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Nota di contenuto	Front Cover; Matthews' Plant Virology; Copyright Page; About the Author; Contents; Preface; Chapter 1. Introduction; I. Historical Background; II. Definition of a Virus; III. About this Edition; Chapter 2. Nomenclature and Classification of Plant Viruses; I. Nomenclature; II. Criteria Used for Classifying Viruses; III. Families and Genera of Plant Viruses; IV. Retro elements; VI. Viruses of Lower Plants; VI. Discussion; Chapter 3. Disease Symptoms and Host Range; I. Economic Losses due to Plant Viruses; II. Macroscopic Symptoms; III. Histological Changes; IV. Cytological Effects V. The Host Range of Viruses VI. Discussion and Summary; Chapter 4. Purification and Composition of Plant Viruses; I. Introduction; II. Isolation; III. Components; Chapter 5. Architecture and Assembly of Virus Particles; I. Introduction; II. Methods; III. Architecture of Rod-Shaped Viruses; IV. Assembly of Rod-Shaped Viruses; V. Architecture of Isometric Viruses; VI. Small Icosahedral Viruses; VII. More Complex Isometric Viruses; VIII. Enveloped Viruses; IX. Assembly of Icosahedral Viruses; X. Discussion and Summary; Chapter 6. Genome Organization;

I. Introduction

II. General Properties of Plant Viral Genomes III. Plant Viral Genome Organization; IV. Double-Stranded DNA Viruses; V. Single-Stranded DNA Viruses; VI. Double-Stranded RNA Viruses; VII. Negative-Sense Single-Stranded RNA Genomes; VIII. Positive-Sense Single-Stranded RNA Genomes; IX. Summary and Discussion; Chapter 7. Expression of Viral Genomes; I. Introduction; II. Virus Entry and Uncoating; III. Viral Genome Expression; IV. Synthesis of mRNAs; V. Plant Viral Genome Strategies; VI. Discussion; Chapter 8. Virus Replication; I. Introduction; II. Host Functions Used by Plant Viruses

III. Methods for Studying Viral Replication IV. Replication of Positive-Sense Single-Stranded RNA Viruses; V. Replication of Negative-Sense Single-Stranded RNA Viruses; VI. Replication of Double-Stranded RNA Viruses; VII. Replication of Reverse Transcribing Viruses; VIII. Replication of Single-Stranded DNA Viruses; IX. Mutation and Recombination; X. Mixed Virus Assembly; XI. Discussion; Chapter 9. Induction of Disease 1: Virus Movement through the Plant and Effects on Plant Metabolism; I. Introduction; II. Movement and Final Distribution; III. Effects on Plant Metabolism

IV. Processes Involved in Symptom Induction V. Discussion; Chapter 10. Induction of Disease 2: Virus-Plant Interactions; I. Introduction; II. Definitions and Terminology of Host Responses to Inoculation; III. Steps in the Induction of Disease; IV. Inherent Host Response; V. Influence of Other Agents; VI. Discussion and Summary; Chapter 11. Transmission 1: By Invertebrates, Nematodes and Fungi; I. Introduction; II. Transmission by Invertebrates; III. Aphids (Aphididae); IV. Leafhoppers and Planthoppers (Auchenorrhyncha); V. Whiteflies (Aleyrodidae); VI. Thrips (Thysanoptera)
VII. Other Sucking and Piercing Vector Groups

Sommario/riassunto

It has been ten years since the publication of the third edition of this seminal text on plant virology, during which there has been an explosion of conceptual and factual advances. The fourth edition updates and revises many details of the previous edition, while retaining the important older results that constitute the field's conceptual foundation. Key features of the fourth edition include: * Thumbnail sketches of each genera and family groups * Genome maps of all genera for which they are known * Genetic engineered resistance strategies for virus disease control * Latest
