Pratylenchus brachyurus
Pratylenchus coffeae
Pratylenchus crenatus
Pratylenchoides leiocauda
Pratylenchus goodeyi
Pratylenchus hexincisus
Pratylenchus jordanensis
Pratylenchus loosi
Pratylenchus neglectus
Pratylenchus penetrans
Pratylenchus
pinguicaudatus
Pratylenchus pratensis
Pratylenchus
pseudopratisensis
Pratylenchus thornei
Pratylenchus vulnus
Pratylenchus zeae
Pratylenchus sp
Pseudohalenchus minutus
Psilenchus sp
Radopholus clarus
Radopholus crenatus

Northern Territory

Aphelenchoides besseyi
Aphelenchoides ritzemabosi
Aphelenchus avenae
Aphelenchus sp
Caloosia nudata
Gracilacus sp
Helicotylenchus dihystra
Helicotylenchus labiatus
Helicotylenchus multicinctus
Helicotylenchus
varicaudatus
Helicotylenchus sp
Hemicriconemoides
brachyurus
Hemicriconemoides
cocophilus
Hemicriconemoides
mangiferae

Queensland

Achlysiella williamsi
Aglencus agricola
Anguina sp
Aphelenchoides besseyi
Aphelenchoides bicaudatus
Aphelenchoides coffeae
Aphelenchoides
composticola
Aphelenchoides fragariae
Aphelenchoides hylurgi

Radopholus magniglans
Radopholus rectus
Radopholus similis
Radopholus trilineatus
Radopholus vangundyi
Radopholus sp
Rotylenchulus sp
Rotylenchus brevicaudatus
Rotylenchus buxophilus
Rotylenchus gracilidens
Rotylenchus robustus
Rotylenchus sp
Sakia sp
Sauertylenchus labiodiscus
Scutellonema brachyurum
Scutellonema clariceps
Scutellonema impar
Scutellonema
incisicaudatum
Scutellonema magniphasma
Scutellonema minutum
Scutellonema sp
Trophotylenchulus
clavicaudatus
Tylenchorhynchus
annulatus
Tylenchorhynchus
brevilineatus

Hemicriconemoides obtusus
Hoplolaimus seinhorsti
Macroposthonia caballeroi
Macroposthonia onoensis
Macroposthonia ornata
Macroposthonia
sphaerocephala
Macroposthonia sp
Meloidogyne incognita
Meloidogyne javanica
Meloidogyne sp
Morulaimus whitei
Paralongidorus eucalypti
Pratylenchus brachyurus
Pratylenchus jordanensis
Pratylenchus zeae
Radopholus nativus
Radopholus nigeriensis

Aphelenchoides parietinus
Aphelenchoides ritzemabosi
Aphelenchoides saphophilus
Aphelenchoides subtenuis
Aphelenchoides sp
Aphelenchus avenae
Aphelenchus sp
Basiria duplexa
Basiria gracilis
Basiria graminophila

Tylenchorhynchus capitatus
Tylenchorhynchus
hastulatus
Tylenchorhynchus latus
Tylenchorhynchus robustus
Tylenchorhynchus striatus
Tylenchorhynchus sulcatus
Tylenchorhynchus tobari
Tylenchorhynchus velatus
Tylenchorhynchus sp
Tylenchulus semipenetrans
Tylenchus sp
Xenocriconemella
macrodora
Xiphinema americanum
Xiphinema brevicolle
Xiphinema elongatum
Xiphinema ensiculiferum
Xiphinema insigne
Xiphinema italiae
Xiphinema krugi
Xiphinema monohysterum
Xiphinema pachtaicum
Xiphinema radicola
Xiphinema sp
Xiphinemella sp

Radopholus similis
Radopholus sp
Rotylenchulus reniformis
Rotylenchus incultus
Rotylenchus sp
Scutellonema brachyurum
Scutellonema impar
Scutellonema
incisicaudatum
Scutellonema sp
Tylenchorhynchus triglyphus
Tylenchulus semipenetrans
Xiphinema americanum
Xiphinema elongatum
Xiphinema insigne
Xiphinema monohysterum
Xiphinema radicola
Xiphinema setariae

