

Expl Agric. (2013), volume 49 (2), © Cambridge University Press 2013
doi:10.1017/S001447971200138X

Ingrained. A Human Bio-geography of Wheat. By L. Head, J. Atchison and A. Gates. Farnham, Surrey, UK: Ashgate Publishing (2012), pp. 246, £55.00. ISBN 9781409437871.

An interesting approach to a broad and complex subject, *Ingrained* examines the cultural, spatial and temporal relationships between man and his largest primary food source. Although primarily concerned with Australian environments, producers, processors, consumers and markets, the authors successfully integrate local considerations into a global perspective. From the first page, the message of how important the entire wheat crop (not just the grain) has become in shaping our everyday lives is vividly and skilfully expressed.

From the origins of modern wheat in the Middle East some 7500 years ago, through to modern plant breeding technologies, the writers describe how the wheat plant has evolved and adapted to provide a close fit with man's environment: from the creation of modern wheat varieties; through farming practices; to food industry transformations, agronomic, nutritional, cultural and financial issues are addressed equally. Once the reader has got used to a slightly quirky writing style that introduces new words to the English language to help illustrate the writers' concepts, reading *Ingrained* becomes an enjoyable experience.

Overall, the book lies somewhere between a highly educational text and an intriguing work of non-fiction. It provides a fascinating insight into the manner in which wheat is integrated into our everyday lives. It is recommended to any member of the public with an interest in the role of wheat in society – and how it got there – as well as to the many industry professionals that would benefit from a broader knowledge of the manner in which the modern day wheat industry has evolved.

Frank Curtis

Expl Agric. (2013), volume 49 (2), © Cambridge University Press 2012
doi:10.1017/S0014479712001123

Sustainable Development, Evaluation and Policy Making. Theory, Practice and Quality Assurance. Edited by A. von Raggamby and F. Rubik. Cheltenham, UK: Edward Elgar (2012), pp. 336, £80.00. ISBN 978-085793-254-9.

In these economically straitened times, it is essential that a thorough critical evaluation of projects is undertaken to justify their continued existence and funding. Nowhere is this more relevant than the area of sustainable development. The subtitle of this book *Theory, Practice and Quality Assurance* gives a clear outline of its compass. This well-structured book is a worthwhile addition to the growing literature in this area, comprising a series of chapters covering a wide gamut of relevant material. The book was developed as part of a German-funded European wide research project – Evaluating Policies for Sustainable Development (EPOS). It constitutes the core of a conference held to promote key aspects of the project.

The book is structured into five useful sections. The first deals with the Perception of Sustainability Problems, followed by a section, which presents contributions on Evaluation and Assessment studies related to Policy Formulation. The third part is dedicated to Policy Implementation in different areas. This is followed by a section on Policy Reformulation and covers monitoring and quality improvement schemes. The fifth and final part covers the area of the Quality of Evaluations.

This thought-provoking and wide-ranging handbook covers a very wide range of multidisciplinary approaches to sustainable development and is a worthy addition to the bookshelf of those working in this area, whether they be evaluators, researchers, students or indeed the policy makers themselves.

Keith Dawson

Expl Agric. (2013), volume 49 (2), © Cambridge University Press 2012
doi:10.1017/S0014479712001135

An Introduction to Sustainable Development, 4th edn. By J. A. Elliott. Abingdon, Oxon, UK: Routledge/Taylor and Francis Group (2013), pp. 361, £25.99. ISBN 978-0-415-59072-3.

This book is a joy to read. It describes without bias the myriad factors influencing our current understanding of sustainable development. It is well illustrated with figures, tables and boxes. There is an index and a comprehensive list of references. There is no list of abbreviations.

There are six chapters each preceded by a list of learning outcomes. The first chapter is concerned with definitions of sustainable development. Throughout the book this is explored with particular reference to developing countries. In the second chapter the contemporary global challenges of sustainable development are considered. There are many interesting examples given, including the processing of tar sands in Canada and concerns around water in Pakistan. In the third chapter the actions taken by a number of institutions and organisations to promote more sustainable development are identified. The environmental agenda of the World Bank is given particular emphasis. In Chapters 4 and 5, the challenges of sustainable development in the developing world are considered in both rural and urban contexts. Again, there are many interesting examples, including a description of rural–urban migration in Indonesia, and an assessment of the challenges of slum development in Morocco. In the sixth chapter, progress made towards sustainable development is considered through the field of sustainable development indicators. It is pointed out that many countries are developing and using indicators to monitor their commitments and progress towards sustainable development. Examples of UK government strategy indicators are listed as greenhouse gas emissions, household energy use and road transport.

Carol Duffus

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doi:10.1017/S0014479712001391

Seed Testing: Principles and Practices. Edited by S. G. Elias, L. O. Kopeland, M. S. McDonald and R. Z. Baalbaki. East Lansing, Michigan, USA: Michigan State University Press (2012), pp. 354, £160.00. ISBN 978-1-61186-039-9.

This large-format (almost A4) book covers all the traditional seed quality tests and also the more modern (such as DNA-marker techniques). The coverage of seed testing practices is comprehensive, with a concluding chapter on statistical applications to seed testing (with 22 tables of tolerances etc.). The USA-based authors combine a wealth of research and practical experience (several being Professors Emeritus) in seed science relating to seed technology and there is considerable evidence of a high degree of care and attention by the authors to ensure that the book provides clear, comprehensive resource material to assist in the training of seed analysts and in the education of staff across the seed industry. There are copious clear, colourful and helpful illustrations, diagrams and photographs, which aid both comprehension and also consistent decision-making by seed technologists. One example is the many pages of tetrazolium test staining patterns, with seeds drawn larger than life size. Similarly, there are a good number of seedling drawings to aid the identification of normal and abnormal seedling development. The book is likely to prove essential to trainee seed analysts and seed technologists. The price appears high, but should be considered in the context of the costs of training professional seed analysts.

Richard Ellis

Expl Agric. (2013), volume 49 (2), © Cambridge University Press 2012

doi:10.1017/S0014479712001147

Handbook of Bioenergy Crop Plants. Edited by C. Kole, C. P. Joshi and D. R. Shonnard. Boca Raton, FL: CRC Press (2012), pp. 824, £127.00. ISBN 9781439816844.

This book claims to be ‘the first of its kind’, a ‘unique and exhaustive compilation’ about energy crops. It is presented in three untitled sections, the first of which deals with ‘general concepts and concerns’ encompassing genetic improvement, the use of model plants to understand cell wall recalcitrance, fuel production, value chains, life cycle assessment (LCA) and ecological issues; the second covers ‘commercialised energy crops’, including oil, sugar, starch and lignocellulosic crops, from annual food crops to trees. The final section consists of ‘emerging crops or their groups’, including the model plant *Brachypodium*, and a chapter on organic farm waste and municipal sludge.

The book is indeed extensive, at 824 pages, with some chapters containing excellent contributions to their individual areas. However, the title is misleading, given the inclusion of model plants, waste streams and several chapters on engineering, and the layout is somewhat confusing. There is no overall introduction or conclusion, and no apparent flow to the chapters. While the content is extremely diverse, it is far from exhaustive; the