

## Book review

### Plant Genotyping: The DNA Fingerprinting of Plants

Edited by RJ Henry

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This book is organized into five sections: (1) Molecular markers available for use in plant genotyping, (2) Genotyping plant genetic resource collections, (3) Genotyping cultivated and wild germplasm, (4) Development of molecular markers for use in plant genotyping, and (5) Technical developments and issues in plant genotyping. The first section has four chapters devoted to plant genotyping using arbitrary amplified DNA (AAD), simple sequence repeats (SSRs), single nucleotide polymorphisms (SNPs), and detection of SNP using DNA microarrays. These chapters provide an informative introduction to emerging technologies in DNA analysis. The next two sections discuss applications of DNA genotyping with common reference to AFLPs, RAPDs, RFLPs, and especially SSRs. The fourth section revisits discovery and application of SNPs and has three more chapters devoted to developing, sourcing, and transferability of SSR markers. The last section includes an informative chapter devoted to plant DNA extraction methods, analysis of SSR data, non-gel techniques for plant genotyping, and other applications of DNA profiling.

As indicated by the editor, this book is intended for researchers in plant genetics, molecular biology, breeding, and biotechnology. In summary, *Plant Genotyping: The DNA Fingerprinting of Plants* has an informative introduction to emerging SNP technologies and a comprehen-

sive, useful guide for development and utilization of SSR markers. The first section, 'Molecular markers available for use in plant genotyping', does not really cover some of the most commonly used markers (Isozymes, RAPDs, RFLPs, AFLPs) or methods of SNP genotyping (sequencing or restriction sites analysis). In this regard, the book is not comprehensive and should not be used as a general introduction for students or researchers not already familiar with common methods and applications of plant genotyping. However, many aspects of SSR marker development, sourcing, application, and analysis are reviewed in comprehensive fashion. This book is most stimulating and useful in this regard. The book also introduces various methods of SNP detection, emphasizing emerging technologies for high-throughput detection. A limited amount of SNP data from plants, obtained by DNA sequencing, is summarized. However, real-world applications of these emerging SNP technologies in plants, are not described in any real detail. As is often the case, traditional methods of PCR, DNA sequencing, and restriction site analysis are not really treated as *bona fide* methods of SNP detection. It seems to me that these traditional techniques are robust and practically useful methods of SNP detection for many researchers. In any case, it would have been interesting to see a more detailed review of applications that utilize traditional and emerging technologies of SNP detection in well-defined areas of plant genetic research – much in the way that applications of SSR markers are reviewed in this book.

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