Basiria tumida
Basiria sp
Boleodorus thylactus
Boleodorus volutus
Boleodorus sp
Caloosia nudata
Carphodorus bilineatus
Carphodorus sp
Cephalenchus emarginatus
Coslenchus costatus

Queensland cont

Circonema lanxifrons
Criconema mutabile
Criconema pacificum
Criconema permistum
Criconema sp
Criconemoides sp
Cryphodera eucalypti
Cryphodera sp
Discocriconemella colbrani
Discocriconemella limitanea
Discocriconemella sp
Ditylenchus
anchilispomus
Ditylenchus dipsaci
Ditylenchus myceliophagus
Ditylenchus sp
Ecphyadophora tenuissima
Ecphyadophora sp
Eutylenchus africanus
Eutylenchus setiferus
Eutylenchus sp
Fergusobia magna
Fergusobia tumefaciens
Fergusobia sp
Filenchus baloghi
Filenchus discrepans
Filenchus exiguus
Filenchus filiformis
Filenchus polyhypnus
Filenchus thornei
Filenchus sp
Globodera sp
Gracilacus mutabilis
Gracilacus peperpotti
Gracilacus steineri
Gracilacus sp
Helicotylenchus californicus
Helicotylenchus dihystra
Helicotylenchus erythrinae
Helicotylenchus exallus
Helicotylenchus minzi
Helicotylenchus multicinctus
Helicotylenchus
tumidicaudatus
Helicotylenchus variabilis
Helicotylenchus sp
Hemicriconemoides
brachyurus
Hemicriconemoides
chitwoodi
Hemicriconemoides
cocophilus
Hemicriconemoides
communis
Hemicriconemoides
coronatus
Hemicriconemoides
digitatus
Hemicriconemoides insignis

Hemicriconemoides
intermedius
Hemicriconemoides
mangiferae
Hemicriconemoides obtusus
Hemicriconemoides
squamosus
Hemicriconemoides sp
Hemicycliophora arenaria
Hemicycliophora bilocolata
Hemicycliophora brevicauda
Hemicycliophora halophila
Hemicycliophora labiata
Hemicycliophora natalensis
Hemicycliophora ovata
Hemicycliophora truncata
Hemicycliophora sp
Heterodera schachtii
Heterodera trifolii
Heterodera sp
Hexatylus sp
Hirschmaniella diversa
Hoplolaimus pararobustus
Hoplolaimus seinhorsti
Hoplolaimus sp
Lelenchus leptosoma
Longidorus sp
Macroposthonia curvata
Macroposthonia onoensis
Macroposthonia ornata
Macroposthonia rustica
Macroposthonia similis
Macroposthonia
sphaerocephala
Macroposthonia xenoplax
Macroposthonia sp
Macrotrophurus sp
Malenchus bryophilus
Meloidogyne arenaria
Meloidogyne hapla
Meloidogyne incognita
Meloidogyne javanica
Meloidogyne thamesi
Meloidogyne hispanica
Meloidogyne sp
Merlinius brevidens
Morulaimus soldus
Morulaimus whitei
Morulaimus sp
Neodolichodorus
adelaidensis
Neodolichodorus obtusus
Neodolichodorus sp
Neopsilenchus magnidens
Neopsilenchus sp
Ogma civellae
Ogma octangulare
Ogma sp
Paralongidorus australis
Paralongidorus eucalypti

