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Nota di contenuto	Preface -- About the Editors -- Contributors -- Part I. Industrial Crops -- 1. Genetics and Breeding of Tropical Acacias for Forest Products: Acacia mangium, A. auriculiformis and A. crassicarpa; Arif Nirsatmanto, Sri Sunarti -- 2. Cotton (Gossypium hirsutum L.) Breeding Strategies; Saeed Rauf et al -- 3. CRISPR/Cas9: A New Genome Editing Tool to Accelerate Cotton (Gossypium spp.) Breeding; Muhammad N. Sattar et al -- 4. Jute (Corchorus spp.) Breeding; Liwu Zhang et al -- 5. Ramie (Boehmeria nivea L. Gaud) Genetic Improvement; Pratik Satya et al -- 6. Genetic Improvement of Guayule (Parthenium argentatum A. Gray): An Alternative Rubber Crop; Hussein Abdel-Haleem et al -- 7. Biotechnological Advances in Rubber Tree (Hevea brasiliensis Muell. Arg.) Breeding; Sankaran Sobha et al -- 8. Genetics and Breeding of Jojoba [Simmondsia chinensis (Link) Schneider]; Mohamed M.A. Khairi -- 9. Flax (Linum usitatissimum L.) Genomics and Breeding; Frank M. You et al -- 10. Breeding Strategies to Improve Production of Agave (Agave spp.); Kelly M. Monja-Mio et al -- 11. Sugarcane (Saccharum spp.): Breeding and Genomics; Shriram J. Mirajkar et al -- Part II. Food Crops -- 12. Cacao (Theobroma cacao L.) Breeding; Frances Bekele, Wilbert Phillips-Mora -- 13. Oil Palm (Elaeis spp.) Breeding in Malaysia; Fadila Ahmad Malike et al -- 14. Safflower (Carthamus tinctorius L.)

Breeding; Pooran Golkar, Somayeh Karimi -- 15. Advances in Sesame (Sesamum indicum L.) Breeding; Swapan K. Tripathy et al -- 16. Breeding Strategies for Sunflower (Helianthus annuus L.) Genetic Improvement; Saeed Rauf -- 17. Saffron (Crocus sativus L.) Breeding: Opportunities and Challenges; Majid Shokrpour -- 18. Vanilla (Vanilla spp.) Breeding; Alan H. Chambers -- Index. .

Sommario/riassunto

Plant breeders and geneticists are under constant pressure to sustain and expand food production by using innovative breeding strategies and introducing minor crops, which are well adapted to marginal lands, provide a source of nutrition, and have abiotic and biotic stress tolerance, to feed an ever-increasing human population. The basic concept of this book is to examine the use of innovative methods augmenting traditional plant breeding towards the improvement and development of new crop varieties, under the increasingly limiting environmental and cultivation factors, to achieve sustainable agricultural production and enhanced food security. In addition to developing improved crops for innovative industrial products such as pharmaceuticals and food additives, biofuels, oils and textiles. Three volumes of this book series were published in 2015, 2016 and 2018, respectively: Volume 1. Breeding, Biotechnology and Molecular Tools; Volume 2. Agronomic, Abiotic and Biotic Stress Traits and Volume 3. Fruits. In 2019, the following four volumes are concurrently being published: Volume 4. Nut and Beverage Crops, Volume 5. Cereals, Volume 6. Industrial and Food Crops and Volume 7. Legumes. This Vol 6, subtitled Industrial and Food Crops, consists of 2 parts. Included in Part I are 11 industrial plant species utilized as sources of raw materials for the production of industrial products including pulp and wood crops (acacia), fiber (cotton, jute and ramie), rubber (guayule and rubber tree), oil (jojoba and flax), biofuels and pharmaceutical (agave) and sugar source (sugarcane). Part II covers 7 food plants selected for their utilization in food industries for the production of chocolate (cacao), cooking oil (oil palm, safflower, sesame and sunflower) and natural flavors and aroma (saffron and vanilla). Chapters are written by 60 internationally reputable scientists from 14 countries and subjected to a review process toassure quality presentation and scientific accuracy. Each chapter begins with an introduction covering related backgrounds and provides in-depth discussion of the subject supported with 138 high quality color figures, and relevant data in 78 tables. The chapter concludes with recommendations for future research directions, appendixes of genetic resources and concerned research institutes and a comprehensive list of pertinent references to facilitate further reading. This book series is a valuable resource for advanced students, researchers, scientists, commercial producers and seed companies as well as consultants and policymakers interested in agriculture, particularly in modern breeding technologies.