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Sangeeta Saxena, A. K. Tiwari (Eds.)

Begomoviruses: Occurrence and Management in Asia and Africa

- Comprehensive information of state of the art molecular diagnostics for virus detection with illustrations
- Complete knowledge of Begomoviruses and the diseases caused by them
- Elucidates management practices from traditional to molecular including transgenics, RNAi and ribozyme technology

Begomoviruses are one of the most interesting plant viruses to study for basic and applied research as they cause huge economic losses to agriculture industries and farmers all over the world. They belong to family Geminiviridae and are emergent plant viral pathogens which cause diseases in various crops in the tropical and subtropical regions. They are transmitted by the whitefly (*B. tabaci*) and have either one (monopartite DNA-A) or two (bipartite DNA-A and DNA-B) genomic components. DNA-A and DNA-B are of ~2600 - 2800 nucleotides each. A number of serious diseases of cultivated crops of the Fabaceae, Malvaceae, Solanaceae and Cucurbitaceae families are caused by Begomoviruses which are considered as threat to their cultivation in many countries. Accurate diagnosis is important for successful diseases management, since plants infected by Begomovirus do not recover, suffer serious yield losses and act as further sources of inoculum, which is then picked up and spread by their vector whitefly (*B. tabaci*). Reports of occurrence of new viruses and re-emergence of several known viruses in new niches have become regular event. In such a dynamic system, growth of several crop species relies on an accurate diagnosis, management and better understanding of the biology of the casual virus. This is crucial to evolve appropriate control practices and to prevent the virus infection. Researchers have achieved considerable progress in characterization, detection and management of virus on different crop species in the last decade. This book covers latest information in diagnosis of begomoviruses in the present scenario and explores the new vistas in the field of genomics and proteomics.

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