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Nota di contenuto	Acknowledgments -- Foreword -- Preface -- Seed Protein, Oil, Fatty Acids, and Amino Acids -- QTL That Control Seed Protein, Oil, and Fatty Acids Contents -- Seed Amino Acids, Macronutrients, Micronutrients, Sugars, and Other Compounds -- Two Decades of QTL Mapping of Mineral Deficiencies in Soybean -- Sixteen Years (2004-2020) of Salt Tolerance QTL Mapping in Soybean -- Isoflavones Biosynthetic Pathways and Methods of Quantification -- Isoflavones Locations and Variations in Seeds, Roots, Leaves, and Other Plant Parts -- Isoflavones Positive and Negative Effects on Humans, Animals, and Plants -- Environmental Factors Affecting Isoflavones Contents -- Two Decades of QTL Mapping of Isoflavones in Soybean Seed -- Bioactive

Sommario/riassunto

Soybean Seed Composition covers three decades of advances in quantitative trait loci (QTL) mapping of seed protein, oil, fatty acids, amino acids, sugars, mineral nutrients, isoflavones, lunasin, and other beneficial compounds. It opens with coverage of seed protein, oil, fatty acids, and amino acids and the effects that genetic and environmental factors have on them. Detailed discussion of QTL that control seed protein, oil, and fatty acids follows, and the book also covers seed amino acids, macronutrients, micronutrients, sugars, and other compounds that are key to selection for crop improvement. The book also provides an overview of two decades of QTL mapping of mineral deficiencies in soybean, which sheds light on the importance of a balanced mineral nutrition in soybean and other crops, elucidates salt stress tolerance QTL mapping, which is another challenge that faces soybean and other crop production worldwide. The importance of soybean seed isoflavones from their biosynthesis and quantification methods to locations and variations in seeds, roots, and leaves, to their QTL mapping is discussed, as well as providing key information on lunasin, a bioactive anticancer peptide in soybean seeds that will help farmers and breeders to develop soybean cultivars with improved seed isoflavones and lunasin content. The book will be of interest to graduate students, academics, and researchers in the fields of genetic and QTL mapping of important agronomic traits in soybean and other crops.
