Expl Agric. (2009), volume 45, © *Cambridge University Press 2009*
doi:10.1017/S0014479709990366

Water and Cereals in Drylands. By P. Koohafkan and B. A. Stewart. London: Earthscan (2008), pp. 110. £27.95. ISBN 978-1-84407-708-3.

This book is a compilation of information and ideas by two people almost uniquely qualified to write on the topic – P. Koohafkan from the FAO in Rome and B. A. Stewart from the Dryland Research Institute in Texas, USA. It is both the result of long years of experience thinking about the topic and a distillation of discussion and interactions with scientists and other professionals grappling with the problems associated with food production in drylands. I see the book as written for people who, while focused on their day-to-day interests, occasionally need to lift their eyes to see the larger picture of the importance of agriculture to the almost one-third of the world's population living in what are, by the widest definition, drylands.

The book is assembled into five chapters dealing with defining the topic, the nature of cereal production through the practicality of ways to enhance production, placing the topic in a socio-economic context and, finally, an examination of the wider environmental issues. The authors obviously spent considerable effort assembling all the information involved. There are, in addition to the chapters, four annexes packed with definitions, data and maps. Each chapter has its own tables, figures and plates, supported by boxes containing case studies giving practical examples illustrating the lines of discussion. All these are carefully listed along with a list of acronyms and supported by a comprehensive index.

Almost 75% of the references cited are from government or agency reports that often do not appear in the scientific literature. This major assemblage of information delivers to the reader the ability to understand crop and soil science in a wider context, and as such would be well used to inform the discussion in scientific papers. It is in this way that I have already used the book.

Blair M. McKenzie

Expl Agric. (2009), volume 45, © *Cambridge University Press 2009*
doi:10.1017/S0014479709990378

Plant Genotyping II. SNP Technology. Edited by R. J. Henry. Wallingford, UK: CABI Publishing (2008), pp. 285, £65.00. ISBN 978-1-84593-382-1.

Genotyping provides a method to detect and estimate genetic diversity between and within species. Singular nucleotide polymorphisms (SNPs) are the most common form of genetic variation and form the basis of a diverse range of genotyping methods. This book is the result of a workshop to review development in SNP genotyping for plants and builds on the 2001 publication *Plant Genotyping: The DNA Fingerprinting of Plants*.

A total of 26 authors contributed to 15 chapters with a strong bias to the southern hemisphere. The chapters provide a good overall account of the discovery and methods for detection of SNPs and how these approaches are being applied in plant genotyping.

The chapter 'SNPs and their use in maize', in which the authors highlight the power of next generation sequencing technologies, is a particularly authoritative description of the commercial drivers for SNP deployment in maize breeding.

The Mass ARRAY system described by Irwin is based on mass spectrometry, a technology particularly well suited to distinguishing gene paralogues, a common feature of complex, polyploidy plant genomes.

The chapter on marker discovery in pasture plant improvement is particularly welcome, given the global significance of pasture species. The breeding systems of ryegrass (*Lolium perenne*) and white clover (*Trifolium repens*) present many challenges and opportunities for SNP detection and deployment in these species.

Unfortunately other chapters are at best peripheral to the main theme of SNP genotyping and detract from an otherwise useful account of this topic, which will be the cornerstone of future important genome-based approaches for plant breeding.

Wayne Powell