

## Special Issue

# Role of Soil Microbes in Sustainable Crop Production

### Message from the Guest Editors

The role of soil microbes offers promising, eco-friendly alternatives to synthetic fertilizers and pesticides for sustainable crop production in addressing global challenges such as soil and ecosystem degradation, climate change, water scarcity, increased pest and disease incidence, nutrient imbalances and intensive agriculture. These interconnected threats—exacerbated by rising temperatures, extreme weather events, soil erosion, biodiversity loss and the need to feed a growing population—demand resilient solutions that maintain or enhance yields while minimizing environmental harm. Here, soil microorganisms, including bacteria, fungi, actinomycetes, arbuscular mycorrhizal fungi and other rhizosphere inhabitants, play a pivotal role in enhancing crop productivity while reducing dependence on chemical inputs. This Special Issue primarily focuses on recent findings regarding the influence of these factors on microbial communities and their functional roles in nutrient cycling, soil structure formation, direct and indirect growth promotion, soil microbiome dynamics and assembly, enhancement of soil fertility, disease suppression and overall ecosystem resilience.

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### Guest Editors

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### Deadline for manuscript submissions

30 November 2026



## Plants

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### Editor-in-Chief

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