



International Association for the  
**PLANT PROTECTION SCIENCES**

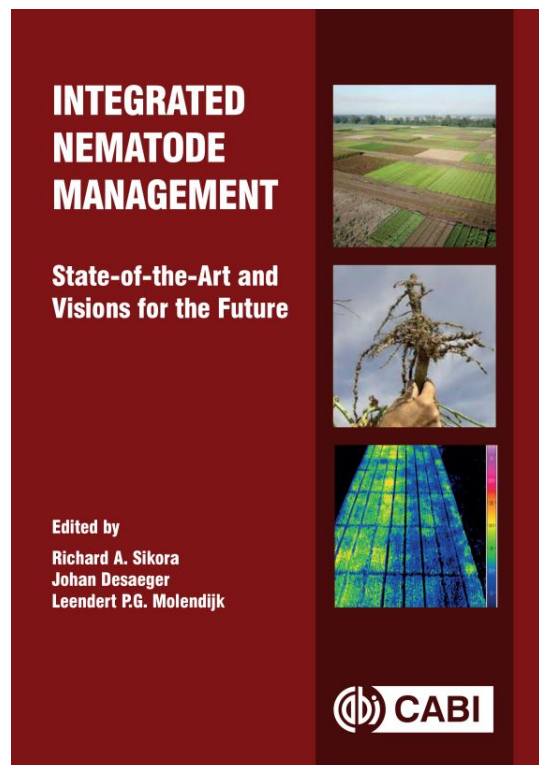
IAPPS

**NEWSLETTER**

Number III

March, 2022

## **NEW BOOK ON PLANT PARASITIC NEMATODES**



Edited by Richard A Sikora, Professor Emeritus, University of Bonn, Germany, Johan Desaegeer, University of Florida, USA, and Leendert P. G. Molendijk, Wageningen University, The Netherlands, this book reviews in a systematic crop by crop approach the state-of-the-art management strategies that have been developed to reduce nematode impact, and outlines their limitations. It contains 65 chapters written by 80 experts and contains more than 300 colored pictures showing symptoms of damage.

Plant parasitic nematodes are costly burdens of crop production, causing an estimated US\$80 - 118 billion per year in damage to crops. They are associated with nearly every important agricultural crop, and are a significant constraint on global food security. Regulations on the use of chemical pesticides have resulted in growing interest in alternative methods of nematode control. Future changes in climate, cropping systems, food habits, as well as social and environmental factors also affect the options for

nematode control. Taking a systematic crop by crop approach, this book:

- Outlines the economic importance of specific plant parasitic nematode problems on the major food and industrial crops.
- Presents the state-of-the-art management strategies that have been developed to reduce specific nematode impacts, and outlines their limitations.
- Contains case studies to illustrate impact in the field.
- Aims to anticipate future changes in nematode disease pressure that might develop as a result of climate change, and new cropping systems.

The book will be of interest to researchers and students in nematology and, plant pathology, as well as extension agents, plant protection agencies, and consultants in pest management. It can be ordered online at [www.cabi.org/bookshop/book/9781789247541](http://www.cabi.org/bookshop/book/9781789247541)

**Dr. Manuele Tamò**

IAPPS Vice-President and Newsletter Editor

E-mail: [m.tamo@cgiar.org](mailto:m.tamo@cgiar.org)



## WHEAT INITIATIVE CELEBRATES 10<sup>TH</sup> BIRTHDAY

Wheat is the most widely grown crop in the world. It provides 20% of the carbohydrate and 20% of the protein in the human diet. Wheat is the most traded crop making it critical for global food security. In addition, wheat is highly susceptible to the impacts of climate change with predictions of a 7% drop in yield for every degree increase in temperature. Despite huge yield increases over the past 50 years, yield gains are stagnating and investment in wheat research is lagging behind other major crops, like maize.

To help address the challenges, in 2011 the G20 Agricultural Ministers endorsed the establishment of the Wheat Initiative (WI) as part of their strategy to improve global food security. The WI provides a framework to identify priorities for wheat research at the international level in both developed and developing countries. It fosters communication between the research community, funders and global policy makers, and aims at securing efficient and long-term investments to meet wheat research and development goals. It also initiates and supports activities that enhance communication and increase access to information, resources and technologies. Since 2018 and thanks to our host, Germany, through the Ministry for Food and Agriculture and the Julius Kühn Institute, the WI is located in Berlin.

The WI vision is to “Create an active global wheat research network supporting and sharing data, ideas and resources to assure global food security through improved wheat production.” The network has grown substantially with current memberships of two well-known International Organisations, CIMMYT and ICARDA, five private companies and 14 member countries plus 5 observer countries. Importantly, 635 wheat researchers from 47 countries participate in the Expert Working Groups. These groups are the key mechanism for achieving the WI vision and attaining global reach. The EWGs meet regularly to identify global research priorities, hold workshops and training sessions, develop resources, and encourage access to data and materials.

