1. Record Nr. UNINA9910743277203321

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| Titolo | Biosafety and Ecological Assessment of Genetically Engineered and Edited Crops |
| Pubbl/distr/stampa | MDPI - Multidisciplinary Digital Publishing Institute, 2023 |
| Descrizione fisica | 1 online resource (262 p.) |
| Soggetti | Biotechnology<br>Technology: general issues |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Sommario/riassunto | Although the biosafety of genetically engineered crops has been debated for the past three decades among scientific communities, regulators, and the public, controversy is still strong regarding human health and environmental safety. While food safety remains a critical concern for the general public, the ecological consequences may have long-lasting effects on natural/agricultural ecosystems. Increased scientific understanding and strategies are thus needed to cope with any environmental risks caused by or related to the release of engineered crops, especially regarding new emerging technology. For instance, past experiences with genetically engineered plants may provide valuable expertise for the assessment of new gene-edited crops. This compendium contains four review papers and 12 case study papers. These articles address a broad range of topics in biosafety and environmental assessment of the genetically engineered and edited crops, covering the impacts of genetically engineered crops on arthropod species, soil microbes, animals, metabolic and proteomic effects, gene flow mitigation of genetically engineered crops, and regulatory and governance perspectives of gene-edited plants. This special issue provides important inputs and references for the scientific research and governmental governance of crops derived by genetic breeding biotechnology. |