Soil and Water Conservation Handbook. By P. W. Unger. London: Haworth Food and Agricultural Products Press (2006), pp. 248, US $29.95. ISBN-10-1-56022-330-8. doi:10.1017/S0014479707005054

Paul Unger has produced a book which, whilst it is not one you will sit down and read from cover to cover, is certainly one which anyone working in the field of soil and water conservation will want to keep handy and use frequently. Essentially the book is a very practical glossary of some 700-plus terms in the area of soil and water conservation. These terms are grouped together under broad headings. In some cases there are entries which cover a single subject, for example there are six lines on infiltrability. In other cases there are broad entries with embedded sections. For example, the entry on Climate includes sections on Climate Change, Characterisation of Regions using the Ratio of Precipitation to Potential Evapotranspiration, Drought, Flash Floods, Growing Period, Temperature, Weather, Wind and Rain/Other Precipitation including notes on intensity, kinetic energy, probability, etc. Similarly the section on Cropping Systems/Sequences details a wide range of topics including Alley Cropping, Continual Cropping, Fallowing, Intercropping, Opportunity Cropping, Shifting Cultivation and Strip Crop Farming. The entries are clear and concise and provide a practical explanation of the terms without lapsing into substantial amounts of technical detail, thereby meeting the book's target of providing information in a practical, non-technical format. Paul Unger brings his lengthy practical experience in the field to this text, both in terms of the selection of topics to be included and in the clear practical content of the descriptions. It should greatly assist communication between field scientists, land users, and policy makers. I recommend this text as a most useful companion for those working in the broad field of soil and water conservation.

Stephen Nortcliff

Soil Erosion and Sediment Redistribution in River Catchments. Edited by P. N. Owens and A. J. Collins. Wallingford, UK: CAB International (2006), pp. 352, £75.00. ISBN 978-0-85199-050-7. doi:10.1017/S0014479707005066

The editors provide a comprehensive overview of recent developments and promising technologies in erosion research. Although many papers are UK-focused the book is larded with examples from around the globe. Articles are grouped in three sections: measurement, modelling and management. Each section starts with a clear overview and ends with a concluding chapter. The general introduction is a mixture of well-known facts and recent developments, ranging from plot measurements to fingerprinting. In fact, the book is multi-dimensional in many respects; regarding scale, from point data to catchment data, regarding population density, from undisturbed forests to inner-cities, and regarding erosion, from source to sink. The first section handles erosion measurement, including the latest developments in the area of fingerprinting and sediment budgeting. Fingerprinting can detect erosion sources, which may lead to targeted protection of vulnerable areas. The second section provides an excellent overview of papers on modelling, where the author pleads, very sensibly, for the use of worst-case scenarios rather than design storms. The third section on erosion management discusses the old dilemma: who is to blame for accelerated erosion? Interventions should be rooted in the society, like the Australian land care approach. Without early involvement of stakeholders in the decision-making process any development project is doomed to fail. The editors state in the concluding chapter that the time has come to return to collection and use of databases that closely match the output of soil erosion models. The link between old and new science is crucial for the development of the discipline. This book is recommended to a wide range of environmental scientists; it gives a clear picture of the state of the art as well as the way to go forward.

Paul Kiepe

Soil Respiration and the Environment. By Y. Luo and X. Zhuo. Burlington, MA, and San Diego, CA, USA: Academic Press (2006), pp. 320, £39.99. ISBN-10: 0-12-088782-7. doi:10.1017/S0014479707005078

It might be a risk to write a book only on soil respiration, but not the broader context of soil carbon dynamics, particularly, if the motivation was to write this book in a context of climate change, and to target not only researchers but also non-scientists that are involved in political decision making, carbon trading, agriculture, or forestry. However, the authors of this book have taken the risk and succeeded. They have provided a detailed and informational book about one of the most crucial, but also of the less understood, processes in the carbon cycle of single ecosystems as well as the whole planet.

Luo and Zhou take the reader through a well-organized course on soil respiration that starts with the basic processes of CO_2 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. Khristiansen, 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