Paralongidorus sacchari
Paralongidorus sp
Paraphelenchus
pseudoparietinus
Paratrichodoros lobatus
Paratrichodoros minor
Paratrichodoros porosus
Paratrichodoros
queenslandensis
Paratrichodoros sp
Paratrophurus dissitus
Paratrophurus sp
Paratylenchus arcuatus
Paratylenchus colbrani
Paratylenchus coronatus
Paratylenchus curvatus
Paratylenchus dianthus
Paratylenchus elachistus
Paratylenchus hamatus
Paratylenchus macrophallus
Paratylenchus microdorus
Paratylenchus nainianus
Paratylenchus nanus
Paratylenchus projectus
Paratylenchus sp
Pateracephalanema alticola
Pateracephalanema
australe
Pateracephalanema
imbricatum
Pateracephalanema
pectinatum
Paurodontus apiticus
Paurodontus densus
Paurodontus gracilis
Paurodontus sp
Pratylenchus brachyurus
Pratylenchus coffeae
Pratylenchus goodeyi
Pratylenchus jordanensis
Pratylenchus neglectus
Pratylenchus penetrans
Pratylenchus thornei
Pratylenchus vulnus
Pratylenchus zeeae
Pratylenchus sp
Prothallonema
asymmetricum
Prothallonema sp
Pseudhalenchus minutus
Pseudhalenchus sp
Psilenchus hilarulus
Psilenchus minor
Psilenchus sp
Radopholus brevicaudatus
Radopholus capitatus
Radopholus clarus
Radopholus crenatus
Radopholus inaequalis
Radopholus inanis

Queensland cont

Radopholus intermedius
Radopholus laevis
Radopholus magniglans
Radopholus megadorus
Radopholus neosimilis
Radopholus rectus
Radopholus serratus
Radopholus similis
Radopholus trilineatus
Radopholus vacuus
Radopholus vertexplanus
Radopholus sp
Rotylenchulus parvus
Rotylenchulus reniformis
Rotylenchulus sp
Rotylenchus brevicaudatus
Rotylenchus gracilidens
Rotylenchus unisexu
Rotylenchus sp
Scutellonema brachyurum
Scutellonema calriceps
Scutellonema impar
Scutellonema incisicaudatum

South Australia

Anguina funesta
Anguina tritici
Anguina sp
Aphelenchoides fragariae
Aphelenchus avenae
Coslenchus costatus
Criconema lanxifrons
Criconema mutabile
Criconema pasticum
Criconema sp
Criconemoides sp
Ditylenchus dipsaci
Ditylenchus sp
Fergusobia tumefaciens
Fergusobia sp
Filenchus filiformis
Gracilacus sp
Helicotylenchus dihystra
Helicotylenchus erythrinae
Helicotylenchus exallus
Helicotylenchus multicinctus
Helicotylenchus pseudorobustus
Helicotylenchus sp
Hemicriconemoides insignis
Hemicriconemoides minor
Hemicriconemoides obtusus
Hemicycliophora acuta
Hemicycliophora arenaria
Hemicycliophora charlestoni
Hemicycliophora eucalypti
Hemicycliophora halophila
Hemicycliophora labiata

Scutellonema insulare
Scutellonema laeviflexum
Scutellonema minutum
Scutellonema sp
Sphaeronema sp
Thada sp
Trophonema arenarium
Trophonema sp
Trophotylenchulus clavicaudatus
Trophotylenchulus obscurus
Trophotylenchulus sp
Trophurus sp
Tylenchorhynchus annulatus
Tylenchorhynchus brevilineatus
Tylenchorhynchus capitatus
Tylenchorhynchus clarus
Tylenchorhynchus claytoni
Tylenchorhynchus coffeae
Tylenchorhynchus curvus
Tylenchorhynchus ewingi
Tylenchorhynchus hastulatus

Tylenchorhynchus mashoodi
Tylenchorhynchus striatus
Tylenchorhynchus velatus
Tylenchorhynchus ventralis
Tylenchorhynchus sp
Tylenchulus semipenetrans
Tylenchulus sp
Tylenchus davainei
Tylenchus sp
Xenocriconemella macrodora
Xiphinema americanum
Xiphinema basiri
Xiphinema brasiliense
Xiphinema brevicolle
Xiphinema elongatum
Xiphinema ensiculiferum
Xiphinema insigne
Xiphinema monohysterum
Xiphinema radicolica
Xiphinema sp
Xiphinemella sp

