1. Record Nr. UNINA9910741199103321

Autore	Sastry K. Subramanya
Titolo	Plant virus and viroid diseases in the tropics . Volume 1 Introduction of plant viruses and sub-viral agents, classification, assessment of loss, transmission and diagnosis / / K. Subramanya Sastry
Pubbl/distr/stampa	Dordrecht, : Springer, 2013
ISBN	94-007-6524-X
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (xxv, 361 pages) : illustrations (some color), color map
Collana	Gale eBooks
Disciplina	632.8
Soggetti	Plant viruses - Tropics Virus diseases of plants - Tropics Viroid diseases of plants - Tropics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	CHAPTER I -- Introduction to plant virus and viroid diseases in tropics -- CHAPTER II -- Viruses and sub-viral agents -- CHAPTER III -- Impact of Virus and Viroid diseases on crop yields -- CHAPTER IV -- Transmission of Plant Viruses and Viroids -- CHAPTER V -- Diagnosis and Detection of Virus and Viroid diseases.
Sommario/riassunto	Plant virus and sub-viral agents cause considerable losses in crop production as they are so widely spread. They are transmitted by means of vegetative propagation of seedlings and also through insect vectors. They infect field crops, vegetables, cereals, oil seeds, fruit crops and ornamentals. The virus may enter into plants through seed / planting material or by vectors. Once the virus is in the field, it multiplies and spreads following definite patterns depending upon the nature of the vector and agro-meteorological conditions. Detection of virus and sub-viral agents at initial stages of infection is critical to reduce economic losses. For nearly two decades, ELISA and its variants played a major role in large scale virus testing and also in the production of virus-free planting materials. In recent years nucleic acid - based molecular detection methods such as the amplification of nucleic acids (PCR and its variants), microarrays, rDNA technology, DNA barcoding, DNA biosensors and other improved techniques are playing

pivotal role in specific virus testing, identification of new viruses, virus strain differentiation, identification of virus relationships and other biological aspects, as these techniques are specific, sensitive and reproducible. Nevertheless, integrated management measures have evident benefits and should be fostered and promoted for managing virus and sub-viral diseases for enhancing crop productivity. This book provides the latest valuable overview of the plant virus and virus-like diseases in tropical countries on aspects like introduction about plant viruses, their classification; transmission and diagnostic techniques; the well written chapters are thoroughly up-to-date and amply and clearly illustrated with numerous photographs. It is a good source of information on plant virus and sub-viral pathogens to all plant virologists, students, faculty, research and quarantine organizations.