1. Record Nr. UNINA9911020052503321 Autore Thatoi Hrudayanath Titolo Applied Biotechnology and Bioinformatics : Agriculture, Pharmaceutical Research and Environment Pubbl/distr/stampa Newark:,: John Wiley & Sons, Incorporated,, 2024 ©2025 **ISBN** 9781119896852 1119896851 9781119896845 1119896843 9781119896869 111989686X Edizione [1st ed.] Descrizione fisica 1 online resource (422 pages) Altri autori (Persone) MohapatraSonali DasSwagat Kumar PradhanSukanta Kumar Soggetti Biotechnology Agriculture Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Cover -- Series Page -- Title Page -- Copyright Page -- Contents --Preface -- Part I: Agriculture -- Chapter 1 Next-Generation Sequencing in Vegetable Crops --1.1 Introduction --1.2 Next-Generation Sequencing Approach in Genomics --1.2.1 Solanaceous 1.2.3 Brassicaceae --1.2.2 Malvaceae --Cucurbitaceae --1.2.5 Apiaceae --1.2.6 Moringaceae --1.3 NGS Approach in Single-Nucleotide Polymorphic Markers Development -- 1.4 Next-Generation Sequencing Approach in Trait-Specific Breeding --1.5 Next-Generation Sequencing Approach in 1.6 Next-Generation Sequencing Approach in Metagenomics --Transcriptomics --1.7 Next-Generation Sequencing Approach in Exome and Captured Sequencing --1.8 Applications of Exome and

Captured Sequencing in Crop Research -- 1.9 Conclusion and Future

Prospects -- References -- Chapter 2 Application of Bioinformatics Tools in Rice Genomics Research -- 2.1 Introduction -- 2.2 Role of Genomics in Rice Research -- 2.3 Model Plant for Genomic Research: Rice -- 2.4 High-Throughput Sequencing -- 2.5 Genome-Wide Association Study (GWAS)

Sommario/riassunto

The book 'Applied Biotechnology and Agriculture, Research and Environment' provides a comprehensive overview of the application of biotechnology in agriculture and environmental research. Edited by experts Hrudayanath Thatoi, Sonali Mohapatra, Swagat Kumar Das, and Sukanta Kumar Pradhan, it covers topics such as crop sequencing, rice genomics, vaccine design in agriculture, and the role of probiotics in oral health. The work aims to present the latest advancements and methodologies in biotechnology to improve agricultural practices and address environmental challenges. Targeted towards researchers and professionals in biotechnology and agriculture, it discusses genomics, phenomics, and advanced tools like CRISPR for enhancing crop resilience and productivity. The book also explores molecular modeling for drug development and the preventative roles of probiotics, emphasizing their therapeutic potential.