

Special Issue

Applications of Sensors and Internet of Things (IoT) in Precision Irrigation

Message from the Guest Editors

Agriculture technology has advanced substantially in recent years, paving the way for the integration of sensors and Internet of Things (IoT) systems into irrigation management. These technologies have made it possible to collect high-resolution, real-time data on soil moisture, weather, plant water status, and system performance. When combined with remote connectivity, such data enable end users to make more timely and accurate irrigation decisions. However, the increasing volume, variety, and velocity of sensor data present significant challenges. Transforming raw data into actionable insights remains a major struggle.

This Special Issue invites contributions to address these challenges and explore opportunities for continued innovation. We aim to highlight recent advancements in the evaluation, development, and application of sensor technologies and IoT frameworks that enhance precision irrigation. Topics of interest include sensor calibration and validation, data transmission and storage solutions, decision support tools, artificial intelligence, satellite-based models, system integration, and growing strategies.

Guest Editors

Dr. Bruno Patias Lena

Goanna Ag, Columbus, NE, USA

Dr. Hemendra Kumar

College of Agriculture and Natural Resources, University of Maryland,
College Park, MD, USA

Deadline for manuscript submissions

15 February 2026



Agriculture

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 6.3



mdpi.com/si/253100

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

Journal Rank:

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