Hemicycliophora litoralis
Hemicycliophora natalensis
Hemicycliophora ovata
Hemicycliophora striatula
Hemicycliophora tessellata
Hemicycliophora truncata
Hemicycliophora typica
Hemicycliophora wallacei
Heterodera avenae
Heterodera cruciferae
Heterodera trifolii
Heterodera schachtii
Longidorus elongatus
Longidorus taniwha
Macroposthonia rustica
Macroposthonia similis
Macroposthonia xenoplax
Macroposthonia sp
Malenchus bryophilus
Meloidogyne arenaria
Meloidogyne fallax
Meloidogyne hapla
Meloidogyne incognita
Meloidogyne javanica
Meloidogyne sp
Merlinius brevidens
Morulaimus arenicolus
Morulaimus geniculatus
Morulaimus simplex
Morulaimus simpsoni
Morulaimus whitei
Morulaimus sp

Neodolichodorus adelaidensis
Paralongidorus eucalypti
Paralongidorus sacchari
Paralongidorus sp
Paratrichodorus lobatus
Paratrichodorus minor
Paratrichodorus mirzai
Paratrichodorus queenslandensis
Paratrichodorus sp
Paratylenchus hamatus
Paratylenchus nanus
Paratylenchus projectus
Paratylenchus sp
Pateracephalanema imbricatum
Paurodontus apiticus
Pratylenchus coffeae
Pratylenchus jordanensis
Pratylenchus neglectus
Pratylenchus penetrans
Pratylenchus thornei
Pratylenchus vulnus
Pratylenchus sp
Radopholus magniglans
Radopholus similis
Radopholus trilineatus
Radopholus vangundyi
Rotylenchus buxophilus
Rotylenchus gracilidens
Rotylenchus wallacei
Rotylenchus sp

South Australia cont

Scutellonema brachyurum
Scutellonema impar
Scutellonema
incisicaudatum
Scutellonema insulare
Scutellonema minutum
Scutellonema sp

Tasmania

Anguina tritici
Aphelenchoides fragariae
Aphelenchoides ritzemabosi
Criconema pasticum
Ditylenchus desctructor
Ditylenchus dipsaci
Ditylenchus intermedius
Filenchus filiformis
Helicotylenchus multicinctus
Helicotylenchus sp
Hemicriconemoides minor
Hemicycliophora charlestoni
Hemicycliophora natalensis

Victoria

Acontylus vipriensis
Acontylus sp
Anguina microlaenae
Anguina tritici
Anguina sp
Aphelenchoides bicaudatus
Aphelenchoides
composticola
Aphelenchoides
dactylocerus
Aphelenchoides fragariae
Aphelenchoides ritzemabosi
Aphelenchoides sp
Aphelenchus avenae
Basiria tumida
Belonolaimus sp
Boleodorus thylactus
Boleodorus sp
Caloosia nudata
Criconema lanxifrons
Criconema sp
Cryphodera eucalypti
Cryphodera sp
Ditylenchus dipsaci
Ditylenchus intermedius
Ditylenchus myceliophagus
Ditylenchus sp
Fergusobia tumefaciens
Filenchus filiformis
Filenchus sp
Globodera rostochiensis
Gracilacus sp
Helicotylenchus dihystra
Helicotylenchus multicinctus

Subanguina mobilis
Tylenchorhynchus dubius
Tylenchorhynchus
hastulatus
Tylenchorhynchus novenus
Tylenchorhynchus siccus
Tylenchorhynchus tobari
Tylenchorhynchus sp

Hemicycliophora truncata
Heterodera avenae
Heterodera humuli
Meloidogyne arenaria
Meloidogyne hapla
Meloidogyne incognita
Meloidogyne sp
Morulaimus arenicolus
Morulaimus geniculatus
Morulaimus whitei
Paratrachodorus sp
Paratylenchus sp
Pratylenchus crenatus

