

General Plant Breeding

A.R. Dabholkar, Concept Publishing Company, New Delhi 110 059, 2006, pp 482; Rs. 200/-
ISBN 81-8069-255-8 (PB)

The author of the book "General Plant Breeding" under review states that there are exquisite, knowledgeable books on plant breeding and several books are published on vegetable breeding also. However, there are not many standard books which deal with both agricultural and horticultural crops. Therefore, the present book is an endeavour by the author Dr. Arvind Rangrao Dabholkar, a Professor of Quantitative Genetics and Plant Breeding and an experienced Sorghum breeder for over 20 years at Jawaharlal Nehru Krishi Viswavidyalaya, to write a book on plant breeding which attempts to bridge this undesirable gap and also refers to vegetable breeding in addition to cereals, pulses, oilseeds, and fibre crops while discussing various breeding concepts and applications. Thus the treatment of the subject by the author in this book retains the basic approach and attempts to explain the various concepts and phenomenon in a simple, clear and easy to-follow discussion.

The book has a total of 18 chapters on the topics: 1. Plant Breeding – Scope and Achievements; 2. Reproductive Systems in Crop Plants; 3. Self-Incompatibility and Male-Sterility; 4. Plant Genetic Resources; 5. The Genetic Composition of Crop Plants; 6. Quantitative Characters; 7. Plant Introduction; 8. Selection – A Tool for Plant Improvement; 9. Breeding Methods for Self-Pollinated Crops; 10. Breeding Methods for Cross-Pollinated Crops; 11. Inbreeding Depression and Hybrid Vigour; 12. Hybrid Varieties; 13. Resistance of Plants to Fungal Diseases; 14. Resistance of Plants to Insect Pests; 15. Breeding Resistant Varieties; 16. Polyploidy in Plant Breeding; 17. Mutation in Plant Breeding and 18. Distant hybridization for Plant Improvement. The book has 23 Tables and 35 Figures. The Bibliography listed on page 476 has only a list of 12 books. There is a six page Index as well at the end of the book.

Although the Preface of the book written by the author himself is dated 22nd July, 2004 the copy right page of the book has a print line of 2006, indicating a very long gap period of two years between the receipt of the full manuscript and the actual publication of the book. This is so evident in the contents of the book as the information on latest in the field of plant breeding and application of modern biotechnological tools and approaches is lacking. The field of plant breeding and crop improvement is currently undergoing a major change in terms of options, opportunities and

practices. Obviously, all this is not adequately covered in the book under review. In the age of internet and websites, the gap in authors proficiency in using these powerful tools is also reflected in the book in several ways but the most obvious facts are seen in the data presented in tables 1.1 and 1.2 and references listed at the end of each chapter, which are not up-to-date at all.

Most of the chapters in the book lack the depth of a higher level text book dealing with latest scientific advances in the field of plant breeding. This is also evident from the number of printed pages devoted to each chapter. Except few chapters like Breeding Methods for Self-Pollinated Crops/ Breeding Methods for Cross-Pollinated Crops/ Hybrid Varieties, most other chapters have been presented in less than 25 pages of this 20 x 25 cm size book, which is naturally too insufficient to do full justice with so much scientific information available on each of the titles covered in so many important chapters in the book. This indicates to the large gap in providing scientific information to the users.

A glance through the literature and references cited and listed at the end of each chapter also makes it clear once again that the author has not been able to scan and present the latest available literature.

The book jacket is well prepared with attractive photographs and paperback binding to keep the cost most affordable, particularly to students. However, there is enough scope for further improvement in the quality of the illustrations. Being printed in black and white, that too on ordinary maplitho paper, the quality and details of the photographs has been lost considerably. Overall, the book contains useful information on the general aspects of the plant breeding in a reader friendly format. Colleges and universities libraries, teachers as well as students of plant breeding particularly at graduate level will find it useful and easily affordable to buy a personal copy. The author is expected to include the latest developments in the field of plant breeding and the statistics in the revised edition of the book.

M.C. KHARKWAL
Secretary & Editor