Special Issue

Prospects of Microbial Engineering Technology in Agriculture

Message from the Guest Editors

Microbial engineering technology has the potential to revolutionize agriculture by utilizing the benefits of microbes for enhancing plant growth and soil health and mitigating the negative impacts of climate change. The long-term goal of developing microbial engineering technology in agroecosystems is to improve soil fertility and structure for higher crop yields, while decreasing the use of synthetic fertilizers, and to enhance interactions between soil microbiomes and crops for better disease resistance and minimum pesticide use. The prospects of microbial engineering technology in agriculture are promising, with the potential to address key challenges, such as climate change, soil degradation, and food security. For this Special Issue, topics of interest include, but are not limited to, the following:

- Microbial biotechnology in agriculture;
- Strategies to enhance soil health and fertility by manipulating microbes;
- Microbial-based plant disease management;
- Microbial roles in stress tolerance, nutrient loss or greenhouse gas emissions;
- Microbial-based nitrogen fixation;
- Microbial-based bioremediation;
- Microbial communities and their impacts on food safety.

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