Helicotylenchus
pseudorobustus
Helicotylenchus sp
Hemicriconemoides insignis
Hemicriconemoides minor
Hemicycliophora arenaria
Hemicycliophora brevicauda
Hemicycliophora halophila
Hemicycliophora natalensis
Hemicycliophora saueri
Hemicycliophora tessellata
Hemicycliophora truncata
Hemicycliophora sp
Heterodera avenae
Heterodera schachtii
Heterodera trifolii
Heterodera sp
Hoplotylus sp
Macroposthonia rustica
Macroposthonia similis
Macroposthonia xenoplax
Macroposthonia sp
Meloidogyne arenaria
Meloidogyne fallax
Meloidogyne hapla
Meloidogyne incognita
Meloidogyne javanica
Meloidogyne thamesi
Meloidogyne sp
Merlinius brevidens
Morulaimus arenicolus
Morulaimus geniculatus
Morulaimus sclerus
Morulaimus whitei
Morulaimus sp

Tylenchulus semipenetrans
Tylenchus sp
Tylodorus fisheri
Xiphinema americanum
Xiphinema monohysterum
Xiphinema obtusa
Xiphinema pachtaicum
Xiphinema radicolica

Pratylenchus flakkensis
Pratylenchus neglectus
Pratylenchus penetrans
Pratylenchus sp
Psilenchus sp
Radopholus sp
Rotylenchus robustus
Subanguina radicolica
Tylenchorhynchus sp
Tylenchus davainei
Tylenchus sp

Neodolichodorus
adelaidensis
Neodolichodorus sp
Ogma vexillatrix
Paralongidorus eucalypti
Paralongidorus sp
Paratrachodorus lobatus
Paratrachodorus minor
Paratrachodorus sp
Paratylenchus baldaccii
Paratylenchus sp
Pateracephalanema
imbricatum
Pateracephalanema
pectinatum
Paterocephalanema pellitum
Pratylenchus coffeae
Pratylenchus crenatus
Pratylenchus jordanensis
Pratylenchus neglectus
Pratylenchus penetrans
Pratylenchus pratensis
Pratylenchus teres
Pratylenchus thornei
Pratylenchus vulnus
Pratylenchus zaeae
Pratylenchus sp
Psilenchus sp
Radopholus crenatus
Radopholus inaequalis
Radopholus magniglands
Radopholus neosimilis
Radopholus
rotundisemenus
Radopholus trilineatus

Victoria cont

Radopholus vangundyi
Radopholus vertexplanus
Radopholus sp
Rotylenchus gracilidens
Rotylenchus robustus
Rotylenchus uniformis
Rotylenchus sp
Sauertylenchus sp
Scutellonema brachyurum
Scutellonema insulare

Scutellonema minutum
Scutellonema sp
Tylenchorhynchus annulatus
Tylenchorhynchus capitatus
Tylenchorhynchus tobari
Tylenchorhynchus sp
Tylenchulus semipenetrans
Tylenchus davainei
Tylenchus sp
Tylodorus acuminatus

Xenocriconemella macrodora
Xiphinema americanum
Xiphinema brevicolle
Xiphinema diversicaudatum
Xiphinema index
Xiphinema monohysterum
Xiphinema pachtaicum
Xiphinema radicolica
Xiphinema sp

Western Australia

Aglencus agricola
Anguina australis
Anguina funesta
Anguina tritici
Anguina sp
Aphelenchoides bicaudatus
Aphelenchoides composticola
Aphelenchoides fragariae
Aphelenchoides parietinus
Aphelenchoides ritzemabosi
Aphelenchoides sp
Aphelenchus avenae
Basiria tumida
Basiria sp
Belonolaimus lolii
Belonolaimus longicaudatus
Belonolaimus sp
Coslenchus alacinatus
Coslenchus costatus
Criconema pasticum
Criconema sp
Criconemoides sp
Ditylenchus anchilispomus
Ditylenchus dipsaci
Ditylenchus obesus
Ditylenchus sp
Filenchus sp
Globodera rostochiensis
Gracilacus sp
Helicotylenchus australis
Helicotylenchus multinctus
Helicotylenchus pseudorobustus
Helicotylenchus sp
Hemicriconemoides brachyurus
Hemicriconemoides cocophilus
Hemicriconemoides minor
Hemicriconemoides obtusus
Hemicriconemoides sp
Hemicycliophora iwia
Hemicycliophora labiata

