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## Environmental and Genetic Factors in Field Crop Production and Improvement: Mechanisms and Regulation

Guest Editors:

**Dr. ShuiJin Hua**

Institute of Crop and Nuclear  
Technology Utilization, Zhejiang  
Academy of Agricultural  
Sciences, Hangzhou 310021,  
China

**Dr. Yang Zhu**

Department of Agronomy and  
Plant Breeding, College of  
Agriculture and Biotechnology  
(CAB), Zhejiang University,  
Hangzhou 310058, China

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### Message from the Guest Editors

Crop production with improved quality and yield is generally affected by both genetic and environmental factors. Need-to germplasms have been largely produced via multiple approaches. Recently, gain-of-function and loss-of-function genetic materials have shown potential applications in modern crop breeding programs. In addition, genome editing for targeted traits and other methods with genetic information changes are available via toolkits to enhance crop production, improve yield, and achieve nutrient enrichment. Therefore, it is essential to understand the mechanisms of how genetic information is precisely transduced at different field conditions and in various consequential development transitions. With dramatic changes in the globe's climate, how to increase plant tolerance in response to environmental stress is a key research area for the crop industry and for food security. However, the mechanism underlying these changes are still largely unknown. This Special Issue of *Plants* plans to decipher how both genetic and environmental factors contribute to crop improvement, showcasing perspectives on agronomy, ecophysiology, biochemistry, bioengineering, and crop biology.



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**Prof. Dr. Dilantha Fernando**  
Department of Plant Science,  
University of Manitoba, Winnipeg,  
MB R3T 2N2, Canada

## Message from the Editor-in-Chief

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*Plants* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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