

Book review

Botrytis: Biology, Pathology and Control. Y. Elad, B. Williamson, P. Tudzynski and N. Delen (eds). 2004. 428 pp. Hardcover. Springer-Verlag, Heidelberg, Germany. ISBN 1-4020-2624-2. €135.00; £94.00; US\$149.00.

As the editors point out in the opening lines of the introductory chapter, it is 25 years since a comprehensive treatise on *Botrytis* was produced, so a book of this type has been eagerly awaited for some time. Has the wait been rewarded? Inevitably in a book of only 400 pages dealing with such a widely researched yet still in many ways enigmatic pathogen as *Botrytis*, deficiencies, if they exist, are most likely to arise from personal preferences. Epidemiologists would probably have liked to see more pages on the epidemiology of *Botrytis*, chemical control people might have liked more on the fungicidal control of *Botrytis*-incited diseases, and so on. In many ways it is a thankless task to try and produce a comprehensive review of a single pathogen in a single volume. In this case, great thanks must go to the editors for producing a first-rate book that is surely destined to find its way onto the shelves of most university and research institute libraries.

The book is organised into three major themes: the fungus and its pathogenicity factors; plant reactions to infection; and the epidemiology and management of important *Botrytis*-incited diseases. After the introduction by the editors, and a chapter on the ecology of *Botrytis* on plant surfaces, chapters 3 and 4 deal respectively with taxonomy and genetic variation, and molecular genetics and genomics. The following chapters continue the molecular theme, dealing with morphology and cellular organisation (chapter 5), signalling (chapter 6), enzymes and metabolites (chapter 7), disruption of redox processes in infected plants (chapter 8), defence compounds

(chapter 9), phytohormones in host-pathogen interactions (chapter 10) and detection, quantification and immunolocalisation (chapter 11). The next two chapters deal with *Botrytis* control, examining chemical strategies (chapter 12) and microbial options (chapter 13). Next comes a series of chapters on crop-, or system-related topics dealing with orchard and vine crops (chapter 14), bulb crops (chapter 15), legumes (chapter 16), greenhouse crops (chapter 17), warning systems (chapter 18) and post-harvest *Botrytis*-related problems (chapter 19). The closing chapter examines some innovative approaches to *Botrytis* suppression, including the manipulation of defence gene expression, induced resistance and suppression using microbial agents. The book is the result of contributions from 43 authors, all leading *Botrytis* scientists from all parts of the world. This is important, as *Botrytis* is itself not restricted to a single agroecosystem, and is just as important in the arid sub-tropics as it is in Europe or north America. The authors have done a good job in selecting up to date key references. This is not surprising for the molecular-based chapters where over 90% of references are less than 10 years old, but it is also true of the field management-related chapters where the majority of the references have been compiled from literature generated in the time since the last major *Botrytis* book was produced. In itself, the book represents a great resource for the huge volume of references in each of the chapters – over 100 in many cases.

Not surprisingly, given the available literature, much of the field-based information is from research emanating from countries with well developed agricultural systems. There is, however, in the chapter dealing with legume diseases, a welcome section on chickpeas and lentils with a

healthy emphasis on disease management options in less developed countries. Finally, of course, there is more to *Botrytis* than *B. cinerea*. Although, naturally, the emphasis of the book is on *B. cinerea*, there is good treatment of the other species; the chapter on the taxonomy and genetic variation in the genus provides an introduction to the lesser worked species, and many of them are discussed in the chapters dealing with crop-specific problems.

Priced at around US\$150.00 the book undoubtedly represents very good value.

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