Hemicycliophora natalensis
Hemicycliophora truncata
Hemicycliophora sp
Heterodera avenae
Heterodera schachtii
Heterodera trifolii
Heterodera sp
Hoplolaimus seinhorsti
Hoplolaimus sp
Macroposthonia curvata
Macroposthonia ornata
Macroposthonia rustica
Macroposthonia similis
Macroposthonia xenoplax
Meloidogyne arenaria
Meloidogyne hapla
Meloidogyne incognita
Meloidogyne javanica
Meloidogyne sp
Merlinius brevidens
Merlinius sp
Morulaimus arenicolus
Morulaimus geniculatus
Morulaimus gigas
Morulaimus sclerus
Neopsilenchus minor
Ogma civellae
Ogma melanesica
Paralongidorus eucalypti
Paralongidorus sp
Paratrichodorus lobatus
Paratrichodorus minor
Paratrichodorus orrae
Paratrichodorus porosus
Paratrichodorus queenslandensis
Paratrichodorus sp
Paratylenchus neoamblycephalus
Paratylenchus sp
Pratylenchoides sp
Pratylenchus brachyurus
Pratylenchus coffeae
Pratylenchus crenatus
Pratylenchus neglectus

Pratylenchus penetrans
Pratylenchus thornei
Pratylenchus teres
Pratylenchus vulnus
Pratylenchus sp
Psilenchus sp
Radopholus capitatus
Radopholus crenatus
Radopholus inaequalis
Radopholus magnigians
Radopholus nativus
Radopholus rectus
Radopholus similis
Radopholus vangundyi
Radopholus vertexplanus
Radopholus sp
Rotylenchulus reniformis
Rotylenchus brevicaudatus
Rotylenchus gracilidens
Rotylenchus incultus
Rotylenchus robustus
Rotylenchus sp
Sakia sp
Scutellonema brachyurum
Scutellonema inciscaudatum
Scutellonema insulare
Scutellonema minutum
Scutellonema sp
Tylenchorhynchus brevilineatus
Tylenchorhynchus sp
Tylenchulus semipenetrans
Tylenchus davainei
Tylenchus sp
Xiphinema americanum
Xiphinema brevicolle
Xiphinema elongatum
Xiphinema insigne
Xiphinema radicolica
Xiphinema truncatum
Xiphinema sp
Xiphinemella sp
Zygotylenchus sp

