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Pathogen recognition and immune signaling -- 19 Interaction of rice and *Xanthomonas oryzae* TAL effectors -- 20 Marker-assisted gene pyramiding for durable blast resistance -- 21 Genes affecting eating and processing quality -- 22 Genetic dissection and breeding effort of grain appearance in rice -- 23 Rice epigenetics -- 24 Genomic Prediction and Selection in Rice -- 25 Genome-wide mapping of complex traits in rice -- 26 Next generation breeding of rice by whole genome sequencing approaches -- 27 Rice genome editing -- 28 Databases for rice omics researches .

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Sommario/riassunto

This book presents the latest advances in rice genomics, genetics and breeding, with a special focus on their importance for rice biology and how they are breathing new life into traditional genetics. Rice is the main staple food for more than half of the world's population. Accordingly, sustainable rice production is a crucial issue, particularly in Asia and Africa, where the population continues to grow at an alarming rate. The book's respective chapters offer new and timely perspectives on the synergistic effects of genomics and genetics in novel rice breeding approaches, which can help address the urgent issue of providing enough food for a global population that is expected to reach 9 billion by 2050.

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