

## Special Issue

# Applications of VIS-NIR-SWIR Spectroscopy in Crop Health Monitoring and Nutrient Diagnosis

### Message from the Guest Editors

We invite contributions that address fundamental and applied aspects of VIS-NIR-SWIR spectroscopy across various agricultural systems, including open-field farming, greenhouse production, and controlled environment agriculture. Emphasis will be placed on the development and validation of spectral indices, chemometric and machine learning models, sensor fusion strategies, and the integration of spectroscopy with remote sensing platforms. Topics of interest include, but are not limited to, the following:

- Development and validation of spectral indices and chemometric models for nutrient estimation (e.g., N, P, K, micronutrients);
- Detection and quantification of biotic and abiotic stresses using spectral signatures;
- Integration of spectroscopy with machine learning, radiative transfer modeling, and digital twin frameworks;
- Hyperspectral and multispectral imaging in controlled and open-field environments;
- Real-time (on-the-go) decision support systems;
- Sensor fusion and data assimilation for real-time decision support systems;
- Remote and proximal sensing platforms (UAVs, satellites, ground-based systems) for large-scale crop monitoring.

### Guest Editors

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### Deadline for manuscript submissions

5 November 2025



## Agriculture

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## About the Journal

### Message from the Editor-in-Chief

*Agriculture* (ISSN 2077-0472) is an international, cross-disciplinary and scholarly journal on the science and technology of crop and animal production, and management of the natural resource base for agricultural production. We invite submissions from authors according to the aims and scope of the journal described in more detail on this page. *Agriculture* is published in an open access format – articles are published on the journal's website immediately after acceptance, giving the scientific community and the public unlimited and free access to the content.

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### Editor-in-Chief

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