



PLANT ROOTS. THE HIDDEN HALF. Waisel Y., A. Eshel and U. Kafkafi (eds.). Marcel Dekker, Inc. New York, Basel, 2002. 3<sup>rd</sup> edition pp. XX+1120. ISBN 0-8246-0631-5. US\$250.00.

Since root physiology, metabolism and function in plants represent a very broad field, review articles on the different topics of plant roots are often dispersed in different books and journals. This book offers an updated coverage of a wide panel of advances on this complex world through 59 well written papers each resulting from a collective work of experts in their field. Beyond the essential literature cited, a wealth of unpublished data are offered to the reader.

The book is composed of ten chapters, each divided in several papers, covering all the modern aspects of the plant roots studies through an approach that spans from the molecular biology to the ecological interactions between plant roots and the environment: 1) *The origin and characteristics of roots*, 2) *The root system: structure and development*, 3) *Root genetics*, 4) *Research techniques for root studies*, 5) *The regulation of root growth*, 6) *Physiological aspects of root systems*, 7) *Root growth under stress*, 8) *Root-rhizosphere interactions*, 9) *Roots of various ecological groups*, 10) *Roots of economic value*.

Of course, this book does not cover all aspects of the structure and function of the roots. Unlike most books on root functions, however, this one succeeds in integrating a wide assortment of views combined with high-quality scientific information. More, the volume gives many amply illustrated examples of the intricate relationships existing among shoots, roots, soil and microorganisms combined as a single functional system.

This book is an essential reference to all plant physiologists, physiological ecologists, teachers and students interested in this fascinating field of plant sciences. Several chapters go well beyond mere review to provide useful generalisations or to suggest new lines of enquiry. Finally, after more than 1100 pages the satiated reader hopes that here will be a continuation of the story in the in the next edition of this book Yet it is a remarkably good attempt, and exceptionally good value. I highly recommend it.

*S. Mancuso*