

## BOOK REVIEW

### Plant molecular breeding – theory put to practice

#### Plant Molecular Breeding

Edited by HJ Newbury

Blackwell Publishing Ltd, Oxford, UK; 2003. 265pp.  
£85.00, hardback. ISBN 184127321X.

*Heredity* (2004) 93, 518. doi:10.1038/sj.hdy.6800574

Reviewed by K Bett

As the cost of molecular techniques continues to decrease and become more automated, more and more breeding programs are finally able to put these technologies to use and produce improved varieties in shorter amounts of time or, even more importantly, introduce variability previously beyond their capability. This book aims to reconcile the massive amount of information on gene structure, function and organization being generated in molecular labs with the practical necessities of plant-breeding programs around the world. The first half of the book is a collection of chapters on QTL analysis, marker-assisted breeding, genome colinearity and genetic engineering. The second half is a series of chapters demonstrating the practical use of these technologies in breeding programs of several major crop types as well as in germplasm collections.

I found the idea of starting off a book with a chapter on QTL followed by a chapter on marker-assisted breeding, both with a heavy emphasis on the mathematics behind these subjects, a bit daunting. The rest of the chapters are much easier to follow and the content becomes less theory and more application the further one reads. Written by experts in each of the fields, the book is current and covers a lot of the recent literature. Each chapter can stand on its own, which is useful if one is only interested in one topic at a time, but it means there is overlap between some of the chapters and a lack of cohesiveness overall. The book would have benefited from a concluding chapter that brought all the material together and suggested where the field is heading.

This book would be suitable for graduate students and researchers in the area of molecular breeding, but it assumes a background in genetics, breeding and molecular biology. The final few chapters on the application of these technologies in specific crop-breeding programs would be a good way to introduce a new researcher or student to that crop and the current status of molecular breeding in those species.

K Bett

*Plant Breeding and Genetics, Department of Plant Sciences,  
University of Saskatchewan, 51 Campus Dr. Saskatoon SK,  
Canada S7N 5A8  
E-mail: K.Bett@usask.ca*