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Nota di contenuto	Chapter 1 - Current Trends and Future Prospects in Global Production, Utilization, and Trade of Pearl Millet -- Chapter 2 - Status and utility of pearl millet germplasm for crop improvement -- Chapter 3 - Milestones in biology, genetics, and breeding of pearl millet -- Chapter 4 - Advances in pearl millet hybrid breeding and development of parental lines -- Chapter 5 - Trait mapping, marker-assisted selection, and Introgression Breeding in pearl millet -- chapter 6 - Genomic selection and its application in pearl millet improvement -- Chapter 7 - Genome editing and opportunities for trait improvement in Pearl Millet -- Chapter 8 - Omics-Based Approaches in Improving Drought Stress Tolerance in Pearl Millet -- Chapter 9 - Genetic biofortification of pearl millet: trait priority, breeding and genomic progress -- Chapter 10 -

Physiological and molecular bases of drought and heat tolerance in pearl millet -- Chapter 11 - Forage Pearl Millet: issues and strategies for genetic improvement -- Chapter 12- The major diseases of pearl millet in the Indian sub-continent: current scenarios in resistance and management strategies -- Chapter 13 - Pearl Millet Breeding for Enhancing Yield and Stability: Strategies, Achievements and Perspectives -- Chapter 14 - Salinity stress in pearl millet: from Physiological to molecular responses -- Chapter 15 - Weed and Striga management in pearl millet production systems in sub-Saharan Africa -- Chapter 16 - Crop Simulation Models for Climate Change Adaptation in Pearl Millet -- Chapter 17 - Modern crop management practices for pearl millet cultivation in Semi-Arid Africa -- Chapter 18 - Modern crop management practices for pearl millet cultivation in Asia -- Chapter 19 - Hybrid seed generation system management to ensure the seed quality in pearl millet -- Chapter 20 - Traditional varieties of pearl millet and food diversity -- Chapter 21 - Enhancing shelf life of pearl millet flour -- Chapter 22 - Biofuel Opportunities in Pearl Millet -- Chapter 23 - An Ecosystem Approach to Promoting Pearl Millet: Balancing Demand and Supply.

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#### Sommario/riassunto

This book documents the global pearl millet research for achieving the sustainable development goals in the eve of International Year of Millets in 2023 by FAO. This book offers perspectives on the recent advances in the field of genomics, next-generation breeding approaches, hybrid development, crop production and protection technologies of pearl millets. Pearl millet is the world's most important millet grown in the hot, semi-arid ecologies of Asia and Africa with versatile end uses. Of all the world's cereals, pearl millet ranks the sixth most important crop after rice, wheat, maize, barley and sorghum. In the changing climatic condition, it can be pitched as strategic crop for food and nutritional security owing to its ability to survive in harsh ecologies and the higher micro-nutrients grain content. This book focuses on nutritional importance, climate resilience, seed systems, value-addition and market policies to enhance the genetic gain of pearl millets under marginal and favorable ecologies, and way forward for a food and nutrition secure world. It is a useful reading material for researchers and professionals working on small grains, millets and their cultivation and nutrition related aspects.

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