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Nota di contenuto	Chapter 1. Economic Importance, Practical Limitations to Production, Management and Breeding Targets of Alfalfa -- Chapter 2. Factors Influencing Yield and Quality -- Chapter 3. The Origin, Evolution and Genetic Diversity of Alfalfa -- Chapter 4. Germplasm Collection, Genetic Resources and Gene Pools in Alfalfa -- Chapter 5. Biotechnology Advances in Alfalfa -- Chapter 6. Sequencing, Assembly and Annotation of the Alfalfa Genome -- Chapter 7. Transcription Factors in Alfalfa (Medicago sativa L.): Genome-Wide Identification and a Web Resource Center AlfalfaTFDB -- Chapter 8. Genomics of Forage Quality in Alfalfa -- Chapter 9. Physiological, Morphological, Biochemical, and Genetic Responses of Alfalfa to Salinity -- Chapter 10. Developing SNPs and Strategies for Genomic Analysis in Alfalfa -- Chapter 11. Genomics Resources for Breeding in Alfalfa: Availability, Utility, and Adoption -- Chapter 12. Genomic Selection for Higher Yield and Quality in Alfalfa -- Chapter 13. Identification and Characterization of Disease Resistance Genes in Alfalfa and Medicago truncatula for Breeding Improved Cultivars -- Chapter 14. Genetic and Genomic Assessments for Improving Drought Resilience in Alfalfa -- Chapter 15.

Self-Incompatibility, Inbreeding Depression, and Potential to Develop Inbred Lines in Alfalfa -- Chapter 16. Targeted Mutagenesis of Alfalfa.

Sommario/riassunto

This book is the first comprehensive compilation of deliberations on whole genome sequencing of the diploid and tetraploid alfalfa genomes including sequence assembly, gene annotation, and comparative genomics with the model legume genome, functional genomics, and genomics of important agronomic characters. Other chapters describe the genetic diversity and germplasm collections of alfalfa, as well as development of genetic markers and genome-wide association and genomic selection for economical important traits, genome editing, genomics, and breeding targets to address current and future needs. Altogether, the book contains about 300 pages over 16 chapters authored by globally reputed experts on the relevant field in this crop. This book is useful to the students, teachers, and scientists in the academia and relevant private companies interested in genetics, breeding, pathology, physiology, molecular genetics and breeding, biotechnology, and structural and functional genomics. The work is also useful to seed and forage industries.