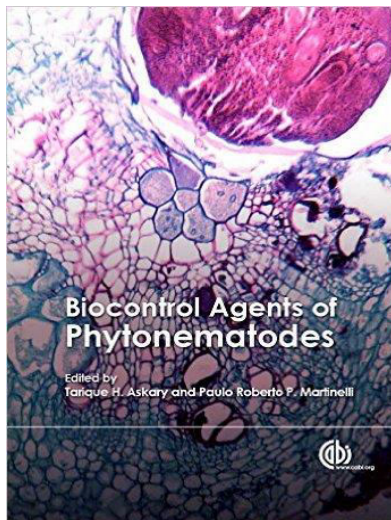


BOOK REVIEW

Biocontrol agents of Phytonematodes



Editor: Tarique Hassan Askary and Paulo Roberto Pala Martinelli

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This book is an attempt to bring together in one volume the valuable information about biocontrol agents (BCA) as an alternative to chemical pesticide of phytonematodes. Through collaborative participation of 27 experts from 10 countries worldwide comprehensive coverage has provided for some important BCAs that are used or potentially active in the management of phytonematodes. The basic to applied information is absorbed in this book which will help to work for the new achievements in this direction.

The volume is divided into eight parts comprising of 19 chapters, all aimed to focus upon different aspects related to biological control of phytonematodes. The first introductory chapter of part I authorized by Mahfouz M.M. Abd Elgawad and Tarique Hassan Askary addressed the global impact of phytonematodes with emphasis on the economic thresholds for damage by plant parasitic nematodes. The second chapter highlights the significance of different biocontrol agents *viz.*, fungi, bacteria, mites, viruses and predatory nematodes in the management of phytonematodes and the inclusion of these BCAs as a potential component in integrated nematode management (INM) programme.

The part II is composed of six chapters providing the detail and update information about nematophagous fungi. The first chapter provides an idea of fungus isolation and identification techniques besides illustrating the interaction of nematode trapping, endoparasitic as well as egg and female parasitic fungi against phytonematodes in biotic community of soil. The rest of the chapters are devoted to ecology,

diversity and geographical distribution, virulence mechanisms, formulation, mass production, application and commercialization of nematophagous fungi. In the end of this part regulations and safety measures are also provided.

Part III sum up the present knowledge and future aspects about nematophagous bacteria in five chapters. The management of phytonematodes through nematophagous bacteria is discussed in the first chapter. Good presentation of pathogenicity and virulence factors produced by antagonistic bacteria against nematodes is given in next chapter. The remaining chapters are also valuable and informative, compiling the survival biology, field application and commercialization of nematophagous bacteria in nematode biocontrol.

Uri Gerson has shared the knowledge about the nematode feeding mites in a chapter of part IV with reference to modes of feeding and some important laboratory studies. The only chapter of part V summarizes the mode of action of plant growth promoting rhizobacteria (PGPR) and excellently presented it in tabular form.

Part VI comprised of a chapter that outlines the work done on arbuscular mycorrhizal fungi (AMF). Inclusion of AMF as a component of integrated management to combat the deleterious effect of phytonematodes is also highlighted. The author has given informative review about efficacy of AMF against economically important nematodes in different crops.

Part VII consists of a single chapter that deals the predatory nematodes occurring in soil ecosystem and preying on the plant parasitic nematodes. The variations in the feeding apparatus of these predatory nematodes are highlighted. Young Ho Kim has compiled the list of predators and their prey nematodes very efficiently.

Part VIII of the book has 2 chapters. In the first chapter, factors influencing commercial success of BCAs have been discussed in detail. The next and final chapter of this book highlights the critical issues involved in the successful utilization of BCAs against PPNs, besides pointing out the reasons that lead to failure of the product. Special attention has been paid by the author Tarique Hassan Askary, on nematophagous fungi and bacteria with emphasis towards future research ideas needed to include in an integrated nematode management (INM) programme.

The book has a wide readership, especially for scientists, teachers and students involved in the studies of phytonematodes. The good uniformity within the chapter format mostly ends with a concise section of conclusion and future prospects, which shows good editorial policy.

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