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Book review

Mechanisms of resistance to plant diseases. Edited by A.J. Slusarenko, R.S.S. Fraser and L.C. Van Loon. 2000. 620 pp. Kluwer Academic Publishers, Dordrecht, the Netherlands. Hardcover. Price € 245.

This is what it is meant to be – a valuable textbook for advanced students of plant pathology and researchers seeking a comprehensive overview on plant–pathogen interactions. This was achieved by bringing together a group of experts in the field who concentrated noticeably on a didactic approach. The result is a sound book, the text of which can easily be followed without missing the necessary scientific details.

The book starts with a nice chapter describing four well-established case studies of plant–pathogen interactions, namely the tobacco–tobacco mosaic virus interplay, the response of crucifers to infection with *Xanthomonas campestris* pv. *campestris*, the tomato–*Cladosporium fulvum* interaction and the barley–*Blumeria graminis* interrelation. Unfortunately, the chapter does not contain the interaction of the model plant Arabidopsis with *Pseudomonas syringae* and/or *Peronospora parasitica* that has provided a thorough insight into the molecular biology and genetics of plant–pathogen interactions over the past ten years.

The following chapters summarise the current knowledge of the genetics of plant disease resistance, the perception and transmission of pathogen-derived signals in the plant, the hypersensitive resistance response, induced and preformed anti-microbial compounds and proteins, various induced disease resistance phenomena and transgenic approaches to control plant disease, to list just a few. Each of the 11 chapters contains an extensive amount of fundamental information, especially those on induced and preformed antimicrobial proteins (Chapter 8) and systemic induced resistance (Chapter 10). Thus, the book should be valuable for several years in spite of the rapid progress being made in plant disease resistance research. Most of the photographs are of good quality though at some points a colour picture would have helped to make facts more clear. This is also true for some of the figures that otherwise are clear, concise and self-explaining. At various places, many authors included boxes in their article providing definitions of terms often used in plant disease resistance research. These are very helpful especially to those who are not familiar with the field.

This textbook also provides extensive subject and species indices that are helpful in finding subjects and species of interest. In summary, I found this an excellent textbook for advanced students and researchers who are seeking an up-to-date overview on the mechanisms involved in plant disease resistance.

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