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Application of Genetic Engineering and Synthetic Biology in Crop Improvement

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Message from the Guest Editor

Dear Colleagues,

Crops are essential sources of food, feed, bioenergy, biomaterials, medicine, and ornamentals. The yield and quality of existing crops cannot meet the future demands of our society. For example, a 70 percent increase in global food production by 2050 will be needed to feed the future world population. This challenge is exacerbated by the reduction in arable land and clean water resources. Therefore, there is an urgent need to find novel solutions to these challenges without placing further burden on the environment. Genetic engineering and the interdisciplinary field of synthetic biology have great potential for plant improvement to meet the future demands of crop production. Many efforts have been directed towards the improvement in crop yield, stress adaptability, and crop quality using synthetic biology and cutting-edge genetic-engineering tools. This Special Issue welcomes research and review articles to highlight the advances and perspectives in the development and application of innovative genetic engineering and synthetic biology technologies in various plant crops.



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Special Issue



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Message from the Editor-in-Chief

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