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<i>Brassica napus</i> – Canola	5,12
<i>Cajanus cajan</i> – Pigeon Pea	5,10,13,16
<i>Carthamus tinctorius</i> – Safflower	5,11
<i>Cicer arietinum</i> – Chick Pea	5,11,12,17
<i>Criconema mutabile</i>	4,7,9,15
<i>Discocriconemella limitanea</i>	4,5,6,15
<i>Ditylenchus anchilosposomus</i>	4,6,7,17
<i>Ditylenchus dipsaci</i>	4,5,6,7,8,17,18
<i>Ditylenchus triformis</i>	4,6,18
<i>Ditylenchus sp</i>	4,6,7,9,18
<i>Filenchus exiguus</i>	4,6,7,9,18
<i>Filenchus filiformis</i>	4,9,18
<i>Filenchus micoletskyi</i>	4,7,18
<i>Filenchus sp</i>	4,6,18
<i>Glycine max</i> – Soybean	5,10,11,12,13,14,15,16,18
<i>Gracilacus mutabilis</i>	4,9,15
<i>Gracilacus peperpotti</i>	4,7,15
<i>Gracilacus sp</i>	4,7,16
<i>Helianthus annuus</i> – Sunflower	5,11,13,14,15
<i>Helicotylenchus digonicus</i>	4,6,13
<i>Helicotylenchus dihystra</i>	4,5,6,7,8,9,13,14
<i>Helicotylenchus erythrinae</i>	4,6,14
<i>Helicotylenchus multincinctus</i>	4,9,14
<i>Hemicriconemoides mangiferae</i>	4,5,16
<i>Hemicriconemoides obtusus</i>	4,7,16
<i>Hemicycliophora sp</i>	4,5,9,16
<i>Heterodera australis</i>	4,7,11
<i>Heterodera avenae</i>	4,5,6,7,11
<i>Hexatylus sp</i>	4,9,19
<i>Hordeum leporinum</i> – Barley grass	5,11,12
<i>Hordeum marinum</i> – Sea Barley	6,12
<i>Hordeum vulgare</i> – Barley	6,10,11,12,13,14,15,16
<i>Lelenchus leptosoma</i>	4,7,18
<i>Lupinus albus</i> – White lupins	6,11
<i>Lupinus augustifolius</i> – Lupins	6,10,11,12,14,15,16
<i>Lupinus digitatus</i>	6,15
<i>Lupinus luteus</i> – Yellow Lupin	6,14
<i>Lupinus sp</i>	6,12
<i>Macroposthonia onoensis</i>	4,5,16
<i>Macroposthonia ornata</i>	4,9,16

<i>Macroposthonia similis</i>	4,9,16
<i>Macroposthonia xenoplax</i>	4,9,16
<i>Macroposthonia sp</i>	4,5,16
<i>Meloidogyne arenaria</i>	4,6,9,10
<i>Meloidogyne hapla</i>	4,5,6,7,8,10
<i>Meloidogyne incognita</i>	4,5,6,7,8,9,10
<i>Meloidogyne javanica</i>	4,5,6,7,8,9,10,11
<i>Meloidogyne thamesi</i>	4,5,6,8,11
<i>Meloidogyne sp</i>	4,5,6,7,8,11
<i>Merlinius brevidens</i>	4,5,6,7,8,14
<i>Merlinius nothus</i>	4,7,14
<i>Merlinius sp</i>	4,7,14
<i>Morulaimus sclerus</i>	4,6,14
<i>Nagelus obscurus</i>	4,6,7,15
<i>Neopsilenchus magnidens</i>	4,9,18
<i>Neopsilenchus sp</i>	4,5,18
<i>Oryza sativa</i> – rice	6,12,13,15,17,18,19
<i>Paralongidorus australis</i>	4,6,17
<i>Paralongidorus eucalypti</i>	4,7,17
<i>Paralongidorus sacchari</i>	4,6,17
<i>Paratrichodorus lobatus</i>	4,7,9,16
<i>Paratrichodorus minor</i>	4,7,9,16,17
<i>Paratrichodorus sp</i>	4,8,17
<i>Paratrophurus dissitus</i>	4,8,15
<i>Paratrophurus sp</i>	4,8,15
<i>Paratylenchus nainianus</i>	4,6,16
<i>Paratylenchus nanus</i>	4,6,16
<i>Paratylenchus projectus</i>	4,5,8,16
<i>Paratylenchus sp</i>	4,5,9,6
<i>Pateracephalanema australe</i>	4,6,16
<i>Paurodontus apiticus</i>	4,7,19
<i>Paurodontus sp</i>	4,6,19
<i>Phaseolus bracteatus</i> = <i>Macroptilium bracteatum</i>	6,10
<i>Phaseolus coccineus</i> – scarlet runner bean	6,10
<i>Phaseolus vulgaris</i> – Field beans	6,7,10,11,12,13,14,15,18
<i>Phaseolus sp</i>	7,17
<i>Pisum sativum</i> – Field Pea	7,10,11,13,14,17,18,19
<i>Pratylenchus brachyurus</i>	4,5,6,7,8,9,11,12
<i>Pratylenchus coffeae</i>	4,8,12
<i>Pratylenchus crenatus</i>	4,5,8,12
<i>Pratylenchus flakkensis</i>	4,8,12
<i>Pratylenchus hexincisus</i>	4,8,12
<i>Pratylenchus neglectus</i>	4,5,6,7,8,12
<i>Pratylenchus penetrans</i>	4,5,6,7,12
<i>Pratylenchus pinguicaudatus</i>	4,6,12
<i>Pratylenchus teres</i>	4,5,8,12
<i>Pratylenchus thornei</i>	4,5,6,7,8,12,13
<i>Pratylenchus vulnus</i>	4,6,9,13
<i>Pratylenchus zeae</i>	4,5,6,7,8,9,13
<i>Pratylenchus sp</i>	4,5,6,7,8,13
<i>Psilenchus sp</i>	4,8,18
<i>Radopholus similis</i>	4,5,7,8,9,13
<i>Radopholus sp</i>	4,7,13
<i>Rotylenchulus parvus</i>	4,5,7,9,16
<i>Rotylenchulus reniformis</i>	4,5,16
<i>Rotylenchulus brevicaudatus</i>	4,5,14

