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Nota di contenuto	Chapter 1.Genetic tinkering of crops for sustainable development – 2020 and Beyond -- Chapter 2.Genetic improvement of rice for food and nutritional security 3.Improvement of wheat (Triticum spp.) through gene manipulation -- Chapter 4. Transgenic finger millet [Eleusine coracana (L.) Gaertn.] for crop improvement -- Chapter 5. Transgenic pigeon pea [Cajanus cajan (L). Millsp.] -- Chapter 6. Genetically engineered chickpea: Potential of an orphan legume to achieve food and nutritional security by 2050 -- Chapter 7. Progress in genetic engineering of cowpea for insect pest and virus resistance -- Chapter 8. Peanut (Arachis hypogaea L.) transgenic plants for abiotic

stress tolerance -- Chapter 9. Genetic engineering of sunflower (Helianthus annuus L.) for important agronomic traits -- Chapter 10. Genetic engineering in safflower (Carthamus tinctorius L.): Retrospect and prospect -- Chapter 11. Nutritional value, in vitro regeneration and development of transgenic Cucurbita pepo and C.maxima for stress tolerance: An overview -- Chapter 12. Sugarcane transgenics: Developments and opportunities .

Sommario/riassunto

Genetic transformation is a key technology, in which genes are transferred from one organism to another in order to improve agronomic traits and ultimately help humans. However, there is apprehension in some quarters that genetically modified crops may disturb the ecosystem. A number of non-governmental organizations continue to protest against GM crops and foods, despite the fact that many organisms are genetically modified naturally in the course of evolution. In this context, there is a need to educate the public about the importance of GM crops in terms of food and nutritional security. This book provides an overview of various crop plants where genetic transformation has been successfully implemented to improve their agronomically useful traits. It includes information on the gene(s) transferred, the method of gene transfer and the beneficial effects of these gene transfers and agronomic improvements compared to the wild plants. Further, it discusses the commercial prospects of these GM crops as well as the associated challenges. Given its scope, this book is a valuable resource for agricultural and horticultural scientists/experts wanting to explain to the public, politicians and non-governmental organizations the details of GM crops and how they can improve crops and the lives of farmers.