

At last, a book that focuses on banana breeding. Not only are *Musa* breeding techniques, strategies and philosophies detailed in ways not done before, but there are also comparisons made with breeding three other clonally propagated tropical crops and the lessons they can teach banana scientists. In addition, there are chapters by various authors covering such topics as *Musa* genetic resources, morphology, pests and diseases, fruit quality, propagation and dissemination of hybrid cultivars, as well as the latest developments in biotechnology and genomics. They complement one another and point the way forward to the development of new cultivars with disease and pest resistance, while satisfying consumer expectations.

The chapters reflect the personal and practical experiences of the authors and the editors are to be congratulated on compiling an excellent new resource on bananas and banana breeding. This book provides basic as well as advanced information for those interested in learning more about banana, as well as those pursuing further research in the crop. Excellent bibliographies in many chapters provide a valuable documentation of the diverse research activity that has taken place in the past few decades and should be of use to serious scholars. I recommend this book to all interested in the genetic improvement of tropical crops, particularly those interested in banana breeding and production.

Mike Smith

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*Barley: Production, Improvement and Uses.* Edited by S. E. Ullrich, Chichester, UK: Wiley-Blackwell (2011), pp. 637, £170.00. ISBN 978-0-8138-0123-0.

This book aims to present the current 'state of the art' in all aspects of barley from DNA sequences associated with key traits for breeding, cultivation and utilization, and biotic and abiotic threats. Chapters are provided by expert individuals or groups, ensuring accurate and up-to-date information, but generating some problems not fully overcome, e.g. considerable repetition of some themes, such as applications of molecular breeding techniques, across several chapters. This demonstrates a generally limited cross-referencing between chapters, although the linking between malting and brewing and both endosperm mobilization and other end-uses is effective. Good overviews, with references for the expert to access more detail are, as indicated by one contributor, appropriate for a book of this type, but there is some variation, in depth and detail, between chapters.

The book is aimed at an academic rather than a general readership and should achieve wide approval amongst barley scientists, although familiarity with techniques and terminology may be necessary for some specialist areas. The geographical subdivision of chapters on breeding and agronomy will enhance international appeal, although extension of this approach to food and feed uses would have been a useful addition. Information on varieties and products from less-developed countries, where barley remains an important food crop, would balance the emphasis on improving nutritional quality, or reducing diffuse pollution, in developed areas. Overall, therefore, the book is not without flaws, but it remains a comprehensive source of information and a valuable addition to the literature on a hugely important crop species.

J. Stuart Swanston

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*Sesame: The Genus Sesamum. Medicinal and Aromatic Plants – Industrial Profiles.* Edited by D. Bedigian. Boca Raton, FL, USA: CRC Press (2011), pp. xxiii + 532, £82.00. ISBN 978-0-8493-3538-9.

Medicinal and aromatic properties of sesame do not spring to mind before, or indeed after, perusal of this volume. Nine chapters discuss seed chemistry, six review cultivation in various countries and four concern topics such as genetics of yield and molecular biotechnology. There are also six chapters by the editor.

Currently, medicinal interest centres on sesame lignans, antioxidants responsible for the keeping qualities of sesame oil, which reportedly reduce plasma cholesterol and curb development of some cancers. However, several chapters conclude that more work is needed before extrapolating laboratory results to humans.

Chapters on sesame in China, Ethiopia, Iran, Somalia, Thailand and Turkey are written by nationals of these countries. Methods range from tillage by ox-drawn plough to tractor cultivation, and from oil extraction by pestle and mortar driven by a blindfolded camel to mechanical pressing. All chapters seem written to stand alone, resulting in some repetition, but together they provide a useful synthesis. A recurrent theme is the need for a non-shattering mutant superior to Langham's 'close sesame'. One has apparently been developed in Thailand.

While most chapters are succinct summaries, the editor's are much longer. One on sesame in Iron Age Urartu (Ararat) seems out of place here. Her final three chapters are mainly compilations of quotations or paraphrases. This leads to repetition and even contradiction, e.g. 'Ethiopia is Africa's largest sesame exporter' (p. 428), but 'northern Sudan is already the largest exporter of sesame seed and oil in Africa' (p. 434). The cumulative effect left this reader asking 'who shall edit the editor herself?'

Barbara Pickersgill

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*Tropical Fruits. Volume 1.* 2nd edition. By R. E. Paul and O. Duarte. Wallingford, UK: CABI (2011), pp. 400, £45.00. ISBN 978-1-84593-672-3.

The second edition of the 1998 book is targeted on the horticultural industry and policy makers as much as students and teachers. Volume 1 is almost as long as the whole of the first edition. The extended introduction to the new edition, which covers the tropics, its soils and horticulture, cultivation, tree management and postharvest technology, provides good background to what follows, and will be useful to students especially. The fruits covered are *Annona* spp., avocado, bananas and plantains, litchi and longan, mango, papaya and pineapple. The approach to revision was to retain the original text largely unchanged, and to add new material. This is satisfactory where little is new, but greater revision might have been expected in the more technical areas. Unfortunately the colour pictures have been removed.

Most of the relevant subjects – botany, ecology, general characteristics, varieties, cultural practices, pest management, harvesting and postharvest handling and utilization – are covered with references to monographs where required. The accounts of breeding are particularly welcome. More on the business side might have been expected from the authors, for example, market analysis is described as the crucial step in establishing a new orchard, but marketing is discussed for three of the seven fruits, and has not been updated in any way. The book would have benefited from careful copy editing.

Overall, the book is a useful introduction to the fruits that it covers.

Rob Lockwood

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*Turfgrass Physiology and Ecology: Advanced Management Principles.* By G. E. Bell. Wallingford, UK and Cambridge MA, USA: CABI (2011), pp. 235. £37.50 / US\$ 75.00. ISBN 978-1-84593-648-8.

This book addresses an important need of students and professionals in turf management for a comprehensive textbook on grassland physiology related specifically to turfgrass. The reader is assumed to have a limited knowledge of plant biology and chapters 1–4 provide a clear and comprehensive description of plant needs, photosynthesis, respiration and transpiration. These chapters could be equally relevant for any student of grassland needing an easy-to-follow text on grass growth and physiology. Subsequent chapters build on this understanding to focus on the management principles specific to turf: mowing, wear, light and shade, nutrition, soil conditions, ecology and competition. Each chapter provides a well-structured learning module, beginning with a glossary of terms and ending with a detailed summary, suggested further reading and websites. The author addresses his readers and holds their attention throughout with a highly informative but relaxed writing style; this is one of the book's strengths. The text is supported with line drawings and photographs, though as monochrome they sometimes fail to show their intended message adequately. A bibliography of some 400