Special Issue

Enhancing Crop Resilience: GWAS and Gene-by-Environment Interaction

Message from the Guest Editors

Since the establishment of genome-wide association studies (GWAS) in 1996, GWAS have focused on detecting genes for binary, categorical and quantitative traits in animal, plant and human genetics. However, as climate change intensifies, attention is turning to the identification of gene-by-environment interactions (GEIs) for these traits, such as phenotypic plasticity. Recent advances in GWAS methodologies, such as the establishment of the compressed variance component mixed model method for identifying GEIs and deciphering phenotypic plasticity, are opening up new opportunities for improving crop resilience. This Special Issue focuses on recent advances in “Enhancing Crop Resilience: GWAS and Gene-by-Environment Interaction”. We welcome new research and reviews covering all related topics, including new methods and software packages, and their development and application in crop breeding: gene-by-environment interaction, phenotypic plasticity, linkage mapping, GWAS, marker-assisted selection, fine mapping, and genomic selection. This issue will provide a good picture of the state-of-the-art and potential future of gene-by-environment interactions

Guest Editors

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