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Advances in Genetic Engineering Strategies for Fruit Crop Breeding

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Deadline for manuscript submissions:

closed (31 July 2020)

Message from the Guest Editors

Genetic engineering offers important opportunities for fruit crop genetic improvement of agronomic traits relevant for increasing sustainability of the cultivation systems and quality of the products used for fresh and processing industries. This potential presently looks enhanced by the availability of new breeding techniques (RNAi, cisgenesis, and gene editing). Furthermore, the application of RNAi technology in the rootstock offers the possibility to induce modifications in the scion without altering its genome. The main limiting factors for the application of these technologies in fruit crops are the development of efficient methods for direct and *Agrobacterium*-mediated genetic transformation, such as plant regeneration and selection of new modified events. In addition, the biosafety rules to be applied to new modified fruit plants are not yet fully explored. This Special Issue of *Plants* will highlight the new methods for genetic transformation/gene editing combined with modified plant regeneration and selection, the new type of gene/traits that can be improved, and the appropriate approaches for running the risk and benefits analyses of the new products.



mdpi.com/si/36003

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Message from the Editor-in-Chief

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