

## Special Issue

# Advancing Soil Organic Carbon Stock Prediction with Digital Mapping

### Message from the Guest Editors

Soil Organic Carbon (SOC) plays a pivotal role in global climate regulation, soil fertility, and sustainable agriculture. As the largest terrestrial carbon pool, SOC is central to international climate goals and nature-based solutions. This Special Issue aims to gather cutting-edge research on innovative approaches for mapping and evaluating SOC stocks at multiple spatial and temporal scales. We welcome contributions that advance Digital Soil Mapping (DSM) techniques, integrate remote and proximal sensing data, and explore machine learning and deep learning applications in SOC prediction. Interdisciplinary studies that incorporate microbiology, spectroscopy, land use dynamics, and novel monitoring frameworks (e.g., MRV systems) are especially encouraged. We are particularly interested in studies addressing persistent challenges in SOC mapping, such as data scarcity, uncertainty quantification, harmonization across regions, and underrepresentation of vulnerable ecosystems. Contributions that propose scalable, transparent, and policy-relevant solutions are essential to support soil-centered climate actions and sustainable land use transitions.

### Guest Editors

Prof. Dr. Raul Roberto Poppiel

Department of Soil Science, Luiz de Queiroz College of Agriculture, University of São Paulo, Pádua Dias Av. 11, Piracicaba, P.O. Box 09, São Paulo 13416-900, Brazil

Dr. Nikolaos Tziolas

Department of Soil, Water and Ecosystem Sciences, University of Florida, Gainesville, FL 32611, USA

### Deadline for manuscript submissions

closed (20 January 2026)



## Agriculture

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*Agriculture*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[agriculture@mdpi.com](mailto:agriculture@mdpi.com)

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*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.

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Prof. Dr. Les Copeland  
Sydney Institute of Agriculture, School of Life and Environmental  
Sciences, The University of Sydney, Sydney, NSW 2006, Australia

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