

PREFACE

It is now more than fifteen years since the first transgenic plants were generated experimentally. In that period, there have been dramatic advances in our understanding of the nature of the *Agrobacterium* infection process, and in the establishment of alternative methods for plant transformation. Perhaps even more spectacular has been the impact of transgenic technology on both basic and applied aspects of plant biology. Now we are on the verge of a new revolution in crop modification, fuelled by the rate at which new genes (important for a host of features of plant growth, metabolism and development) are being identified and characterized. Transgenic technology has been pivotal in the full spectrum of these new developments, from gene identification to an improved understanding of gene regulation, as well as genetic transformation.

Our view of the nature of crop products can also be expected to change in the short to medium term, as plants are exploited for the production of novel compounds such as biodegradable plastics and new pharmaceuticals. However, it is the case that the extent to which the potential of transgenic research is realized will depend on public acceptance. To a significant extent this will require that the biology of transgenics is fully understood, and that a maximum degree of predictability of transgene effect, both phenotypic and genotypic, can be ensured.

While this volume is not intended to cover all advances in transgenic plant research, and certainly could not be expected to within the space available, the intention is that many of the key flavours of current research are represented. The contributions are organized to reflect current themes: transformation techniques, gene isolation, manipulation of plant development, biochemistry and physiology, and the issues of transgene stability of expression and environmental impact. Each chapter cites numerous references for access to the wider literature.

I would like to thank each of the authors for their great efforts in producing their articles, at a time when the pressures are on all of us to spend our available writing time in producing research papers. I feel that this collection of articles will be of undoubted value for students, teachers and established research workers alike; the quality of the contributions derives directly from the high quality of research for which each of the researchers is renowned. Finally I would like to thank the staff of Harwood Academic Publishers for their efforts on the publication side.