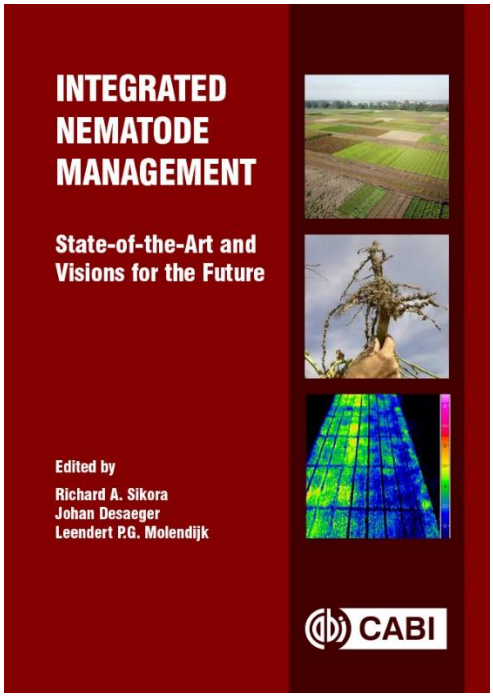
TWO USEFUL BOOKS ON INTEGRATED MANAGEMENT OF PLANT-PARASITIC NEMATODES ON VARIOUS CROPS

In the last twenty years, CAB International has published many books on plant-parasitic nematodes, but two recent publications focus on the nematodes which attack the world's most important food and fibre crops, and the integrated nematode management practices that can be used to reduce losses. The control measures that are effective on particular crops are discussed in detail, but both books have chapters covering the management tactics being used against a wide range of nematode pests in many different countries. Thus, one of the benefits of these books is that they provide opportunities to consider whether nematode control measures being used in other crops and environments could be useful in Australia.

Sikora RA, Desaeger J, Molendijk LPG Eds. (2022) Integrated Nematode Management. State-of-the-art and visions for the future. 498 pp.

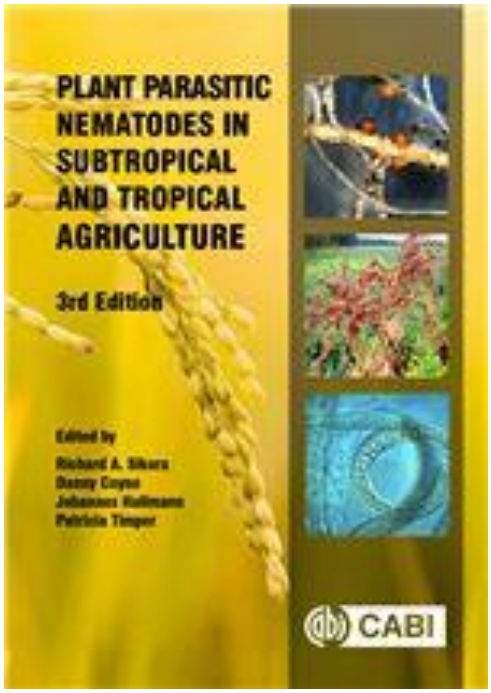


The 65 chapters in this practical guide to managing plant-parasitic nematodes are written by research and extension scientists working with nematode problems on the world's most important food and fibre crops. Because each chapter is only 6 or 7 pages long, the authors provide a concise and readable overview of the management practices being used to overcome losses caused by nematode pests in their region of the world.

The book is subdivided into sections that cover field crops, legumes, fruit and nut crops, vegetables, and root and tuber crops. There is also a section on emerging technologies that deals with issues such as molecular approaches to map the nematode-suppressive potential of a soil; the use of genome editing to improve the nematode resistance of crops; remote sensing to assess nematode infestations in the field; and precision agriculture technologies that allow site-specific management of nematodes.

There are two chapters by Australian authors: Chapter 1 by Kirsty Owen on the management of root lesion nematode, *Pratylenchus thornei*, in the sub-tropical grain growing region, and Chapter 51 by Graham Stirling on practices being used to improve soil health and reduce losses from root-knot nematode on sweetpotato. However, many other chapters deal with the same nematode problems being faced by Australian growers, and so the book provides an opportunity to learn how those problems are being managed in other countries.

Sikora RA, Coyne D, Hallmann J, Timper P Eds. (2018) Plant parasitic nematodes in subtropical and tropical agriculture. 876 pp.



This multi-authored book covers all economically important crops grown in the tropics and subtropics, and the plant parasitic nematodes that have been shown to cause yield loss on those crops. Each chapter has a structured approach that commences with information on the crop and the nematode species known to cause damage. The major nematode pests that attack the crop are then covered in the following way: distribution; symptoms of damage; biology and life cycle; survival and means of dissemination; population dynamics; methods of diagnosis; economic importance; damage thresholds; and management practices.

The book has a chapter on each of the following crops (or groups of crops): rice; cereals; potato and sweetpotato; tropical root and tuber crops; food legumes; vegetables; groundnut; citrus; tropical fruit tree crops; coconut and other palms; coffee and cocoa; tea; bananas and plantains; sugarcane; tobacco; pineapple; cotton; and spices. The final chapter provides an overview of the integrated management technologies that can be used to reduce losses from nematodes

The book also has two other very useful chapters, one on the identification, morphology, and biology of plant-parasitic nematodes, and another on the methods that can be used to extract nematodes from soil and plant tissue.

Chapter 3 is another important chapter because it covers the free-living nematodes that mineralise nutrients, regulate populations of other soil organisms, and play a vital role in improving plant and soil health. Anyone interested in managing nematode pests in a sustainable way should read this chapter, because it explains how analyses of the nematode community can be used to determine whether current management practices are having a beneficial or detrimental effect on the suppressive services provided by organisms in the soil biological community.

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