



## Book Reviews

### Plant Biotechnology

B.D. Singh, Kalyani Publishers, Ludhiana and New Delhi, First Edition, 2006, pp 755; Rs. 275/- ISBN 81-272-2788-9

The present 750 plus page book "Plant Biotechnology" costing only Rs. 275/- is the first edition of the book by B.D. Singh, Professor, School of Biotechnology, Faculty of Science, Banaras Hindu University, Varanasi. A highly experienced and prolific writer of several books on genetics, plant breeding and biotechnology, Prof. Singh has attempted to provide up-to-date, readily comprehensible and quality study material on plant biotechnology to students of the subject at graduate and post-graduate levels in this edition in a simple and easily understandable narrative language. Being the first edition of the text -book the treatment of the subject retains the basic approach and attempts to explain the various concepts and phenomenon in a simple, clear and easy to-to-follow discussion.

The voluminous book has a total of 22 chapters on the topics: 1. Introduction to Plant Biotechnology, 2. Plant Cell and Tissue Culture, 3. Micropropagation, 4. Virus-Free Plants, 5. Germplasm Conservation, 6. Biochemical Production from Cultured Plant Cells, 7. Haploid Production for Hybrid Sorting and Analytical Breeding, 8. Technology for Distant Hybridization I. Embryo Rescue and *In-vitro* Pollination 9. Technology for Distant Hybridization II. Somatic Hybridization, 10. Somaclonal Variation, 11. Genes and Genomes, 12. Gene Action and Its Regulation, 13. Recombinant DNA Technology, 14. Transgenic Plants. I. Gene Constructs, Vectors and Transformation Methods, 15. Transgenic Plants. II. Resistance to Abiotic and Biotic Stresses, 16. Transgenic Plants. III. Quality Modifications and Novel features, 17. Genome Maps, 18. Genomics and Bioinformatics, 19. Molecular Markers and Marker-Assisted Selection, 20. Biosafety, 21. Biosafety II. Transgenic Plants, and 22. Intellectual Property Rights.

There are also 38 very useful Appendices running in 54 pages and covering a wealth of additional illustrated information on various biotechnological techniques and protocol details in depth for hands on practice by students of biotechnology on several main topics covered in the chapters of the book.

The book also includes important references for each chapter, particularly standard text books for additional reading by users under the heading "Relevant Literature" listed after the Appendices. An A to Z Author Index as well as a comprehensive Subject Index add on to the standard and utility of this text book.

The text in the chapters is supported by a large number of Tables, Figures and Illustrations, wherever necessary. For the benefit of students, all the Chapters also have Questions at the end. Thus, the book under review, running into over 750 pages, presents in its 22 chapters almost everything that a student at graduate or post-graduate level or even a beginner of modern plant biotechnology discipline needs to know.

The book under review adequately covers all the major topics of importance in the fast progressing areas of biotechnology currently undergoing a major change in terms of options, opportunities and practices. The treatment of subject matter in each chapter is really exhaustive. Information on important scientific advances and major achievements made in individual topics in the field of plant biotechnology are adequately covered. Keeping in view the target audience of this text book, primarily graduate and post graduate students in the colleges and universities, the author has done well by providing very useful questions as well as suggested further reading list of only very important books available in plant biotechnology.

The book is thus well prepared with a paperback jacket binding to keep the cost most affordable, particularly to students. Being the first edition, there are several typographical errors here and there, which the author and the Publisher will get corrected in the next edition of the book as and when the same is brought out by them. There is a vast scope to improve the quality of several illustrations given in the book. However, the author and the publisher deserve all appreciation for bringing out this excellent up-to-date book at such a modest and very affordable price of Rs. 275/- only. Research workers, teachers as well as students of plant biotechnology at graduate and post graduate level will find the book very useful. In view of its excellent quality and quantity of scientific contents, the book richly deserves a valuable addition in all agricultural colleges, universities and research institute libraries and of course a special place in the personal collection of every student looking forward to make his contribution in the field of plant biotechnology.

**M.C. KHARKWAL**  
Secretary & Editor