

Quality Declared Seed System: FAO Plant Production and Protection Paper 185. Anonymous. Rome: Food and Agriculture Organization of the United Nations (2006), pp. 243, \$40.00. ISBN 92-5-105510-6. doi:10.1017/S0014479706314901

Many countries have highly developed systems for the certification and enforcement of seed quality. For countries that do not yet have, or want such systems, the FAO *Quality Declared Seed System* is a practical alternative. In some countries a 'fully fledged system' may not be appropriate, cost effective or exist for some crops. The responsibility for assuring quality is put on to the registered seed producers but with official check testing of crops and seed.

The panel of experts assembled by FAO have updated an earlier publication and provided procedures for over 90 species/crops. The first 17 pages of the publication outline the system; this is followed by the procedures, which briefly outline field inspection techniques as well as providing minimum field and laboratory standards for each species. References are given to organizations that provide detailed field inspection and seed testing methods. The FAO minimum requirements for varietal purity, analytical purity, germination and seed moisture content are usefully tabulated (Annex 3). In comparison to many existing country systems the FAO minimum standards are easier to attain; indeed this is one of the aims of the FAO system.

The FAO publication is a useful reference document for countries without highly developed regulatory systems. It also provides relief organizations with an overview of seed system requirements and thereby helps ensure quality assured seed is available when it is needed.

Steve K. Jones

Fruits for the Future 5. Annona Species. By A. C. de Q. Pinto, M. C. R. Cordeiro, S. R. M. de Andrade, F. R. Ferreira, H. A. de C. Figueiras, R. E. Alves and D. I. Kinpara. Southampton: Centre for Underutilised Crops: (2005), pp. 263, free on request to national scientists of developing countries. ISBN 0854327651. doi:10.1017/S0014479706324908

The genus *Annona* consists of 119 species of tropical shrubs and small trees, originating from (mainly) America and Africa. This multi-author book focuses on five of the under-utilized species which are cultivated for their fruit and have been chosen on the basis of the potential for expanding their use. The purpose of this book is to compile information systematically, for use by 'students, research and development specialists, annona farmers and others'. An accompanying extension manual is planned for the use of small-scale producers.

Overall, the knowledgeable authors achieve their objective comprehensibly and with a readable text, although chapters have been translated into English. Chapters include the complex taxonomy and descriptions of the botany of the five species, origin and distribution with major and minor production areas. The useful properties of the plants are described and include natural products with pesticidal and medicinal applications as well as fresh and processed fruit (health-giving pulp). The important genetic resources of the genus and their improvement/plant breeding are covered. A major part of the book is devoted to the agronomy (all species together), harvesting, post-harvest handling and processing with much 'how-to' information.

The book contains an impressive reference list (more than 350 citations), tables of the chemicals found (and their medicinal properties) and the institutions and individuals involved in research. It is very practical and provides guidance to those interested in the production of these five *Annona* species. However, the supporting science is well treated and thus this book is recommended to all those with an interest in annonas, tropical fruits and natural products.

Richard Wilkins

Fruits for the Future 7. Njjaansang, Rigidendron hendelotii. By Z. Tchoundjen and A. Atangana. Southampton, UK: Southampton Centre for Underutilised Crops (2006), pp. 74, available free on request to national scientists of developing countries. ISBN 0854328424. doi:10.1017/S0014479706334904

The value of many trees and other species to the indigenous people in the West African rain forest is slowly becoming known to the outside world, and with it their potential as future crops. At the same time, the area of forests and woodlands is shrinking with changes in land use.

