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Trigiano, R.N., Gray, D.J. (ed.): **Plant Development and Biotechnology**. - CRC Press, Boca Raton - London - New York - Washington 2005. 358 pp. ISBN 0-8493-1614-6.

Editors of this book are excellent experts in plant biotechnologies: Prof. Robert N. Trigiano from the Department of Entomology and Plant Pathology at the University of Tennessee, Knoxville, USA, and Dr. Dennis J. Gray from the University of Florida, IFAS, Horticulture Department. The presented book covers the major issues in the field of plant development and biotechnologies and discusses new techniques and opportunities. The book employs an informal style to address the main aspects of development and biotechnology with minimal references, without sacrificing information or accuracy. The book contains 29 chapters and their division into the five sections was not necessary. Both Section I and Section II contain only one chapter "Introduction" and "History of Plant Tissue Culture", respectively. These two chapters and the Chapter 3 ("Getting Started with Tissue Culture: Media Preparation, Sterile Technique and Laboratory Equipment") from Section III ("Supporting Methodologies") are appropriate to the beginners in the field of plant tissue culture. For this group of researchers a short summary of plant growth regulators often used in plant tissue cultures may be also important (Chapter 8). To the Section III further belong chapters dealing with histological techniques (Chapter 4) and photographic methods (Chapter 5). Very useful is Chapter 9 presenting software and databases for analyzing nucleic acid and protein sequences. Following section IV ("Propagation and Development Concepts") offers the articles connecting with the micropropagation and organogenesis (Chapters 12 and 13) and somatic embryogenesis (Chapters 14 and 15) and presenting also the molecular aspects. "Crop Improvement Techniques" is the name of Section V. We can find here methods for isolation of protoplasts and regeneration of plants from the protoplasts (Chapter 16),

haploid cultures (Chapter 17), embryo rescue procedure (Chapter 18), and germplasm preservation (Chapter 23). The main topic of this section is genetic engineering technologies (Chapters 19 to 22) describing three major DNA transfer methods: *Agrobacterium*-mediated transformation, direct protoplast-mediated DNA transfer and microprojectile bombardment. Following chapter discuss the problems with public view to cultivation of genetically modified (GM) plants, the food safety of GM plant products and ecological interaction between GM plants and wild plants. At the end of this section we can find a short chapter about utilization of *in vitro* culture for production of pharmacologically important secondary metabolites. The last section IV ("Special topics") contains five chapters. Two chapters deal with plant pathology: development of disease-resistant genotypes of crop plants (Chapter 25) and diagnostic methods for detection and identification of viral and bacterial plant pathogens (Chapter 28). Very unusual, but interesting, is the Chapter 27 ("Commercial Laboratory Production") giving the advice how to utilize micropropagation as a practical and cost-effective production tool. This chapter describes some of the basic steps involved in plant micropropagation, discusses the practical aspects of the micropropagation business, and gives some examples of how and why micropropagation is being now used by growers.

Every chapter starts with brief concept and ends by list of cited literature and suggested readings. The text is complemented by tables, figures, schemes and black and white photographs. I can suggest this book to all research teams started with plant tissue culture development, micropropagation, genetic plant transformation or other *in vitro* plant biotechnologies.

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