

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

references is included. The author is based at Oklahoma and the book is generally written for a US readership, although most of the content has international relevance. In the final chapter the author illustrates the principles with a practical example: a back lawn. Perhaps some additional examples from different turfgrass situations might have added to the book's scope, but it delivers on its aim of explaining physiological needs and the management techniques to supply those needs.

Alan Hopkins

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*Crop Wild Relatives: A Manual of in situ Conservation.* Edited by D. Hunter and V. H. Heywood. Earthscan: London (2010), pp. 440, £29.99 (Paperback). ISBN 978-1-84971-179-1.

Crop wild relatives (CWR) are the group of plant species which are more or less closely related to crops and to which they can potentially contribute traits (resistant to stress, disease, drought and other factors) desired by plant breeders; as such they are likely to provide for climate change mitigation and will thus play a key role in future food security. The book is based on experience gained during a recent Bioversity International project and focuses on case studies for *in situ* CWR conservation from five countries. The 16 chapters introduce CWR science, *in situ* conservation planning, *in situ* conservation establishment, major threats and raising awareness of CWR diversity. The chapters are very well written and provide a fair overview of the existing literature, but the editor should be commended for the integration of practical experience gained from the five country studies into the description of each facet of *in situ* conservation planning and establishment. The one major omission is a thorough chapter on complementary *ex situ* CWR conservation: *ex situ* CWR conservation is a necessary safety backup. A lesser, but important, second omission is the lack of the link between CWR conservation and use. It could be argued that without use no element of agro-biodiversity can be sustainably conserved. There have been several texts published in recent years but this is a significant addition and despite some minor quibbles I recommend this text to all those interested in agro-biodiversity and protected area conservation.

Nigel Maxted

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*Wild Crop Relatives: Genomic and Breeding Resources. Millets and Grasses.* Edited by C. Kole. Heidelberg: Springer (2011), pp. 342. €149.95. ISBN: 978-3-642-14254-3.

This series is dedicated to the Father of the Green Revolution, the late Dr Norman E. Borlaug. It provides a wealth of information about crop wild relatives in ten volumes ranging from cereals to forest trees. The specific volume reviewed here addresses wild relatives of cultivated millets and grasses – small-seeded Poaceae grown as cereals, forages, ornamentals and/or turf.

In 16 well-organized, genus-specific chapters (*Agrostis*, *Bromus*, *Cenchrus*, *Cynodon*, *Dactylis*, *Dichanthium*, *Eleusine*, *Eragrostis*, *Festuca*, *Lolium*, *Panicum*, *Paspalum*, *Pennisetum*, *Phleum*, *Setaria* and *Zoysia*), the 48 eminent authors nicely summarize available information for each genus in tables, text and figures, with accompanying references. For each genus, the chapters comprehensively review the status, origin, distribution, morphology, cytology, genetic diversity and available genetic and genomic resources of wild crop relatives, and relate this to available information on their domesticated counterparts. Evolution, phylogenetic relationships, genetic erosion and conservation efforts, potential for domestication and exploitation in crop improvement are all addressed. Individual chapters are well presented, although several would have benefited from more thorough copy-editing.

While the series can be recommended to public- and private-sector agricultural research institutions globally, this specific book will also be greatly appreciated by graduate students and research scientists concerned with genetic resource conservation and improvement of small-seeded grasses cultivated as cereals, forages, ornamentals and/or turf crops, and those dealing with control of related weeds.

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