



High-Throughput Phenotyping in Plants Using Remote Sensing

Guest Editors:

Dr. Paulo Eduardo Teodoro

Department of Agronomy,
Universidade Federal de Mato
Grosso do Sul, Chapadão do Sul
7956-000, Brazil

**Dr. Carlos Antonio Da Silva
Junior**

Department of Geography, State
University of Mato Grosso
(UNEMAT), Sinop 78550-000, MT,
Brazil

**Dr. Larissa Pereira Ribeiro
Teodoro**

Department of Agronomy,
Universidade Federal de Mato
Grosso do Sul, Chapadão do Sul
7956-000, Brazil

Deadline for manuscript
submissions:

25 September 2025

Message from the Guest Editors

Dear Colleagues,

Ensuring that food production is sufficient to meet the needs of a human population that is expected to grow to more than 9 billion by 2050 is a major challenge for plant science. Thus, the integration between remote sensing and plant breeding for high-throughput phenotyping can contribute to an increase in agricultural production. The integrated use of remote sensing and computational intelligence makes it possible to make predictions about the characteristics of plants and their agronomic performance, especially size, cycle, and productivity, which are crucial for the success of the production system. The measurement of these characteristics in the field, when carried out in a conventional way, demands a lot of time and manpower, especially when considering the simultaneous evaluation of several cultures. Using phenotyping techniques that combine remote sensing and computational intelligence, greater efficiency is obtained in cultivar evaluation trials, such as labor savings, speed in the evaluation of agronomic characteristics, and greater reliability of the information obtained.





an Open Access Journal by MDPI

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

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 peer-review 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.

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)

Contact Us

Remote Sensing Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/remotesensing
remotesensing@mdpi.com
[X@RemoteSens_MDPI](https://twitter.com/RemoteSens_MDPI)