

management at the national level have not been attempted in any serious way. This book is a pioneering attempt.

The focus is on the mechanisms of influence through which overlapping regimes, comprising: the Convention on Biological Diversity (CBD), the World Trade Organization Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), the Convention of the Union for the Protection of New Varieties of Plants (UPOV) and the International Undertaking and the International Treaty on PGRFA (IU/ITPGRFA), transpose into domestic policies and goal achievements. The book seeks to grasp, through an analytical model, the challenges facing developing countries that have only limited capacity to respond.

The content is laid out in the form of a research study: from the descriptions of PGRFA and the regimes in question, to the analytical framework for analysing the driving force behind their development and their mechanisms of influence, and to testing them in case studies from the Philippines. The book concludes with a serious warning that the mainly negative consequences of the regimes are leading to an emerging 'anti-commons tragedy': a situation where multiple actors have possibilities to exclude each other from the use of plant genetic resources.

This meticulously researched book makes a significant contribution to our understanding of the effectiveness of the international regimes on PGRFA management, and why further research is urgently needed to strengthen international governance for the maintenance and use of plant genetic resources.

Amir Kassam

Growing Vegetables for Home and Market. FAO Diversification booklet 11. Rome: FAO (2009), pp. 91, US\$18.00. ISBN 978-92-5-061398-8. doi:10.1017/S0014479709007637

This succinct booklet by FAO is one of a series aimed mainly at people who provide advisory, business and technical support services to resource-poor, small-scale farmers and local communities in low- and middle-income countries, including policy-makers and programme managers in government and non-governmental organizations. Vegetables provide an opportunity to move away from home gardens and subsistence farming towards cash crop farming, whilst still retaining an important nutritional role at the family level.

Augmented with black and white photographs of vegetable production and marketing in different countries it sensibly emphasizes the need, at least initially, for small-scale farmers to concentrate on the 'easy-to-grow' vegetables – onions, shallots, potatoes and sweet potatoes. Tomatoes and asparagus fall into the category of 'speciality' crops, whilst cucumbers, sweet peppers, lettuce and tomatoes are deemed to be best for greenhouse production. Greenhouses vary from simple to highly complex structures with plastic film a popular replacement for glass.

FAO stresses that the booklet should not be seen as a technical 'how-to-do it' publication but it does cover a wide range of relevant topics, emphasizing pitfalls as well as potential in different environments. A list of additional sources of information, technical support and a number of relevant web-site addresses enables readers to seek more information. There are also a number of boxes with case studies.

I found it an enjoyable read and a useful publication for those involved in or interested in vegetable production and marketing.

N. L. Innes

Handbook of New Technologies for Genetic Improvement of Legumes. Edited by P. B. Kirti. Boca Raton, FL, USA: CRC Press/Taylor and Francis Group (2008), pp. 481, US\$169.95. ISBN 978-1-56022-952-0. doi:10.1017/S0014479709007649

Many of the world's most important food legumes are grown in arid and semi-arid regions of Africa and Asia, where crop productivity is hampered by biotic and abiotic stresses. In recent years biotechnology approaches, mainly genetic engineering and genomics have shown a great potential for tackling these stress constraints and improving crop productivity. However, many food legumes (except soyabean) have not benefited from biotechnology approaches as they have either been branded as recalcitrant to *in vitro* regeneration, an important component of genetic engineering, or suffer from low levels of genetic polymorphism and a paucity of molecular markers – a critical factor to develop genetic and QTL maps. Therefore publication of *Handbook of New Technologies for Genetic Improvement of Legumes* is a very timely and invaluable contribution to legume crops.

A wide range of topics is covered in 37 chapters of this book by about 100 eminent scientists from about a dozen countries. The editor is to be congratulated for bringing together international leaders in legume biotechnology. Most chapters deal with transformation protocols and genetic engineering topics. In my opinion, genomics have not been adequately covered, but it is difficult to cover all the topics of legume biotechnology in one volume. The subject index at the end of the book is a big plus, as it is easy to browse a topic of interest.

This volume will serve as a good reference book for the legume community in general and young researchers who are entering the field of legume biotechnology to understand the current status of new technologies for the genetic improvement of legumes.

Rajeev Varshney

Health Benefits of Organic Food. Effects of the Environment. Edited by I. Givens, S. Baxter, A. M. Minihane and E. Shaw. Wallingford, UK: CABI Publishing (2008), pp. 319, £85.00. ISBN 978-1-84593-459-0 doi:10.1017/S0014479709007650

This book is the result of a multidisciplinary workshop, which met in 2008 to address three key questions: Are there quantifiable effects of organic rather than conventional produced food on human health? How might the environment impact on these possible health benefits? How do the public perceive these benefits?

As such it is an interesting and timely snapshot of our understanding of these issues with well-written articles from respected authors in many areas relevant to human health ranging from the effect of n-3 fatty acids to dietary flavonoids to selenium (both as a benefit and a threat) to contaminants in foods.

I found Stockdale and Watson's article describing what constitutes organic farming very interesting and of great value, especially for students, as a summation of the current views. Also, the excellent articles on the effects of flavonoids on human health (Spencer *et al.*) and on the effects of the environment on the regulation of flavonoid accumulation (Jenkins *et al.*) are of immediate and long-lasting value for my own research. Although the book is necessarily limited by the set-up of the original workshop, the choice of authors and the breadth of topics explored are excellent. As such, I would recommend this book to research institutes and university departments involved in relevant research fields. I have one slight quibble. The title surely requires a question mark as the overwhelming message from the contributors is that there is little current evidence for the assumption that organically produced food is healthier than conventionally produced foods.

Gordon J. McDougall

Innovation Africa. Enriching Farmers' Livelihoods. Edited by P. C. Sanginga, A. Waters-Bayer, S. Kaaria, J. Njuki and C. Wettasinha. London: Earthscan (2009), pp. 409, £29.95 (paperback). ISBN 978-1-84407-672-7. doi:10.1017/S0014479709007662

Innovation deals with interactions among all stakeholders. It is highlighted in this book about new developments in agricultural innovation systems. Contributions by some 100 authors of 25 chapters trace the conceptual and methodological roots of the innovation systems thinking, examine various forms of social capital in agricultural innovation systems, discuss institutional change, policy and indigenous innovation. The chapters originate from selected papers from an international symposium in Kampala, Uganda, in 2006. One chapter provides a comprehensive overview of how the concept of innovation has developed over the last half century. Contrasting the linear transfer of technology model, the innovation systems research recognizes the complexities by focusing on social and economic components.

The papers present progress and weaknesses of pilot-interventions, mainly from Africa. Useful details describe participatory processes and action research, farmer innovators, empowerment, improved social status of farmers and how the new concept can enrich livelihoods. There is little information on how the innovation systems approach works at larger scales. Some contributions confine themselves to interactions between only two or three groups of stakeholders. Less attention is devoted to the potential of the private sector and sustainability issues. The book also carries messages on how formal training programmes can be modified. The new approach requires interdisciplinary, intercultural teams with social skills, personal ethos and a culture of reflection. Another message calls for general changes in agricultural research in strengthening rural innovation capacity. Implications for policy change might have been spelled out more explicitly. The book is strongly recommended to agricultural scientists, university teachers, agricultural research managers and extension staff.

Bo M. I. Bengtsson