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Nota di contenuto	Genomics of Abiotic Stress Resistance in Malus domestica -- Genomic Designing for Abiotic Stress Resistant Banana -- Genetic Improvement of Citrus Limon (L. Burm f.) for Resistance to Mal Secco Disease -- Genomic Designing for Abiotic Stress Resistant Grapevine -- Wild and Related Species as a Breeding Source for Abiotic Stress Resistance of Peach Cultivars and Rootstocks -- Genomic Designing of new Almond-Peach Rootstock-variety Combinations Resistance to Plum pox virus -- Genomic Designing of New Plum Pox Virus Resistant Plumcot -- Integrated Genomic Designing and Insights for Disease Resistance and Crop Protection against Pathogens in Cherry -- Development of Abiotic Stress Tolerant Berries.
Sommario/riassunto	This book presents deliberations on molecular and genomic mechanisms underlying the interactions of crop plants to the abiotic stresses caused by heat, cold, drought, flooding, submergence, salinity, acidity, etc., important to develop resistant crop varieties. Knowledge on the advanced genetic and genomic crop improvement strategies

including molecular breeding, transgenics, genomic-assisted breeding, and the recently emerging genome editing for developing resistant varieties in fruit crops is imperative for addressing FHNEE (food, health, nutrition, energy, and environment) security. Whole genome sequencing in many of these crops followed by genotyping-by-sequencing has provided precise information regarding the genes conferring resistance useful for gene discovery, allele mining, and shuttle breeding which in turn opened up the scope for 'designing' crop genomes with resistance to abiotic stresses. The seven chapters each dedicated to a fruit crop and a fruit crop group inthis volume elucidate different types of abiotic stresses and their effects on and interaction with the crops; enumerate the available genetic diversity with regard to abiotic stress resistance among available cultivars; illuminate the potential gene pools for utilization in interspecific gene transfer; present brief on classical genetics of stress resistance and traditional breeding for transferring them to their cultivated counterparts; depict the success stories of genetic engineering for developing abiotic stress-resistant crop varieties; discuss on molecular mapping of genes and QTLs underlying stress resistance and their marker-assisted introgression into elite varieties; enunciate different genomics-aided techniques including genomic selection, allele mining, gene discovery, and gene pyramiding for developing adaptive crop varieties with higher quantity and quality of yields, and also elaborate some case studies on genome editing focusing on specific genes for generating abiotic stress-resistant crops. .