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Titolo	Progress and opportunities of doubled haploid production // Muhammad Asif
Pubbl/distr/stampa	Cham, : Springer International, 2013
ISBN	3-319-00732-7
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (84 p.)
Collana	SpringerBriefs in plant science
Disciplina	581.35
Soggetti	Haploidy Plant genomes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Abstract -- Introduction/Historical background -- Haploid Production -- Androgenesis -- Microspore culture -- Donor plant's growth and developmental conditions -- Collection of floral organs -- Pretreatments -- Microspore's isolation and purification -- Media Composition -- Regeneration -- Increase in Ploidy Level -- Albinism -- Pathways of microspore embryogenesis -- Anther Culture -- Genotype, physiological state, growth and developmental stage of donor plants -- Pretreatments and media composition -- Uniparental Chromosome Removal/Elimination or Wide Hybridization -- Bulbosum Method -- Haploids using maize as a pollen donor -- Haploids using Solanum phureja and maize inducer lines -- Gynogenesis -- Genotype -- Developmental stage of female gametophyte -- Pretreatment -- Composition of media -- Parthenogenesis -- Applications and uses of haploids -- Homozygosity -- Genomics -- Mutation -- Transformation -- Synthetic or Artificial Seed Production -- Future Thrust -- Conclusion -- References.
Sommario/riassunto	Deals with the historical perspectives and the current status of doubled haploid production along with its practical implications in basic and applied research. It highlights various haploid production methods with a comprehensive discussion on their pros and cons, bottlenecks, and embryogenic pathways. The review also describes in detail the results of molecular and genomic studies conducted to investigate the underlying principles of this spectacular technique that has changed

the status of many species from recalcitrant to responsive over the last ninety years.

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