

Special Issue

Advanced Technology in Agricultural Water-Saving Irrigation

Message from the Guest Editors

Against the backdrop of increasingly scarce global water resources, advanced water-saving irrigation technologies have become a core driver for sustainable agricultural development. This Special Issue focuses on this cutting-edge field, aiming to explore how technological innovations can achieve efficient and precise utilization of water resources. Key areas of interest include real-time soil moisture monitoring systems based on IoT and smart sensors, irrigation decision-making models driven by big data and artificial intelligence, high-efficiency and uniform precision irrigation equipment (such as drip irrigation, micro-sprinkler, and subsurface irrigation), and intelligent management systems integrated with fertigation. These technologies not only significantly improve water use efficiency but also strive to minimize agricultural water consumption and non-point source pollution while ensuring crop yields. We aim to advance water-saving irrigation technologies toward a smarter, more integrated, and sustainable future, providing key technological solutions to address global food security and water resource challenges.

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In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

Editor-in-Chief

Dr. Jean-Luc PROBST

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