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Special Issue Reprint

Agricultural Practices to Improve Irrigation Sustainability, 2nd Edition

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This Reprint compiles the peer-reviewed articles published in the second edition of the Special Issue 'Agricultural Practices to Improve Irrigation Sustainability' (*Water*, 2025). Agriculture remains the largest global water user, accounting for nearly 70% of total withdrawals, and is under increasing pressure to demonstrate efficient, fair, and environmentally responsible water use. The collected papers highlight the need to safeguard irrigation sustainability while addressing climate change, resource degradation, and governance challenges within the water–energy–food–environment (WEFE) nexus.

Building upon the first edition (2024), this volume expands the scope from plot-scale efficiency increase to advanced decision support tools capable of addressing uncertainty. The contributions highlight innovations in water use efficiency, smart irrigation technologies, remote sensing integration, and data-driven modeling approaches. Importantly, the studies emphasize that future gains depend on context-specific, resource-efficient practices rather than one-size-fits-all solutions. Together, these articles provide researchers, stakeholders, and policymakers with practical insights and analytical tools to support more resilient and informed irrigation management.

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