

Book review

Introduction to Plant Pathology Richard N. Strange. 464 pp. John Wiley & Sons Ltd., UK. ISBN 0-470-84973-8.

This book gives the reader a comprehensive introduction to the subject of plant pathology. It reviews a wealth of information, from the fundamental principles to the current state of knowledge as regards plant pathogens and the consequences of plant disease. This book is an unconventional plant pathology text with respect to how it approaches the subject. The first chapter that details the causal organisms of disease is concise but informative, focusing on the impact rather than the biology of plant pathogens, and is supported by good colour plates of plant diseases. Chapter 2 gives the reader an overview of conventional and modern techniques for the detection and diagnosis of plant pathogens and the diseases they cause. Chapter three reviews the role of the host, the pathogen and the environment in plant disease epidemiology. Disease pressure in soil, air, disease measurement *in planta* and the relationship between disease and yield are discussed in chapter 4. Disease forecasting is discussed in chapter 5 in the context of reducing the sources of inoculum. This chapter also gives an in-depth overview of biological control agents. The physical, chemical and biological factors involved in host localisation, penetration and colonisation are discussed in chapters 6 and 7. Chapters seven and eight give an up-to-date review of the role of hormones and toxins in plant disease development. In recent

years, much research has focused on determining the constitutive and induced plant defence mechanisms against disease and chapters nine and eleven give an excellent overview of physical, chemical and biological plant barriers to disease development. No book on introductory plant pathology would be complete without a discussion of the gene-for-gene concept, both historical and modern perspectives on this theory, and chapter ten brings the reader from the basic principles of this concept through to the co-evolution and structure of avirulence and disease resistance genes. The book concludes with chapter 12 that discusses the control of plant diseases. While this chapter does not discuss the role of chemicals such as fungicides in disease control, it reviews the current state of research as regards alternative control strategies, ranging from exploiting chemical plant and pathogen signals, plant transformation with candidate genes to enhance resistance, to RNA suppression and gene silencing. The book is, to my mind, very good value for money and provides an alternative and complementary approach to other textbooks for those interested in introductory plant pathology.

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