

## BOOK REVIEWS

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*Plant Mutation Breeding and Biotechnology*. Edited by Q. Y. Shu, B. P. Forster and H. Nakagawa. Wallingford, UK: CABI (2012), pp. 608, £125.00. ISBN 978-178064-085-3.

*Plant Mutation Breeding and Biotechnology* is the successor to the *Mutation Breeding Manual* published by the International Atomic Energy Agency in 1975, with a second edition in 1977. This new book is published jointly by CAB International and FAO. The three editors have done an excellent job in bringing together 41 chapters, arranged in five sections: I. Concepts, Historical Development and Genetic Basis; II. Mutagens and Induced Mutagenesis; III. Mutation Induction and Mutant Development; IV. Mutation Breeding and V. Mutations in Functional Genomics. Each chapter is clearly written by an authority or authorities on the subject with good cross referencing to other relevant chapters. Furthermore, the text of each chapter is complemented by very useful tables, boxes, figures and photographs, in colour where this adds clarity. The references at the end of each chapter include cited references, websites and further reading. The book ends with three appendices on radio-sensitivity of various plant species to fast neutrons; radio-sensitivity of plants to chronic irradiation and suggested dose for mutation induction; and the radio-sensitivity of plants to acute gamma irradiation estimated by LD<sub>50</sub> and RD<sub>50</sub> and the suggested dose (SD) for practical application. The book is a very welcome, comprehensive and much needed synthesis of the literature on the modern role of induced mutagenesis in plant breeding and functional genomics. There is an excellent balance between theory and practice, and between model plants and important crops. The book should prove valuable to practical plant breeders and to researchers in basic and applied plant biology.

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*Organic Agriculture for Sustainable Livelihoods*. Edited by N. Halberg and A. Muller. London and New York: Earthscan/Routledge (2012), pp. 280, £29.99. ISBN 978-1-84971-296-5.

This book focuses on the potential of organic agriculture to support rural development. It comprises 11 chapters and four in-depth case studies, authored by different teams of contributors from a variety of countries and disciplines. The links between chapters are highlighted by editors, although each may also be read independently. Topics range from the consequences of the organic approach on livelihoods and food security of smallholder farmers, to the globalization of organic food chains, the role of agro-ecological methods in sustainable production and the contribution organic agriculture can make to climate change adaptation. Policy issues and market development are also explored. Whilst the main emphasis is on developing countries and those in a period of economic transition, the book also draws comparisons with developed countries, underlining the impact of interactions between the two. Case studies serve to contextualize the principles outlined in the chapters and integrate a number of ideas through practical examples. The book as a whole is generally well-written although there are some inconsistencies in the use of terminology between different authors, along with a few minor spelling errors. Nevertheless, the book is well-referenced and provides a comprehensive coverage of current issues underpinning sustainable production which are of relevance across all sectors. As such, there are areas of interest to a range of stakeholders including growers, consumers, policy makers and researchers.

Sally Howlett