The 12 chapters of this monograph summarize indigenous and scientific knowledge of *Ricinodendron hendelotii*, a little known but locally valued species that is dispersed over a wide geographic area. They give a detailed

description of the botany and agriculture of the species. They illustrate how the native uses of the plant range through numerous remedies in traditional medicine, as a spice, as food with about 50 % oil in the kernel, including a high level of linoleic acid and as a source of cooking oil. The residual flour is high in essential amino acids, making it nutritionally useful. The oil is potentially suitable for soap and varnish making. Cuttings are easy to root, so a simple mass selection programme should lead to rapid improvement of highly heritable traits, although dioecy will be a constraint. There are 80 entries in the bibliography, together with eight well-chosen colour plates and three line drawings. Altogether, this is a fine introduction to the species for anyone who needs to know more about it.

Rob Lockwood

Tomatoes. Crop Production in Horticulture 13. Edited by E. Heuvelink. Wallingford, UK: CABI Publishing (2005), pp. 339, £35.00 (paperback). ISBN 0-85199-396-6. doi:10.1017/S0014479706344900

Targeting both the advanced student and professionals in horticulture, this book sets out in the Preface to update the 'Tomato Bible' first published in 1986 (Atherton and Rudich). In the intervening 20 years much has been added to our knowledge of this model crop and in its 10 chapters this book achieves the objective of updating the reader in the underlying scientific principles of the biology and production of tomatoes.

Following a useful introduction to and overview of the tomato industry, chapters on Genetics and Breeding, Developmental Processes, Crop Growth and Yield, refer widely to current research, although in order to remain concise the editor and author of these chapters make full use of earlier reviews and publications, such as chapters 4 and 5 in Atherton and Rudich. This format works well. The field of genomics and the 'explosion' of activity in this area are particularly well reviewed and informative.

The importance of this crop, its global distribution and diverse production methods could lead to some of the subsequent chapters, such as those on irrigation and fertilization, being considered rather general in nature. However, these chapters successfully compare and contrast the field scale, protected or otherwise, with the intensive soil-less production of Europe, Canada and the USA. On crop protection, economically important viruses such as Pepino Mosaic Virus could have received more detailed coverage.

The concluding chapters 8 to 10, and particularly 9, Greenhouse Tomato Production, highlight the rapidly changing face of the industry and the latest technology, from the use of artificial lighting and the 'closed' greenhouse concept, that will be deployed to secure this sector of the industry's future.

David J. Hand

CRC World Dictionary of Grasses; Common Names, Scientific Names, Eponyms, Synonyms and Etymology. Three Volumes. By U. Quatrocchi. Boca Raton, FL, USA: CRC/Taylor Francis Group (2006), pp. 2383, £335.00. ISBN 0-8493-1303-1. doi:10.1017/S0014479706354907

Producing a dictionary of the greatest family of plants is an ambitious undertaking: this publication details about 800 genera of grasses, including the bamboos, and thousands of species. Genera and species are listed alphabetically according to the currently accepted name: previous names are placed in synonymy; there seems to be duplication in the nomenclature of the cultivated species of *Hordeum* and *Triticum*. The etymology of generic names is supplied; for species, as appropriate, eponyms and less obvious toponyms are explained.

A brief botanical description of the genus and often of the species follows. Bibliographic references are listed for each entry; there is also a bibliography for the whole book. The short notes on geographical distribution do not always agree with the text which follows: for example, the distribution of *Agropyron repens* is given as Kashmir and West Tibet, but common names are given in English, French as well as from Morocco and Latin America, not India and China as the distribution would suggest. The notes on ecological adaptation and uses of many species are so condensed that some appear contradictory and most are fragmentary. Far too many common names are given – half a page of them for maize in Nigeria. Some are listed by language, others by country. Coverage is uneven; Russia and Central Asia are ignored. Those in languages and regions known to the reviewer are often unfamiliar; many Arabic names are merely differing transliterations. Scientific names common in older literature, and many still in frequent use, are put into synonymy. Looking up a species which is not a main entry is laborious; cross-referencing such a multitude of names would be impossible so it is necessary to sift through the genus until the grass is found. The same grass sometimes appears in two genera, leaving the reader a choice; examples include: *Agropyron repens* and *Elytrigia repens*; *Diplachne fusca* and *Leptochloa*