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Special Issue Reprint

Beneficial Microbes for Sustainable Crop Production

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This Reprint presents a collection of research related to beneficial microorganisms used in cropping systems. The studies are focused on sustainability and efficiency obtained by the use microorganisms; changes and improvements in biogeochemical cycles; assessments of microbial communities in treated vs. untreated soils; plant–microorganism–soil interactions; and the analysis of microbial functions, suppressive and resilient capacity. The necessity of these types of studies is linked to the dynamics and functionalities that microbial communities provide in cultivated soils, being the main drivers of crop success and responsible for numerous ecosystem services. The plant-growth promotion process links the ability of microorganisms to provide nutrients and biostimulators to plants with a visible effect on the yield potential. The use of microbial inoculum in cropping systems has long been considered a viable solution to ensure supplementary nutrients, crop protection, biomass decomposition, and the stability of soil fluxes.

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