Compendium of Grape Diseases, Disorders, and Pests

SECOND EDITION

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Preface

The first edition of the *Compendium of Grape Diseases* was published in 1988. It was a groundbreaking book at the time and has remained a major reference for grape growers and advisers ever since. However, the volume and breadth of grape disease research conducted in the quarter century following its publication, and the degree to which the results of these efforts have been utilized to improve vineyard disease management programs, is remarkable. Thus, our intention in compiling the second edition of this volume has been to preserve the basic structure and value of the original while reflecting the many advances that have been made in understanding the subject matter since that publication's release. In doing so, we have maintained a primary focus on multiple infectious diseases of grapes that are caused by fungi, oomycetes, bacteria, phytoplasmas, viruses, and viruslike agents, including the symptoms and diagnostic features for each of the diseases; the etiological agents and environmental conditions that interact with the host to cause them; and techniques for their management.

As with the first edition, we also have included a chapter on the parasitic nematodes that affect grapes and have provided photographs and text to help diagnose and understand the symptoms of various abiotic disorders. Similarly, we again have provided text and photographs to aid in diagnosing the symptoms that are caused by certain arthropod pests but can be mistaken for symptoms of infectious diseases, along with relevant information on the biology and management of those pests. To highlight its primary focus on infectious diseases while also recognizing this additional subject matter, the new volume has been titled *Compendium of Grape Diseases, Disorders, and Pests*. For more inclusive treatments of abiotic disorders and/or pests, the interested reader is encouraged to consult additional sources that examine these topics in greater detail.

Due to the significant international value of grapes, the wide range of diseases that afflict the crop, and the critical role that disease management plays in its production, this new edition is published in an expanded format that allows additional pages of text and figures beyond those accommodated in the original; included are 375 photographs and drawings, including 280 that are new to this edition. The book is intended to be a general reference that is accessible to individuals with limited formal training in plant pathology and its associated disciplines, while also providing sufficient technical detail to be of value to subject matter specialists. Nevertheless, it remains oriented toward a primary readership of informed grape growers, their advisers in the public and private sectors of the economy, and individuals in various support industries who wish to diagnose grape diseases and disorders and are seeking science-based, practical information regarding their cause and control. Two relatively extensive sections that were not included in the first edition, *Grapevine Fungicides and Spray Technology for Grapevines*, attest to this particular focus on grape producers and disease management practitioners. And in an effort to provide additional context pertaining to the host plant itself, two other sections have been expanded significantly relative to their counterparts in the first edition, (i) *The Genus *Vitis*, Its Species,*

and Its Rootstocks; and (ii) *Grapevine Structure and Growth Stages*.

This book is a collaborative effort of 79 authors and co-authors who are recognized authorities in their fields. These authors represent 12 different countries spread across five continents, thereby providing a deliberate international scope and perspective to the information presented. Many of the individual authors contributed photographs for their own sections and sometimes for sections written by others as well. Photographs and illustrations new to this volume were provided by 29 additional individuals who did not author sections of the text, whom we thank and gratefully acknowledge below.

The *Compendium of Grape Diseases, Disorders, and Pests* rests squarely on the shoulders the first edition, *Compendium of Grape Diseases*. That original volume provided the fundamental framework for this current one, and we recognize and remember its editors, the late Drs. Roger C. Pearson (who was taken from us far too soon) and Austin C. Goheen. Many of the individual sections in the original edition provided a basis for the revised versions in this new one, and we recognize and thank the previous contributors, who are listed below. Additionally, we thank Gary Grove and Heather Scheck for critically reviewing the entire manuscript; Marc Fuchs and Naidu Rayapati for their thorough reviews and prepublication updates of the chapter on virus diseases; and Bob Martin and the staff of APS PRESS for their editorial assistance in getting the book completed.

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