

Orchid Biotechnology, Wen-Huei Chen and Hong-Hwa Chen (Eds), 2007, World Scientific Publishing Co. (Pty) Ltd., 5 Toh Tuck Link, Singapore, Price: US\$ 76.00, 258 pages, ISBN 978-981-270-619-5, Website: <http://www.worldscibooks.com/lifesci>

The title of the book is the perfect description of the book's content. This is not a book for the orchid enthusiast who has no background in biotechnology, but rather a book for those with an up to date understanding and interest in plant biotechnology. The book focuses on the recent advances in orchid biotechnology research in the last 10 years in Taiwan. It covers both basic and advanced biotechnological research.

Topics included: Breeding and Development of New Varieties; Embryo Development; *In vitro* Morphogenesis and Micro-Propagation; Somaclonal Variation; Mycorrhizal Fungi; Flow Cytometry; Cytogenetics; Analysis of the Chloroplast Genome; Analysis of Expression of *Phalaenopsis* Floral ESTs; Control of Floral Morphogenesis; Gene Expression of Inflorescence Initiation; Application of Virus-induced Gene Silencing Technology in Gene Functional Validation of Orchids and Genetic Transformation as a Tool for Improvement of Orchids.

As stated by the publishers the readership includes: researchers, graduate and post-graduate students in biotechnology, plant biotechnology, botany, plant biology and horticulture; growers; and professionals in the biotechnology industry.

Although the book does cover a vast number of orchid genera the emphasis is on the biotechnology of *Phalaenopsis*. The book is not a comprehensive review of orchid biotechnology but rather current research and advances made by a number of leading Taiwanese orchid researchers.

This is an important book in its field and is well produced and written. For anyone with a biotechnological background this book will be a valuable addition to your library.

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Mycorrhizae: Sustainable Agriculture and Forestry, Z.A. Siddiqui, M.S. Akhtar, K. Futai (Eds.), 2008, Springer, Price: \$219.00, Hard Cover, 359 pages, ISBN 978-1-4020-8769-1, Website: www.springer.com

Mycorrhizal associations between beneficial fungi and plant roots are essential components of sustainable soil-plant systems and are therefore an important aspect of agriculture and forestry.

Such associations very often enhance the growth of a root system thereby improving the growth of the whole plant, as well as controlling certain pathogens. They play an important role in plant nutrient uptake, water relations, ecosystem establishment, plant diversity, and plant productivity. Thus, mycorrhizae are an important tool for promoting sustainable agriculture.

The purpose of this book is "to provide a comprehensive source of current literature and future prospects for research," and indeed the book does just that. It is comprised of 15 chapters, each with a short abstract summarising the chapter. Chapter 1 provides an overview of the current knowledge of mycorrhizal interactions, processes and potential benefits, while Chapter 2 describes the molecular components of nutrient exchange between arbuscular mycorrhizae (AM) and plants. There are a further eight chapters on AM, providing information on the contribution of AM fungi to plant nutrition, water relations, soil stability, establishment of micropropagated plantlets, the indirect contributions and effects of interactions of AM fungi and soil aggregation to plant growth and plant protection, their role in the remediation of contaminated soils, and the effects of various fertilization practices on AM fungi community structure and crop productivity in major North American grain production areas. This is followed by two chapters on ectomycorrhizae and their importance in forest ecosystems, and two chapters on the practical application and use of mycorrhizae in restoration of disturbed ecosystems and in *in vitro* micropropagation. The final chapter describes practical methods for visualizing and quantifying endorhizal fungi.

The layout of the book is simple and neat, and I personally like the citation/reference system that uses author names (rather than a numbering system) and gives the full title of the referenced articles. This publication incorporates both theoretical and practical aspects and is recommended to students, teachers and researchers in any area of the field, particularly in agricultural microbiology, plant pathology and agronomy.

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Science and the Garden: The Scientific Basis of Horticultural Practice, (2nd Edition), D.S. Ingram, D. Vince-Prue, P.J. Gregory (Eds.), 2008, Wiley-Blackwell, West Sussex, UK, Price: £24.99, Soft Cover, 350 pages, ISBN 978-1-4051-6063-6, Website: www.wiley.com

Following the First Edition of "Science and the Garden", published in 2002, the Royal Horticultural Society have