1. Record Nr. UNINA9910816402303321 Autore Albrechtsen S. E (Sven Erik) **Titolo** Testing methods for seed-transmitted viruses [[electronic resource]]: principles and protocols / / S.E. Albrechtsen Wallingford, UK;; Cambridge, MA,: CABI Pub., c2006 Pubbl/distr/stampa **ISBN** 1-280-73546-5 9786610735464 1-84593-148-3 Descrizione fisica 1 online resource (280 p.) Disciplina 632/.8Seeds - Testing Soggetti Seed pathology Virus diseases of plants Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Errata stuck to inside front cover. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Contents; Preface; Acknowledgements; PART I; 1 Introduction; 1.1. Seed-transmitted Viruses and Viroids; 1.2. The Development of the Science: 1.3. Economic Importance of Seed-transmitted Viruses: 1.4. Testing of Seeds for Viruses: Why?; References: 2 Seed Transmission of Viruses; 2.1. Location of Inoculum in the Seed; 2.2. Plant-to-seed and Seed-to-plant Transmission; References; 3 Ecology, Epidemiology and Control; 3.1. Ecology and Epidemiology; 3.2. Control Strategies; References; PART II; 4 Biological Assays; 4.1. Symptomatology; 4.2. Facilities and Equipment for Biological Assavs 4.3. Growing-on Tests4.4. Infectivity Assays; 4.5. Maintenance of Isolates: References: 5 Serological Testing Methods: 5.1. Antigens and Antibodies; 5.2. Enzyme-linked Immunosorbent Assay (ELISA); 5.3. Dot Immunobinding Assay (DIBA); 5.4. Tissue Blotting Immunoassay (TBIA); 5.5. Other Serological Test Methods; References; 6 Nucleic Acid-based Testing Methods; 6.1. Nucleic Acid Hybridization; 6.2. Enzymatic Nucleic Acid Amplification; References; 7 Epilogue; 7.1. Other Detection Techniques; 7.2. Organization and Interpretation of Seed-health Assays

7.3. Tolerance Levels of Infection, and Pathogens in Germplasm7.4. Standardization and Cost of Tests; References; Appendix 1. List of

Seed-transmitted Viruses and Viroids; Appendix 2. Reagents, Solutions and Buffers; Appendix 3. Suppliers of Laboratory Equipment and Materials; Index; A; B; C; D; E; F; G; H; I; K; L; M; N; O; P; Q; R; S; T; U; V; W; Y; Z

## Sommario/riassunto

Yield losses and reduced crop quality, caused by plant viruses are an increasing problem. Several important plant viruses are, in addition to their sap and vector transmission, also transmitted through seed. Seed transmission of plant pathogens plays an important role for the early outbreak of disease in a crop, for the survival of inoculum from one crop season to the next, and for its international dispersal. Freedom from seedborne viral infection can be revealed by certain seed health testing methods. This book provides a practical guide to the commonly used detection methods for seed-transm