

**BOOK REVIEW**

# Plant pathology and plant pathogens, J. Lucas, 4th edition

Lucas, J. 4th edition. 415pp. US\$100. ISBN 9781118893869 (paperback), 9781118893821 (pdf), 9781118893852 (ePub). *John Wiley & Sons Ltd: Chichester, UK, 2020*

This textbook by John Lucas is expertly crafted to introduce, bring up to speed, and increase the knowledge and understanding of current plant pathology to readers with varied academic background in the subject. The informative chapters of the textbook build up complexity of concepts that are comprehensively explained and supported by very well-presented visual images and figures together with diverse examples from globally important crop pathosystems. I also like how this textbook seamlessly bridges fundamental aspects of plant pathology with applied science.

The book is divided into three parts. The first part is entitled "Plant Disease" and includes five chapters that cover the concept of disease and the elements of plant epidemics including the diseased host and the microbial pathogen. This first part also introduces applied aspects of plant pathology including disease identification, assessment, and forecasting. Finally, a chapter on plant disease epidemics links mathematical modelling, epidemiology, and practical disease management. Part 2 of the book covers the fundamental mechanisms of host-pathogen interactions by introducing first the infection process, the physiology of disease, and the pathogenicity of microbes. Then it naturally progresses with chapters on passive and active mechanisms of plant defence and the concept of host-pathogen specificity including gene-for-gene interactions, microbial effectors, and plant immunity. Part 3 focuses on the current methods of practical disease management with individual, in-depth chapters on chemical control, host resistance, and biological control. Finally, the chapter focused on integrated management of plant disease provides the reader with specific examples of diseases best controlled by a combination of effective control measures.

The book is very well organized and written with the target audience of undergraduate and postgraduate students in mind to first introduce the subject and key terminology before proceeding to cover all aspects of plant pathology in depth. It is helpful to unfamiliar readers that the terminology is written in bold and explained in detail. The inclusion of high-quality images of host-pathogen interactions in combination with well-presented diagrams, tables, and figures throughout the book also helps to explain and strengthen the introduced concepts. Sections and subsections are used to structure chapters, with each chapter concluding with a section of further reading in the form of books and published research papers/reviews to expand learning. As a plant pathology teacher, I also greatly appreciate the companion website with online availability of figures and images in PowerPoint slides to complement and diversify my teaching practice.

I fully recommend this comprehensive plant pathology textbook by John Lucas as an essential addition to our libraries and teaching on the subject. Furthermore, I envisage that the book will be much used and referenced by both fundamental and applied plant pathology students, researchers, and academics alike.

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