Special Issue

Advances in the Remote Sensing of Crop Phenology and Production Monitoring Under Environmental Constraints

Message from the Guest Editors

The spatially explicit and accurate monitoring of crop phenology and production is essential for enhancing our understanding of agricultural practices and their associated ecological services. Significant efforts have been made to improve monitoring accuracy, though these efforts are inevitably complicated by environmental constraints, including extreme temperatures, drought, nutrient deficiencies, and diseases. We are pleased to invite you to contribute to this Special Issue related to phenology and production monitoring using remote sensing methods across different spatial scales and various crops, as well as under environmental constraints. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the followina:

- Detecting and monitoring crop phenology;
- Estimating crop yield and production;
- Developing algorithms for improving the accuracy of crop phenology and production monitoring;
- Analyzing environmental constraints on crop phenology and production monitoring;
- Applying machine learning and deep learning for crop phenology, production, and environmental constraints analysis.

Guest Editors

Dr. Xin Zhao

Dr. Jianxiu Shen

Dr. Sanai Li

Deadline for manuscript submissions

30 September 2025



an Open Access Journal by MDPI

Impact Factor 4.1 CiteScore 8.6



mdpi.com/si/235354

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

mdpi.com/journal/ remotesensing





an Open Access Journal by MDPI

Impact Factor 4.1 CiteScore 8.6



MDPI

About the Journal

Message from the Editor-in-Chief

Remote Sensing is now a prominent international journal of repute in the world of remote sensing and spatial sciences, as a pioneer and pathfinder in open access format. It has highly accomplished global remote sensing scientists on the editorial board and a dedicated team of associate editors. The journal emphasizes quality and novelty and has a rigorous peerreview process. It is now one of the top remote sensing journals with a significant Impact Factor, and a goal to become the best journal in remote sensing in the coming years. I strongly recommend *Remote Sensing* for your best research publications for a fast dissemination of your research.

Editor-in-Chief

Dr. Prasad S. Thenkabail

Senior Scientist (ST), U. S. Geological Survey (USGS), USGS Western Geographic Science Center (WGSC), 2255, N. Gemini Dr., Flagstaff, AZ 86001, USA

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), Ei Compendex, PubAg, GeoRef, Astrophysics Data System, Inspec, dblp, and other databases.

Journal Rank:

JCR - Q1 (Geosciences, Multidisciplinary) / CiteScore - Q1 (General Earth and Planetary Sciences)