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Sommario/riassunto	This book offers an in-depth exploration of non-coding RNA and its

critical role in enhancing plant abiotic stress tolerance. It provides a comprehensive overview of non-coding DNA's structural and functional diversity and its regulatory mechanisms in stress responses. The chapters cover topics such as epigenetic regulation, mobile genetic elements, and genomic profiling techniques. It covers latest research on non-coding RNA-mediated regulation, transcriptional regulatory elements controlling stress-responsive gene expression, and the role of long non-coding RNAs (lncRNAs) in fine-tuning gene expression networks under stress conditions. The book also discusses chromatin modifications, transposon-mediated regulation, high-throughput sequencing approaches for identifying stress-responsive ncRNAs, and CRISPR-based functional analysis. In addition to exploring these advanced topics, the book highlights practical implications for crop improvement strategies. Researchers in plant biology, genomics, molecular biology, and agricultural sciences will find this book particularly beneficial. It is also an essential resource for educators looking to provide their students with up-to-date information on cutting-edge research techniques. By offering both theoretical perspectives and practical case studies from renowned experts worldwide, this volume equips readers with actionable knowledge to address real-world challenges in agriculture.