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Titolo	High-Throughput Crop Phenotyping / / edited by Jianfeng Zhou, Henry T. Nguyen
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Descrizione fisica	1 online resource (259 pages)
Collana	Concepts and Strategies in Plant Sciences, , 2662-3196
Disciplina	631.53
Soggetti	Plant biotechnology Agriculture Bioinformatics Biology - Technique Plant genetics Plant Biotechnology Computational and Systems Biology Biological Techniques Plant Genetics Conreus Millorament selectiu de plantes Fenotip Llibres electrònics
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Nota di contenuto	Solve the breeder’s equation using high-throughput crop phenotyping technology -- Experiences of Applying Field-Based High-Throughput Phenotyping for Wheat Breeding -- High-throughput crop phenotyping systems for controlled environments -- Got all the answers! What were the questions? Avoiding the risk of “phenomics” slipping into a technology spree. Subject Index.
Sommario/riassunto	This book provides an overview of the innovations in crop phenotyping using emerging technologies, i.e., high-throughput crop phenotyping technology, including its concept, importance, breakthrough and

applications in different crops and environments. Emerging technologies in sensing, machine vision and high-performance computing are changing the world beyond our imagination. They are also becoming the most powerful driver of the innovation in agriculture technology, including crop breeding, genetics and management. It includes the state of the art of technologies in high-throughput phenotyping, including advanced sensors, automation systems, ground-based or aerial robotic systems. It also discusses the emerging technologies of big data processing and analytics, such as advanced machine learning and deep learning technologies based on high-performance computing infrastructure. The applications cover different organ levels (root, shoot and seed) of different crops (grains, soybean, maize, potato) at different growth environments (open field and controlled environments). With the contribution of more than 20 world-leading researchers in high-throughput crop phenotyping, the authors hope this book provides readers the needed information to understand the concept, gain the insides and create the innovation of high-throughput phenotyping technology.