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Nota di contenuto	Foreword -- Preface -- Accelerated Breeding of Plants: Methods and Applications -- Speed Breeding: Methods and Applications -- Genomic Selection in Cereal Crops: Methods and Applications -- Data Driven Decisions for Accelerated Plant Breeding -- Advanced Quantitative Genetics Technologies for Accelerating Plant Breeding -- Haploid Production Technology: Fasten Wheat Breeding to Meet Future Food Security -- Recent Advances in Chromosome Elimination Mediated Doubled Haploidy Breeding: Focus on Speed Breeding in Bread and Durum Wheats -- Acceleration of the Breeding Program for Winter Wheat -- Genomics, Biotechnology and Plant Breeding Towards Improving Rice Production -- High Frequency Androgenic Green Plant Regeneration in Indica Rice for Accelerated Breeding -- Doubled

Haploid Technology for Rapid and Efficient Maize Breeding -- Bio-fortification of Maize using Accelerated Breeding Tools -- Efficient Barley Breeding -- Finger Millet (*Eleusine coracana* L. Gaertn.) Genetics and Breeding for Rapid Genetic Gains -- Breeding Advancements in Barnyard Millet -- Sorghum Improvement Through Efficient Breeding Technologies -- Index.

Sommario/riassunto

Plant improvement has shifted its focus from yield, quality and disease resistance to factors that will enhance commercial export, such as early maturity, shelf life and better processing quality. Conventional plant breeding methods aiming at the improvement of a self-pollinating crop, such as wheat, usually take 10-12 years to develop and release of the new variety. During the past 10 years, significant advances have been made and accelerated methods have been developed for precision breeding and early release of crop varieties. This work summarizes concepts dealing with germplasm enhancement and development of improved varieties based on innovative methodologies that include doubled haploidy, marker assisted selection, marker assisted background selection, genetic mapping, genomic selection, high-throughput genotyping, high-throughput phenotyping, mutation breeding, reverse breeding, transgenic breeding, shuttle breeding, speed breeding, low cost high-throughput field phenotyping, etc. It is an important reference with special focus on accelerated development of improved crop varieties.
