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Sommario/riassunto	This contributed volume covers the technology of double haploid production with special reference to anther culture and double haploid production in crop plants, and applications for basic and applied research in crop improvement. Globally, plant breeders aim to achieve higher crop productivity by using different breeding techniques. The double haploid genotypes have made this monotonous work easier and more efficient to a greater extent by achieving homozygosity and genetic fixation. Haploids are genotype with a gametophytic chromosome number, and a double haploid is a genotype developed when haploid cells undergo chromosome doubling. Artificial production of double haploids can easily shorten the time required to create

homozygous plants which is vital in plant breeding. The book discusses how double haploids can help in accelerating conventional plant breeding programs and make early release of cultivars with superior and desirable traits along with greater utility in other research aspects of plant breeding, genetics, and genetic engineering. It also explains the role of double haploids in complementing back cross breeding by transferring genes of interest from wild relatives thus breaking genetic barriers. The book highlights the role of double haploids in genetic studies like inheritance of quantitative traits, quantitative trait loci (QTL) mapping, Genomics, gene identification, whole genome mapping and production of stable, transgenic plants. This book is essential for plant breeders, geneticists, researchers, and students in agricultural and crop sciences, offering insights into the transformative potential of double haploid technology in modern plant breeding.