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Sommario/riassunto

Advances in plant genomics, plant molecular biology and genome editing have revolutionized opportunities for more efficient plant breeding. Successful application requires a concrete understanding of the concepts. Molecular Plant Breeding is an interface of issues from basic concepts to applications to crop improvement. The tools include molecular marker technology, gene mapping, genetic transformation, precise gene editing, and climate smart agriculture. This book provides a comprehensive coverage of molecular tools and methodologies that should be integrated within plant breeding programs for the improvement of crop plants. The book covers all relevant areas of molecular breeding in plants, with concepts and tools of relevance to plant genomics research and advanced molecular breeding. Chapters comprehensively review the contemporary literature on the subject and reflect the experiences of the authors. Each chapter emphasizes introduction covering related backgrounds and provides in-depth discussion of the subject supported with high-quality color illustrations and relevant data. Chapters conclude with future research perspective and, a comprehensive list of pertinent references.