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Special Issue Reprint

Physiological and Molecular Characterization of Crop Resistance to Abiotic Stresses

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Abiotic stress represents the main constraint for agriculture, affecting plant growth and productivity worldwide. Yield losses in agriculture will be potentiated in the future by global warming, increasing contamination, and reduced availability of fertile land. The challenge for agriculture of the present and future is that of increasing the food supply for a continuously growing human population under environmental conditions that are deteriorating in many areas of the world. Minimizing the effects of diverse types of abiotic stresses represents a matter of general concern. Research on all topics related to abiotic stress tolerance, from understanding the stress response mechanisms of plants to developing cultivars and crops tolerant to stress, is a priority. This Special Issue is focused on the physiological and molecular characterization of crop resistance to abiotic stresses, including novel research, reviews, and opinion articles covering all aspects of the responses and mechanisms of plant tolerance to abiotic. Contributions on physiological, biochemical, and molecular studies of crop responses to abiotic stresses; the description and role of stress-responsive genes; marker-assisted screening of stress-tolerant genotypes; genetic engineering; and other biotechnological approaches to improve crop tolerance were considered.

