

FOREWORD

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Cereal crops, particularly rice, maize, sorghum and millets serve as major staple food for millions of people in different parts of the tropical world. These crops are of relatively low cash value, and are frequently grown by a large proportion of the world's family farmers, who are usually resource-poor. One of the major constraints to the production of these crops, and a major challenge to scientists and technologists because of the diversity of technological problems and resource - poverty of the family households, is the attack by various major insect pests, especially crop borers. Among the key genera of crop borers, *Chilo* is known to include 41 significant pestiferous species. More than 25 species infest cereal as well as sugar-cane crops, 18 of which occur in Africa. The grain yield losses caused by *Chilo partellus* in sorghum alone have been estimated to amount up to 88% in Kenya on many occasions.

These *Chilo* spp. are particularly difficult to control, largely because of the cryptic and nocturnal habits of the adult moths, and the protection afforded by the stem or pod of the host crop to the developing stages. However, knowledge of this important genus has not been well disseminated, and documented references are scattered and largely undigested. Therefore, there is a pressing need for researchers to get together and examine the potential for integrating the findings on the *Chilo* major pests in order to generate a holistic, intellectually coherent and concerted approach to solving the *Chilo* pest problems.

It is in the context of these circumstances that the International Centre of Insect Physiology and Ecology (ICIPE) had organized the First International Symposium on the Cereal Stem Borer, *Chilo* at its world headquarters in Duduville, Nairobi from 25th to 29th July 1989.

The international symposium was organized under eleven sections as follows:

- Status and control of *Chilo* spp. in different regions
- Taxonomy, distribution, population ecology, dynamics and crop losses
- Physiology, behaviour and biochemistry
- Rearing and quality control
- Host plant resistance
- Breeding and resistance genetics
- Cultural, genetic and chemical control
- Biological control
- Pheromonal control
- Integrated pest management (IPM)
- International co-operation.

More than 75 experts from 20 countries representing Africa, Asia and Europe discussed at length the currently available knowledge in these areas with reference to *Chilo*.

The present volume, representing the *Proceedings* of this First International Symposium on the Cereal Stem Borer, *Chilo* goes some way to evaluating a great deal of recent information on *Chilo* which might lead to new borer control strategies for the resource-limited small-scale family household, in the tropics.