



water

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Advances in Agriculture Water Efficiency

Guest Editor:

Dr. Surya P. Bhattarai

School of Health, Medical and Applied Sciences (HMAS),
Institute for Future Farming Systems (IFFS), CQUniversity
Australia, Bruce Hwy,
Rockhampton, QLD 4701,
Australia

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Message from the Guest Editor

Irrigated cropping covers 346 million ha, representing 20% of global agricultural land, contributing 40% of the world's food production. In 2010, globally, 1500 km³ of water was used for irrigation but 2700 km³ was withdrawn for this purpose, resulting in an irrigation efficiency (IE) of only 56%. Currently, 70% of the global freshwater supply is diverted for irrigation, with little opportunity for sourcing additional water in the future. Therefore, it is imperative that water use efficiency (WUE) of irrigated cropping be improved to meet the projected doubling of food production by 2050, required to feed an estimated nine billion people.

Improving WUE requires an interdisciplinary approach, involving irrigation and drainage engineering, agronomy, breeding, soil science, crop nutrition and a wide range of applied irrigation sciences plus environmental, socio-economic, geopolitical and cultural aspects relevant to irrigation. We solicit papers from different disciplines that contribute to the enhancement of crop WUE at different scales of plant production (leaf to landscape level), required to make meaningful gains in improving water productivity at a global scale.



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Special issue



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Dr. Jean-Luc PROBST

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Message from the Editor-in-Chief

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.

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Contact Us

Water Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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