Special Issue

Germplasm Resources and Breeding of Agave II

Message from the Guest Editor

Agave species have been exploited in Central and North America as sources of food, fiber, medicinal compounds, and construction materials since the pre-Columbian era. Cam metabolism, particular anatomical traits and fructan metabolism, have converged in agaves, making them uniquely adapted to thrive under hot, arid conditions. Most agave species (>70%) are found in Mexico, where 119 of a total of 210 species are endemic. However, agave germplasm can now be found worldwide either growing wild, being cultivated for fiber or for the production of spirits, or, more recently, being developed as a source of bioenergy. Long life cycles and the perennial monocarpic mode of reproduction have hampered both breeding and the possibility for the detailed genetic analysis of agave species. However, transcriptome-based studies are now enabling the molecular genetic analysis of important characteristics of agave species, such as CAM, fructan and lignin metabolisms, reproductive strategies, and stress tolerance, with a view to improve agave germplasm for commercial production and to incorporate these adaptations into other crop species.

Guest Editor

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Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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