Special Issue

Plant Response to Arid Environment

Message from the Guest Editors

Arid environments are defined by the dominant role of water in limiting the activities of life. Plants have evolved numerous adaptations that allow them to survive in these harsh environments and to deal with water deficits. Survival strategies involve adjustments at many levels, from gene expression, through individual plant physiological and biochemical processes, to ecosystem levels. Understanding the mechanisms that underlie the response of plants to water scarcity is an urgent problem in arid environments, particularly considering that these ecosystems are prone to land degradation or desertification and are characterized by shrub encroachment, invasion by exotic species, and loss of total perennial vegetation cover. This Special Issue focuses on the responses of plants that enable them to survive in arid environments and deal with the adaptation of individual species or populations to drought in terms of physiology, water relations, and biochemical mechanisms.

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Deadline for manuscript submissions

closed (30 November 2020)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/34310

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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