Examples of EWG activities include:

- The Wheat Information System links databases from all over the world so that researchers can find information no matter where it is kept.
- The Agronomy Expert Working Group is developing a global yield gap atlas to facilitate the identification of regions most at risk and where investment offers the greatest opportunities for yield enhancement.
- The Pest and Disease Expert Working Group is seeking to develop standard disease diagnostic systems. Improving access to pathogen collections and developing global disease monitoring systems, to address current and future disease threats.
- The Germplasm Group is exploring opportunities to enhance access and use of genetic diversity,
- The Quality Group is identifying reference germplasm for key quality traits and associated protocols for quality assessment.
- And the Durum Group have developed reference germplasm collections that are now being distributed globally and will allow coordination and validation of durum research.

The WI also explores new ways to bring the international research community together and support multinational projects. In 2020, the 10X Wheat Genomes project published the wheat pan-genome based on reference quality sequences of 15 wheat varieties. This group is now working on a

transcriptome database and high-quality gene annotation. During 2020, the WI established AHEAD, the Alliance for Adaptation of Wheat to Heat and Drought. AHEAD is a new structure that provides an umbrella organisation to support and coordinate national and international research programs.

Additionally, the WI supports the research community through the International Wheat Congress, deferred to next year in Beijing due to COVID, our Newsletters, Media briefs, Twitter and WheatVIVO.

**Prof. Dr. Frank Ordon**

IAPPS coordinator for Region I: West Europe

E-mail: [frank.ordon@julius-kuehn.de](mailto:frank.ordon@julius-kuehn.de)

## **7TH ASIAN PGPR INTERNATIONAL CONFERENCE FOR SUSTAINABLE AGRICULTURE 2022**

The 7th Asian Plant Growth-Promoting Rhizobacteria (PGPR) International Conference for Sustainable Agriculture 2022 will be held from 23rd to 26th August 2022 at Universiti Putra Malaysia UPM. The Malaysian PGPR Society and Faculty of Agriculture, UPM will co-organize the event on behalf of the Asian PGPR Society for Sustainable Agriculture.

This year's theme for the conference is "Regenerating Agriculture Through Beneficial Microbes for Improvement of Crop Productivity and Safety". The conference agenda will cover the most recent scientific discoveries that decipher the role of beneficial microbes in plant development, disease suppression and increase yield by direct or indirect mechanisms. Plant-microbe interactions in the rhizosphere are pivotal in carbon sequestration, nutrient cycling and ecosystem functioning and undoubtedly will be continually the main focus in the coming decades.

The conference will showcase various recent topics in plant-microbe interactions by distinguished keynotes, plenary speakers, as well as selected oral speakers and poster presentations by participants. The conference promises an attractive scientific program, with opportunities for networking and collaboration in addition to acquisition of the fusion of knowledge, technologies, ideas, and innovation.

Scope:

- PGPR in crop production and disease management to feed the growing population.
- Soil microbiome and nano-based plant biostimulants.
- Plant-microbe interactions and mode of action.
- PGPR and mitigation of climate change effects.
- Commercialization of PGPR as bio-pesticides, bio-fertilizers and bio-stimulants for safe and healthy food.
- Regulatory constraints and global harmonization.
- Role of MOUs, global funding opportunities and education, training and interactions among stakeholders.

### **Important dates**

Early registration: On / Before 30th April 2022

Late registration: After 30th April 2022

Abstract deadline: 30th June 2022

Full Paper deadline: 31st July 2022

Information regarding registration and rates can be obtained online at: [www.pgpr.org.my/](http://www.pgpr.org.my/) or online registration at [tinyurl.com/f8x5ec9b](http://tinyurl.com/f8x5ec9b).

Submission of abstracts at [7thpgprabstract@gmail.com](mailto:7thpgprabstract@gmail.com)

### **Professor Dr. Mui-Yun Wong (NCSU)**

Deputy Director

Institute of Plantation Studies, Universiti Putra Malaysia

E-mail: [muiyun@upm.edu.my](mailto:muiyun@upm.edu.my)

**The IAPPS Newsletter is published by the International Association for the Plant Protection Sciences and distributed in *Crop Protection* to members and other subscribers. *Crop Protection*, published by Elsevier, is the Official Journal of IAPPS.**

**IAPPS Mission: to provide a global forum for the purpose of identifying, evaluating, integrating, and promoting plant protection concepts, technologies, and policies that are economically, environmentally, and socially acceptable.**

**It seeks to provide a global umbrella for the plant protection sciences to facilitate and promote the application of the Integrated Pest Management (IPM) approach to the world's crop and forest ecosystems.**

**Membership Information: IAPPS has four classes of membership (individual, affiliate, associate, and corporate) which are described in the IAPPS Web Site [www.plantprotection.org](http://www.plantprotection.org).**

**The *IAPPS Newsletter* welcomes news, letters, and other items of interest from individuals and organizations. Address correspondence and information to:**

**Manuele Tamò  
Editor, IAPPS Newsletter  
IITA-Benin  
08 B.P. 0932 Tri Postal, Cotonou, Republic of Benin  
E-mail: [m.tamo@cgiar.org](mailto:m.tamo@cgiar.org)**