Special Issue

Beneficial Microbes for Sustainable Agriculture: Understanding the Functional Relationship between Plants and Their Microbiota

Message from the Guest Editor

Globally, agriculture relies on supplementing cropped soils with macro and micronutrients sourced from mined ores or industrially produced through energy intensive processes. However, as global demand for fertilizers increases, the costs associated with the production for each of these major nutrients increases. Plant growth promoting bacteria (PGPB), which naturally occur in soils and aggressively colonize around plant roots, have been shown to promote plant growth by various direct and indirect mechanisms. The potential of PGPB to reduce dependence on high levels of fertilizer inputs has gained significant increase in interest over recent years. Sustainably improving agricultural production by plant growth-promoting microorganisms is a promising field of research; however, there still exist significant gaps in the understanding of the actual mechanism of plant growth promotion. This Special Issue of Agronomy is dedicated to PGPB with a particular focus on their mode of action, examples of innovative methodologies for their characterization of the mode of action and analysis of their interaction with the host plant.

Guest Editor

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