

Special Issue

Precision Irrigation System: Challenges and Opportunities

Message from the Guest Editors

This Special Issue will examine new knowledge and practical solutions under the theme “Precision Irrigation System: Challenges and Opportunities.” We invite contributions on, but not limited to, the following topics: Irrigation scheduling and management: Use of decision support tools, data driven models, and field studies to guide efficient water use.

Image-based analysis for irrigation support: Use of images to detect crop stress, disease, and pest conditions, and to link these observations with irrigation management for more informed decision making and complete view of field management.

New irrigation technologies: Development of sensors, control systems, and water delivery methods that allow detailed monitoring of crop water status and precise application.

Quantitative modeling for irrigation management: Application of crop models, hydrological models, machine learning, deep learning, and other data driven approaches to improve irrigation decisions.

Social and economic perspectives: Cost-benefit analysis, training needs, cultural factors, and policies that influence the adoption of precision irrigation.

Guest Editors

Dr. Weizhen Liang

Panhandle Research and Extension Center, University of Nebraska-Lincoln, Scottsbluff, NE, USA

Dr. Jingqiu Chen

Biological Systems Engineering, College of Agriculture and Food Sciences, Florida A&M University, Tallahassee, FL, USA

Deadline for manuscript submissions

closed (30 April 2026)



Agriculture

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 6.3



mdpi.com/si/257203

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

[mdpi.com/journal/
agriculture](https://mdpi.com/journal/agriculture)





Agriculture

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 6.3



[mdpi.com/journal/
agriculture](https://mdpi.com/journal/agriculture)



About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

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

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), GEOBASE, PubAg, AGRIS, RePEc, and other databases.

Journal Rank:

JCR - Q1 (Agronomy) / CiteScore - Q1 (Plant Science)