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*Maize Agroecosystem: Nutrient Dynamics and Productivity.* By K. R. Krishna. Oakville, CA, USA: Apple Academic Press Inc. (2013), pp. 341, £95.00. ISBN 978-1-926895-08-6.

This book is useful to many scientists worldwide who have an interest in maize production. In many respects, it is a major challenge to bring together coherently all the information on one of the world's most widely grown crops, particularly given the many tens of thousands of articles published on the subject. The author has attempted to bring together the agronomic/management aspects of maize production with a fundamental knowledge of how nutrients are cycled in plant–soil–microbial systems. The problem with a single authored book is that it is difficult for the author to have an intimate knowledge of all the subjects needed to evaluate critically the subject matter available. Consequently, some aspects are reviewed much more extensively than others whilst at other times the discussion is lacking. Although the book does contain a wealth of information, it is let down by a range of issues. Firstly, the text contains numerous typographical errors. Secondly, many information-rich paragraphs contain no references or lack clarity. Thirdly, many of the figures are poorly presented. My other issue with the book is that it doesn't really identify critical knowledge gaps or suggest the future direction for maize agronomy. In terms of enhancing food security, water use efficiency, carbon sequestration, etc., it is vital that we improve current management regimes. A focused and integrated discussion of these issues would have brought the book to a logical conclusion. Despite its shortcomings, the book does contain lots of valuable information and makes a suitable crop-specific companion for Horst Marschner's classic work *Mineral Nutrition of Higher Plants*. Academic Press (2011) ISBN 978-0123849052.

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*Plant Salt Tolerance: Materials and Methods.* Edited by S. Shabala and T. A. Cuin. New York, Heidelberg, Dordrecht, London: Humana Press (2012), pp. 432, £109.99. ISBN978-1-61779-985-3.

This edited book describes a wide range of modern techniques that can be used to help understand the molecular and ionic basis of salinity tolerance in plants and to study mechanisms of salt stress signalling in plants. The text is a very comprehensive account of the practical implementation of relevant methods and is split into sections outlining: (1) microelectrode and other techniques for the study of ionic relations and transport processes, (2) imaging techniques from various microscopic techniques to thermal imaging of whole plants, (3) biochemical tools from metabolomics to the assay of relevant materials such as Reactive Oxygen Species, antioxidants and ABA, (4) molecular techniques for cell sorting, transformation and transcriptomics to the use of Marker Assisted Selection and (5) a short section on other techniques such as the use of isotope techniques, trait dissection and measurement of soil salinity.

In many ways, this is a rather unusual book with its very clear emphasis on the detailed description of the current technologies and especially in the level of detail that is provided on the practical aspects of how they can be used to answer questions relating to salt tolerance and breeding of more tolerant varieties. All the articles are written by experts in the relevant field and mostly provide excellent step-by-step guides to use of the techniques described. The detailed protocols provided will be invaluable for researchers in the field and as a source of training materials for young scientists.

Hamlyn Jones

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*Genomics Applications for the Developing World: Advances in Microbial Ecology.* By K. E. Nelson and B. Jones-Nelson. New York: Springer (2012), pp. 363, US\$171.99. ISBN 978-1-4614-2181-8.

The rapid pace at which genomics research is churning out new information about the genetic make-up of organisms makes it almost impossible for any author to capture the potential applications of these technologies