Special Issue

Functional Regulation of Soil Microorganisms in Agricultural Ecosystems: Impact on Agronomical Practices

Message from the Guest Editors

The role of the soil microbiome in agricultural ecosystems has received tremendous attention in recent years as moving towards more sustainable agriculture under a changing climate, which requires a drastic reduction in chemical and energy inputs. In this scenario, the microbial resources of the soil and their interactions with plants are fundamental drivers of innovation, inclusive of studies on microbial nitrogen fixation, plant growth-promoting microorganisms, and protection from plant pathogens. The use of novel organic amendments, sustainable agronomical practices, and reclaimed wastewater for irrigation, requires an interdisciplinary approach to elucidate the potential benefits of a healthy soil microbiome in terms of preventing any drawback in soil health and crop quality.

This Special Issue focuses on innovative agronomical practices that directly rely on novel microbial resources (e.g., biofertilizers) or evaluation of their impact on soil microbial diversity and interactions with plants and include interdisciplinary studies that consider agronomical inputs, microbial resources, and physiological plant response and their impact on soil health and crop quality.

Guest Editors

Dr. Luciano Beneduce

Department of the Science of Agriculture, Food and Environment (SAFE), Università degli studi di Foggia I UNIFG, Foggia, Italy

Dr. Giuseppe Gatta

Department of Agricultural Sciences, Food, Natural Resources and Engineering (DAFNE), University of Foggia, 71122 Foggia, Italy

Deadline for manuscript submissions

31 December 2025



Agriculture

an Open Access Journal by MDPI

Impact Factor 3.6 CiteScore 6.3



mdpi.com/si/230289

Agriculture
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
agriculture@mdpi.com

mdpi.com/journal/agriculture





Agriculture

an Open Access Journal by MDPI

Impact Factor 3.6 CiteScore 6.3



About the Journal

Message from the Editor-in-Chief

Agriculture (ISSN 2077-0472) is an international, scholarly and scientific open access journal publishing peer-reviewed research papers, review articles, communications and short notes that reflect the breadth and interdisciplinarity of agriculture.

Editor-in-Chief

Prof. Dr. Les Copeland

Sydney Institute of Agriculture, School of Life and Environmental Sciences, The University of Sydney, Sydney, NSW 2006, Australia

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubAg, AGRIS, RePEc, and other databases.

Journal Rank:

JCR - Q1 (Agronomy) / CiteScore - Q1 (Plant Science)