<i>Rotylenchus sp</i>	4,7,14
<i>Sakia sp</i>	4,6,18
<i>Scutellonema brachyurum</i>	4,5,8,14
<i>Scutellonema impar</i>	4,7,14
<i>Scutellonema sp</i>	4,7,14
<i>Secale cereale</i> – Rye	7,10,11,12,13,14,17
<i>Sorghum bicolor</i> – Grain Sorghum	7,10,11,12,14,16,18
<i>Sorghum intrans</i>	7,14,16,17
<i>Sorghum plumosum</i>	7,13,14,16,17
<i>Sorghum stipoideum</i>	7,14,17
<i>Sorghum sudanense</i>	7,10,12,13,14
<i>Tritico secale</i> – Triticale	7,12,13
<i>Triticum aestivum</i> – Wheat	7,8,10,11,12,13,14,15,17,18
<i>Triticum durum</i> – Durum wheat	8,12,13
<i>Trophurus sp</i>	4,5,15
<i>Tylenchorhynchus annulatus</i>	4,6,15
<i>Tylenchorhynchus brevilineatus</i>	4,6,8,15
<i>Tylenchorhynchus capitatus</i>	4,7,8,15
<i>Tylenchorhynchus clarus</i>	4,5,15
<i>Tylenchorhynchus curvus</i>	4,5,15
<i>Tylenchorhynchus ewingi</i>	4,8,15
<i>Tylenchorhynchus mashoodi</i>	4,5,15
<i>Tylenchorhynchus striatus</i>	4,8,15
<i>Tylenchorhynchus sp</i>	4,5,6,8,15
<i>Tylenchus sp</i>	4,6,7,9,19
<i>Vicia benghalensis</i> – purple vetch	8,10
<i>Vicia faba</i> – Broad Bean / Faba Bean	8,10,11,12,13,14,18
<i>Vicia narboensis</i>	8,18
<i>Vicia sativa</i> – Vetch	8,10,11,12,16
<i>Vicia villosa ssp dasycarpa</i> – woolly pod vetch	8,18
<i>Vicia sp</i>	8,12
<i>Vigna luteola</i>	8,10
<i>Vigna marina</i>	8,10,13,14
<i>Vigna mungo</i> – Black gram	8,11,13
<i>Vigna parkeri ssp maranguensis</i> – creeping vigna	8,10
<i>Vigna radiata</i> – Mung Bean	8,10
<i>Vigna umbellata</i> - Rice Bean	8,11
<i>Vigna unguiculata ssp unguiculata</i> – Cowpea	9,10,12,13,16
<i>Vigna unguiculata ssp sesquipedalis</i> – Yardlong Bean	9,11
<i>Vigna vexillata</i>	9,10
<i>Vigna sp</i>	9,16
<i>Xiphinema americanum</i>	4,5,7,17
<i>Xiphinema radiciola</i>	4,7,17
<i>Zea mays</i> – maize	9,11,12,13,14,15,16,17,18,19