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Nota di contenuto	1. Marker Assisted Breeding for Abiotic Stress Tolerance in Crop Plants -- 2. Dynamics of Salt Tolerance: Molecular Perspectives -- 3. Marker Assisted Breeding for Disease Resistance in Crop Plants -- 4. Morpho-Physiological Traits and Molecular Intricacies Associated with Tolerance to Combined Drought and Pathogen Stress in Plants -- 5. Genome Editing for Crop Improvement: Status and Prospects -- 6. Utilization of Wild Species for Wheat Improvement using Genomic Approaches -- 7. Genetics and Applied Genomics of Quality Protein Maize for Food and Nutritional Security -- 8. Genetic Improvement of Basmati Rice: Transcendence Through Molecular Breeding -- 9. Groundnut Entered Post-Genome Sequencing Era: Opportunities and Challenges in Translating Genomic Information from Genome to Field -- 10. Marker Assisted Breeding for Economic Traits in Common Bean -- 11. Genomic Approaches to Enhance Stress Tolerance for Productivity Improvements in Pearl millet -- 12. Genomic Assisted Enhancement in Stress

During the past 15 years, cellular and molecular approaches have emerged as valuable adjuncts to supplement and complement conventional breeding methods for a wide variety of crop plants. Biotechnology increasingly plays a role in the creation, conservation, characterization and utilization of genetic variability for germplasm enhancement. For instance, anther/microspore culture, somaclonal variation, embryo culture and somatic hybridization are being exploited for obtaining incremental improvement in the existing cultivars. In addition, genes that confer insect- and disease-resistance, abiotic stress tolerance, herbicide tolerance and quality traits have been isolated and re-introduced into otherwise sensitive or susceptible species by a variety of transgenic techniques. Together these transformative methodologies grant access to a greater repertoire of genetic diversity as the gene(s) may come from viruses, bacteria, fungi, insects, animals, human beings, unrelated plants or even be artificially derived. Remarkable achievements have been made in the production, characterization, field evaluation and commercialization of transgenic crop varieties worldwide. Likewise, significant advances have been made towards increasing crop yields, improving nutritional quality, enabling crops to be raised under adverse conditions and developing resistance to pests and diseases for sustaining global food and nutritional security. The overarching purpose of this 3-volume work is to summarize the history of crop improvement from a technological perspective but to do so with a forward outlook on further advancement and adaptability to a changing world. Our carefully chosen "case studies of important plant crops" intend to serve a diverse spectrum of audience looking for the right tools to tackle complicated local and global issues.