



High-Throughput Phenotyping in Plants Using Remote Sensing

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Deadline for manuscript
submissions:

30 August 2024

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.





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