

Luo and Zhou take the reader through a well-organized course on soil respiration that starts with the basic processes of CO<sub>2</sub> production in and transport out of the soil. From there they move on to describe the regulating factors. This is the strongest part of the book. In three chapters an excellent overview about basic controlling factors and their interactions, spatial and temporal variability and acclimation and response to disturbance is given. The final part introduces technical approaches for the measurement and integration techniques such as models, including another excellent chapter about partitioning of different sources of soil respiration.

The book clearly explains its subject and gains didactical value from a high quality selection of figures – most of them taken from recent publications – and an excellent compendium of literature that invites the reader to go even deeper into the subject.

Werner L. Kutsch

*Introduction to Agroecology. Principles and Practices.* By P. A. Wojtkowski. London: Haworth Press (2006), pp. 403, US\$79.95. ISBN 13-978-1-56022-316-0. doi:10.1017/S001447970700508X

There is a desperate need for an authoritative text on agroecology that meets the needs of researchers, teachers and students. For this, we need a rigorous basis for evaluating natural resource use efficiencies in different agroecosystems and how biotic, human and economic factors impact on these basic efficiencies. This book goes some but not all the way to answering this need.

Early chapters cover spatial and temporal factors in the structure of agroecosystems, threats to productivity, and insect and disease factors. Agroecological concepts are then introduced and applied to monocultures, intercropping and agroforestry. Subsequent chapters consider land modification technologies, social, community and economic factors and the design of agroecosystems and landscapes. The last of the 18 chapters provides a brief summary. This is followed by 45 pages of notes that provide an annotated bibliography and commentary on each chapter. To support the main text, a complementary instructor's manual provides an additional 82 pages of questions, homework and projects to guide the teacher.

The book is suitable for college and university students unfamiliar with agroecological principles. In his preamble, the author describes the book as an advanced text for beginners which is about right. There is clearly a wealth of personal knowledge and experience within the book to support theoretical aspects, which rely heavily on existing approaches to complex vegetation systems. Whilst the book provides a readable and accessible support to existing texts and a very useful introductory resource for teachers and students, the search for a novel, quantitative approach on which to evaluate agroecosystems goes on.

Sayed Azam-Ali

*Organic Agriculture. A Global Perspective.* Edited by P. Kristiansen, A. Taji and J. Reganold. Wallingford, UK: CABI Publishing (2006), pp. 449, £75.00. ISBN 1-845931-69-6. doi:10.1017/S0014479707005091

This book has global ambitions in more ways than one. It attempts to cover organic farming globally from a geographical perspective but also from a functional and philosophical perspective, covering as it does not only the technical and scientific aspects of organic farming but also certification issues, public good benefits, research, education and philosophical challenges in organic farming. It succeeds better with the latter aim than with the former.

Attempting to write a global geographical perspective on organic agriculture is a major challenge. To do this, the editors have called on the expertise of 51 authors from 13 countries, although the majority of the authors are from Australia, Denmark, Germany, Netherlands and USA. Thus, whilst some chapters make mention of African and Asian organic farming, inevitably most of the material has a European, North American or Australian focus.

Nevertheless the book will provide a very useful resource for students and academics. There are many excellent reviews, particularly the chapters on crop agronomy, plant breeding, animal health and welfare, environmental impact and food quality. The 'Special Topic' chapters provide interesting philosophical discussions (e.g. on contradictions in the principles of organic farming, tillage, biodynamic agriculture, and participative extension in Ghana). The chapter on understanding the market (which omits much useful market information on sales of different food types, points of entry for new organic consumers, etc.) and that on

soil fertility (which has very little discussion on the importance of nutrient re-cycling within the farm) were disappointing to this reviewer.

David Younie

*Going Organic: Mobilising Networks for Environmentally Responsible Food Production.* By S. Lockie, K. Lyons, G. Lawrence and D. Halpin. Wallingford, UK: CAB International (2006), pp. 256, £49.95. ISBN 1-84593-1342-7. doi:10.1017/S0014479707005108

This book sets out to examine what is really going on in the organic sector and to explore whether the experiences can be utilized to transform the way in which we distribute and consume food. It covers the whole organic food chain including global organic markets, production, why consumers buy organic food, coverage in the media, and the development of standards and regulations. It critically examines with a fresh perspective the concepts of 'conventionalisation' and 'bi-furication' that have dominated the social science literature on this subject in the last few years.

The authors come from 'down under' where the sector developed largely without government intervention and they deal with a number of common misconceptions about consumers and producers of organic food. They are social scientists and encourage the reader not to simply blame newcomers and large-scale corporations for any undesirable developments associated with recent growth. A number of challenges that the organic industry faces in coming to terms with recent growth are identified – for example the focus on input restriction and the absence of social values of many standards – as well as strategies how to deal with it. The book is based on material from Australia, but the authors demonstrate familiarity with developments in other continents and have extensively used references including many very recent publications. The book is well written as one book rather than a collection of papers and provides an interesting introduction to social and political aspects of organic farming, both for newcomers and those that are more familiar with the topic.

Susanne Padel

*Agricultural Sustainability: Principles, Processes and Prospects.* By S. Raman. Binghamton, NY, USA: Food Products Press (2006), pp. 494, US\$69.95 (paperback). ISBN-13: 978-1-56022-310-1. doi:10.1017/S001447970700511X

Two decades after the Brundtland Commission wrote their remarkably enduring definition for sustainable development, sustainability in agriculture has become a norm. It is easy to say that everyone is in favour. Who would argue for unsustainable systems? Yet such a widely used term needs clear principles, concepts and exemplars, as well as understanding of contradictions and trade-offs. This is a largely descriptive book that addresses some of these concerns well. The early chapters cover the history of agriculture and the contextual nature of agricultural sustainability. Part II is thematic, with separate chapters focusing on natural resources, land management, soils, water management, biodiversity, energy and measurement indices and frameworks. Part III then contains four chapters that focus on global challenges, rural livelihoods and future sustainability. There is little to disagree with here – the structure, contents and presentation are easy to follow.

But there are problems. This breaking apart of sustainability into sectors is rather conventional and lacks synthesis and critical analysis. There are few cases where the complexities of restoring or developing sustainable systems are explored with human detail or scale. Even more importantly, for a book published in 2006, it is a surprise to see almost no references after 2002. Important recent literature is therefore missing, and some debates suffer. Important international initiatives such as the Millennium Ecosystem Assessment are missed, as well as debates on the values of environmental goods and services. This book is a collection that stands more as a summary of ideas to the turn of the century rather than of potential futures in the 21st century.

Jules Pretty OBE

*Handbook of Sustainable Weed Management.* Edited by H. P. Singh, D. R. Batish and R. K. Kohli. New York: Haworth Press (2006), pp. 892, US\$99.95 (hardback), US\$139.95. (hardback). ISBN 13: 978-1-56022-957-5/ISBN 10: 1-56022-957-8. doi:10.1017/S0014479707005121

This substantial text comprises 25 chapters, by 49 authors, and includes topics ranging from weed-seed predation to weed-suppressive rice cultivars, from bioherbicides to herbicide-resistant crops, and from the management of weeds in forestry, to turf grass and pastures. There are four chapters on cover crops in different cropping systems